

California Clean Construction Guidelines

October 24, 2025



California Air Resources Board

1001 I Street

Sacramento, CA 95814

Off-Road Fleet Recognition Program Guidelines

Proposed finalization: 2025, Proposed Implementation: 2027

Background and Introduction

As on-road emission standards have advanced and dramatically reduced emissions from on-road vehicles, off-road equipment emissions in California have become an increasingly important source of emissions.

To address these emissions, the 2022 State Strategy for the State Implementation Plan ([CARB State SIP Strategy](#)) proposed a non-monetary program to encourage off-road fleets to reduce emissions with a strong emphasis on zero-emission equipment. The original measure name was Off-Road Recognition Program and now the new name is the California Clean Construction Program.

Throughout the development of the California Clean Construction program, California Air Resources Board (CARB) staff have engaged with the public and interested parties in multiple ways. An [Off-Road Recognition Program Request for Information](#) was issued and remained open from September 19- November 15, 2024. CARB staff also hosted a [Public Information Session](#) live on May 20, 2025, that had over 150 participants. These events, along with direct engagement with interested parties such as manufacturers, rental organizations, equipment dealers, public agencies, and businesses, helped to inform staff during the program development process.

The California Clean Construction program aims to provide a methodology for awarding bodies, including state and local government entities, as well as other interested parties hiring construction fleets, to establish contracting criteria that can help achieve their environmental policy goals. By incorporating the California Clean Construction program into construction project conditions, awarding bodies encourage the use of the cleanest off-road equipment available, which benefits project workers, equipment operators, and neighboring communities, and contributes to the market growth of zero-emission construction equipment.

The California Clean Construction program may also be incorporated into projects undergoing environmental review under the California Environmental Quality Act (CEQA). In CEQA documents, lead agencies can require participation in the program as a project design feature by including it in the project description, or as a mitigation measure to reduce construction-related air quality and greenhouse gas impacts.

This document provides a description of the California Clean Construction program.

Applicability

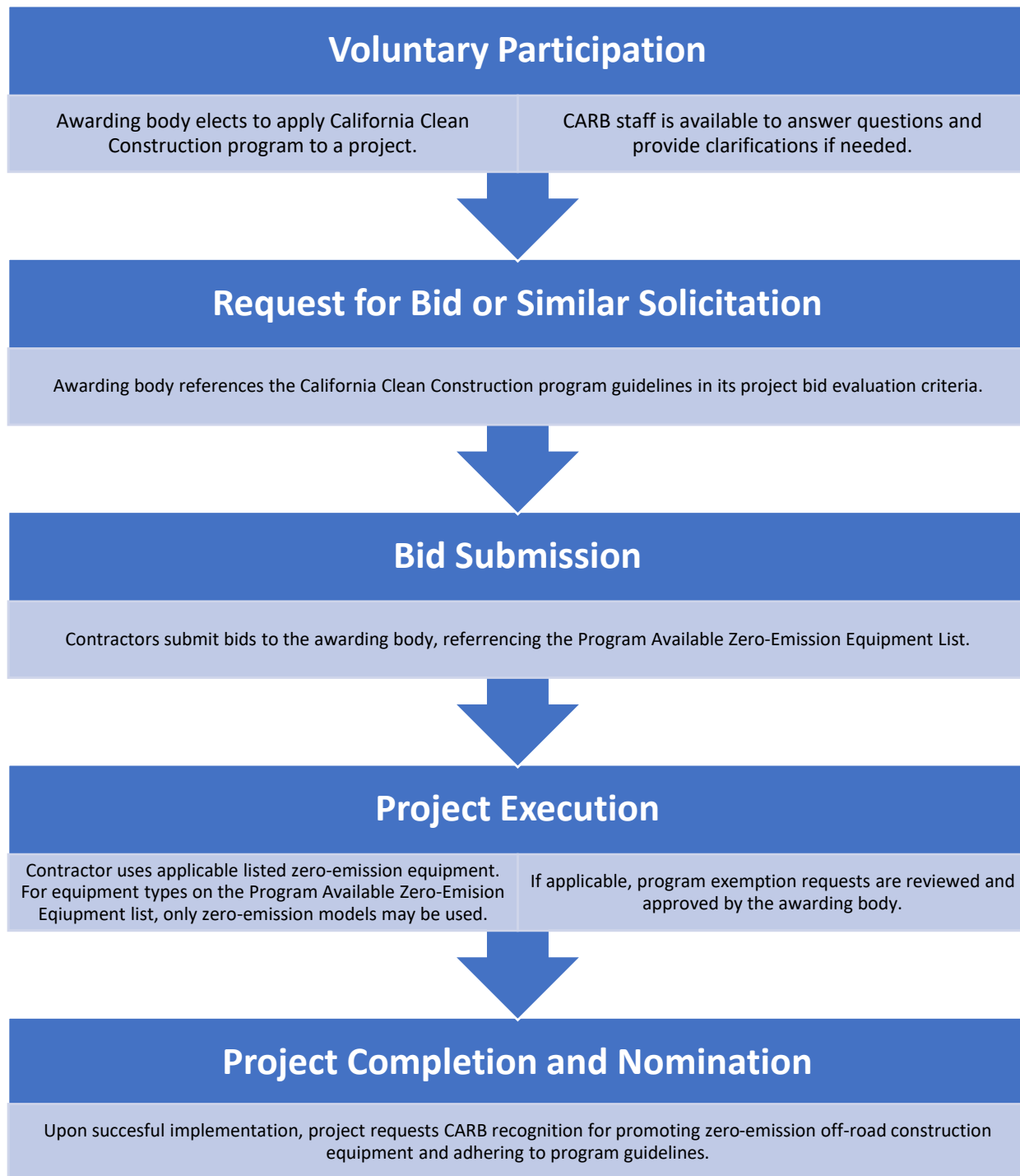
The California Clean Construction program is a voluntary program that provides guidelines for awarding bodies soliciting or advertising for construction projects that use off-road equipment. Awarding bodies that are seeking to encourage the use of zero-emission equipment and cleaner combustion equipment can incorporate the California Clean Construction program guidelines into their construction project conditions as part of a bid proposal evaluation points award/scoring system or as a required contract condition.

Program Summary

Awarding bodies participate in the program by including language in the request for proposal stating that submittals must adhere to the program guidelines. The Program Eligible Zero-Emission Equipment List provides equipment types that must be zero-emission. Upon project completion, the project can be recognized by CARB for successful program implementation and promotion of zero-emission off-road construction equipment.

The following flow chart, Figure 1, illustrates how the California Clean Construction program will work.

Figure 1 How the California Clean Construction Program Works



Definitions

The following definitions apply to this voluntary program:

“Awarding Body” means a city, county, special district, or other public agency, or two or more public entities acting jointly, or the duly constituted body of an Indian reservation or rancheria, agencies of the United States of America or the State of California, and departments, divisions, public corporations, or public agencies of this State or of the United States, or private organizations soliciting or requesting responses of a structure such that it may commonly be recognized as or referred to as a bid or proposal for construction service.

“BESS” means a battery energy storage system incorporating batteries capable of storing and distributing electrical energy.

“CARB” means the California Air Resources Board.

“CEQA” means the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.).

“Equipment categories” means off-road motorized construction equipment which by design and function is grouped by intended work capabilities and may include performance considerations.

“Off-Road Regulation” means the In-Use Off-Road Diesel Fueled Fleet Recognition Regulation (California Code of Regulations, title 13, sections 2449 et seq.).

“Hybrid Genset” means a hybrid power system that includes a smart controller, a battery energy storage system which may incorporate multiple battery system recharge resources including renewable energy capture, such as solar, a right-sized internal combustion generator, or utility power, such as temporary project site power service.

“Program Eligible Zero-Emission Equipment List” means a California Clean Construction program specific curated list of eligible zero-emission construction equipment or equipment categories.

“Right Sized Internal Combustion Generator” means a generator which runs at its optimal, efficient load (typically around 80% and not less than 30%) for short intervals, primarily for charging the BESS.

“Zero-Emission Equipment” means equipment that produces no exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas under all possible operational modes and conditions.

Process

During initial construction project planning, the awarding body voluntarily elects to include the California Clean Construction program into the request for proposal or solicitation as a project condition and select the methodology for consideration, i.e., part of a point award scheme or conditional requirement.

CARB provides helpful resources for program implementation available at [California Clean Construction Program Home Page](#).

The California Clean Construction Program Eligible Zero-Emission Equipment List identifies zero-emission equipment that should be utilized on a program participating project site. The awarding body or contractor reviews anticipated off-road construction project equipment lists and equipment being procured or delivered to the project and compares that equipment to the Program Eligible Zero-Emission Equipment List. If equipment types on the Program Eligible Zero-Emission Equipment List are used on the project, they must be zero-emission. In other words, for California Clean Construction program projects, internal combustion versions of equipment types on the Program Eligible Zero-Emission Equipment List may not be used. Additional details are provided in the Program Eligible Zero-Emission Equipment List section of the guidelines.

The awarding body may choose to require use of additional zero-emission equipment beyond those included in the applicable Program Eligible Zero-Emission Equipment List. Please see the Performing Above & Beyond section of the guidelines.

The Program Eligible Zero-Emission Equipment List is publicly available. This public availability maximizes access and contributes to program clarity.

When using the California Clean Construction Program to reduce or avoid environmental impacts as part of a project's CEQA analysis, the awarding body or lead agency may incorporate the program into the project's mitigation measures and its mitigation monitoring and reporting plan to ensure implementation and accountability. Lead agencies may also cite the Program Eligible Zero-Emission Equipment List as substantial evidence demonstrating the feasibility of requiring zero-emission off-road equipment. Incorporating the California Clean Construction program into a project's conditions of approval allows the program to function as enforceable mitigation under CEQA while providing contractors with transparent expectations and procedures.

For program exceptions, please see the Exceptions section of the program guidelines.

Program Eligible Zero-Emission Equipment List

CARB staff developed the Program Eligible Zero-Emission Equipment List based on zero-emission off-road construction equipment identified as readily available for lease, rent, or purchase in California. CARB staff developed and will maintain the Program Eligible Zero-Emission Equipment List using the following criteria:

- Equipment types must be available to obtain for use (either by purchase or rent) in California within a reasonable or typical time period but at a minimum, in time to be used on an upcoming construction project, and
- Equipment types must be zero-emission (i.e., must have no tailpipe emissions and generally are likely to be battery-electric or fuel-cell powered).

Additionally, in developing the Program Eligible Zero-Emission Equipment List effectively, CARB staff considered the following factors and data sources:

- **Clean Off-Road Equipment Vouchers (CORE) database:** Identifies zero-emission off-road equipment models that have received funding support, indicating commercial availability and readiness

- Equipment in the CORE database must be a commercially ready equipment model that is not in the prototype/demonstration phase, has historical sales, testing results, operational data, and user experience information
- **DOORS (Diesel Off-Road Online Reporting System) database:** Provides a registry of off-road fleet equipment currently in use, serving as a cross-reference for identifying existing off-road/non-road diesel-fueled models that may have zero-emission alternatives
- **Direct engagement:** Discussions with manufacturers, dealers, and rental agencies for staff to gather information on equipment specifications, lead times, rental options, and operational limitations
- **Industry Publications and Resources:** Manufacturer websites, product catalogs, and dealership publications

The awarding body and the contractor are expected to act in good faith when evaluating and interpreting listed equipment applicability. The awarding body maintains program implementation decision discretion and authority.

The Program Eligible Zero-Emission Equipment List is provided and maintained on the California Clean Construction Program web page (<https://ww2.arb.ca.gov/our-work/programs/california-clean-construction-program>).

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Program Eligible Zero-Emission Equipment List Updates

Over time, it is reasonable to expect advancements and market availability within the zero-emission off-road construction equipment space, allowing for Program Eligible Zero-Emission Equipment List updates. CARB staff will monitor new zero-emission products entering the market along with changes in equipment availability and delivery times. List updates will include the same criteria and considerations as were detailed for the development of the Program Eligible Zero-Emission Equipment List. .

CARB staff expect to publish updates to the Program Eligible Zero-Emission Equipment List approximately every two years.

Availability Exceptions

In limited instances where zero-emission equipment is or is expected to be deployed for the purposes of the California Clean Construction program, a contractor may experience an

unforeseeable complication preventing the delivery or utilization of specific required zero-emission equipment.

For unanticipated project modifications and changes, the equipment associated with the modification or change must be re-evaluated through the same process as was used for the original project equipment list. This involves comparing updated off-road construction equipment needs to the required zero-emission equipment from the Program Eligible Zero-Emission Equipment List. This process will enable program flexibility, allowing for adaptation to project and condition changes.

This exception would be limited to unforeseen equipment circumstances such as a delivery delay, product shortage, project specification change, condition or task change, or other situations where utilizing required zero-emission equipment is not technically feasible or would result in disproportionately higher costs. The limited exception determinations are requested by the contractor from the awarding body, which then decides whether to grant such exceptions.

The awarding body would be responsible for maintaining documentation of exceptions granted, and exception determinations remain part of the good faith implementation responsibilities of the awarding body.

The project must have zero-emission construction off-road equipment from the applicable Program Eligible Zero-Emission Equipment List in-use on the project for the California Clean Construction program to be applicable.

Project Site Electrification Exception

CARB recognizes that construction projects will often have unique features and conditions, and that planning for project site electrification might look different from one project to another. Considerations for this critical aspect of project planning should prioritize achieving the lowest possible emissions.

Planning for potential grid connections, capacity, consumption, and charging infrastructure and operations are critical considerations for ensuring the project performance and efficiency. Early and frequent engagement with the utility provider that serves the project's geographic area is essential to facilitate proper consultation and planning for both current needs and potential future upgrades. Many investor-owned utilities provide services supporting customers in site electrification planning, technical assistance, financial guidance, and stakeholder coordination, such as transportation electrification advisories. See the California Clean Construction program page ([California Clean Construction Program Home Page](#)) External Resources and Programs section for potentially beneficial links. Similar to planning associated with the fueling of internal combustion engine project equipment, the energy management for zero-emission equipment is a fundamental project aspect.

In many instances, BESS can be configured to charge from a variety of sources, including utility service connection, microgrids (e.g., solar or mobile units), hydrogen fuel cell technology, and on-site right-sized power generators as part of a hybrid genset system, eliminating or reducing on-site emissions. Depending on the technology and configuration, high discharge capability may be achievable, supporting demanding equipment. While systems incorporating right-sized internal

combustion generators such as hybrid gensets may be used, non-hybrid system combustion generators are not permitted for charging zero-emission equipment.

While achieving the lowest possible emissions for on-site project power solutions is the goal, CARB recognizes that, at this time, the availability of on-site zero and near zero-emission charging infrastructure may be a challenge for some projects. Flexibility is provided for contractors who are unable to access the necessary power or configurations to provide zero or near zero job site electrification and charging solutions.

An exception for on-site charging and site electrification may be granted at the discretion of the awarding body if it is not feasible to access the appropriate power or due to a variety factors, including but not limited to:

- **Geographic isolation of the job site:** The project location is in a remote area with no access to the electrical grid and a BESS or Hybrid Genset is not a feasible option due to an exceptionally higher necessary configuration cost.
- **Grid limitations:** The local electrical grid infrastructure and/or the project site utility service is insufficient to support the charging demands of the charging equipment or of a BESS or Hybrid Genset.
- **Permitting or utility delays:** A contractor has made a good faith effort to secure a temporary power connection from the utility early in the project but has experienced delays beyond their control and site conditions prevent the successful utilization of a BESS or Hybrid Genset.
- **Cost-prohibitive infrastructure upgrades:** The cost of upgrading the electrical service via utility or supplantation with BESS or Hybrid Genset is economically unfeasible for the project.
- **Access to clean advanced charging equipment:** If the contractor is unable to obtain a BESS, Hybrid Genset, solar panels, or other clean advanced charging equipment at the project site.

As mentioned in the program Availability Exceptions section, the program operates on the principle of good-faith participation and awarding bodies and contractors are encouraged to keep their own records of their efforts to secure site electrification, in the event a need to discuss specific circumstances with the program implementing awarding bodies arises.

Performing Above and Beyond

The awarding bodies may add additional or a combination of additional conditions specific to their project. For example, an awarding body could require additional or specific zero-emission equipment beyond that listed in the Program Eligible Zero-Emission Equipment List.

Or an awarding body could require all non-zero emission off-road construction diesel-fueled equipment to have engines certified to current Tier 4 Final emission standards using diesel particulate filters (DPF) which is the cleanest possible technology for particulate matter emissions control. DPFs are advanced emission control devices that physically capture and remove toxic diesel particulate matter (PM) before it is released into the air and are the cleanest technology currently available for controlling PM emissions in combustion ignition engines. Accordingly, off-road equipment using a Tier 4 Final engine with a DPF is currently the cleanest combustion ignition equipment on the market to help reduce the health risks from diesel PM exposure. The California Clean Construction web page [California Clean Construction Program](#) provides a resource link, [Optional Tier 4 Final Plus Diesel Particulate Filter Equipment](#), to assist with this cleaner combustion project option above and beyond the program guidelines.

Program Support

CARB staff are committed to working collaboratively with contractors, awarding bodies, and other interested parties to find solutions that support both the goals of the program and the practical realities of construction projects. A program resource page is available at [California Clean Construction Program](#). California Clean Construction staff can be reached at a dedicated email address, ccc@arb.ca.gov or by phone at (877) 593-6677.

Upon Project Completion

For the governing body, awarding body, lead agency, or contractor that voluntarily informs CARB of successful California Clean Construction project completion, CARB will recognize the project. The recognition request will be evaluated by CARB for program compliance, primarily, for the utilization of equipment from the Program Eligible Zero-Emission Equipment List. Recognition will include CARB issuing a project certificate to the awarding body and listing on a CARB sponsored web page, projects and associated contractors that utilized the zero-emission off-road construction equipment.

Project recognition requests should be sent to ccc@arb.ca.gov. It is suggested that these requests include at least the project name, awarding body, associated agencies, contractors, and equipment suppliers, descriptions of the project, type of power resources utilized, insights regarding the project's equipment, project photos of the off-road zero-emission equipment, and insights regarding associated zero-emission equipment use, performance, and procurement experience summary. A template is included on the program homepage, [California Clean Construction Program](#)