

California Air Resources Board: Innovative Clean Transit Regulation Summary

Applicability: All transit agencies that own, operate, lease, rent, or contract with another entity to operate buses with a Gross Vehicle Weight Rating (GVWR) over 14,000 lbs in California. This does not include:

- Vehicles that operate on rails or trolleybuses
- Caltrans, Caltrain, Amtrak, or any local school district
- Cutaway buses that have a GVWR between 14,000 and 26,000 lbs., articulated buses, double decker, or over-the-road buses. These buses will be integrated the latter of either January 1, 2026, or when they meet Altoona bus testing and Orange County Bus Cycle requirements.

Zero-Emission Bus (ZEB) Rollout Plan: Each transit agency's Board of Directors must approve a plan through the adoption of a resolution, and submit to the Executive Officer of the California Air Resources Board (ARB). Large transit agencies must submit the plan by July 1, 2020. The plan is to include details related to:

- How the agency intends to fully transition to ZEB by 2040, without early retirement of conventional internal combustion engine buses.
- Identification of ZEB technology the agency plans to deploy.
- A schedule for construction of associated facilities and infrastructure, including details about location, type, and timeline.
- A schedule for ZEB and conventional internal combustion engine bus purchases and lease options, including bus type, fuel type, number of buses.
- A schedule for conversion of convention internal combustion engine buses to ZEB, if any.
- A plan for how the agency plans to deploy ZEBs in disadvantaged communities.
- A training plan and schedule for ZEB operators and maintenance/repair staff.
- Identification of potential funding sources.

Purchase Requirement:

Prior to Any Purchase Requirement: Executive Office to provide the ARB with a comprehensive review of program readiness at least one year prior to the implementation of any purchase requirement. The review is to analyze several factors including cost, performance, reliability, incentive funding availability, infrastructure requirements, job creation and training programs, deployment of ZEB buses and related technology, and availability and barriers to deployment of ZEBs.

A similar annual report is to be provided by the Executive Officer on status of implementation, including information about above factors.

January 1, 2023: Large fleets with over 100 buses would need to ensure **25 percent** of total new buses purchases in each calendar must be ZEB.

January 1, 2026: Small and Large Fleets would have to meet a **50 percent** purchase requirement.

January 1, 2029: **100 percent** purchase requirement for all fleets.

- New bus purchases does not include: purchase of used buses, ZEBs converted from convention internal combustion engine buses, and purchase of cutaway buses, over-the-road buses or articulated buses (until commercially available, or January 1, 2026, whichever is later).

- A bus purchase means the transit agency has identified, committed and encumbered funds and executed one of the following: (1) A written “notice to proceed;” or (2) a written purchase agreement that specified the date when the bus manufacturer is to proceed with the work to manufacture the bus; or (3) a signed written lease agreement between the transit agency and a bus manufacturer or sales representative for a new bus to be placed in revenue service for a contract term of five years or more.
- Must retain a new bus for at least 5 years to count towards purchase requirements.

Waiver of Purchase Requirements:

2023 Bus Purchase Requirement: Waived if transit agencies statewide have at least 850 ZEBs purchased or in active bus fleets by December 1, 2020.

2024 Bus Purchase Requirement: Waived if transit agencies statewide have at least 1,250 ZEBs purchased or in active bus fleets by December 1, 2021.

If both the 2020 and 2021 statewide targets are met, the 25 percent purchase requirement would not be implemented until 2025.

Purchase Requirement Early Action Credits:

Fuel cell bus purchased before December 31, 2017, and still in fleet as of January 1, 2018: 2:1

Fuel cell bus placed in service between January 1, 2018 and December 31, 2022: 1:1

Battery electric buses purchased before December 31, 2017 and still in service as of January 1, 2018: 1:1

- Credits expire on January 1, 2029, but can be used to meet any of the purchase requirements previous to then.

Each electric trolleybus placed in service between January 1, 2018, and December 31, 2019, receives one-tenth of a bonus credit that expires by December 31, 2024.

Joint ZEB Compliance Option:

Multiple transit agencies can petition the ARB Executive Director to implement a joint ZEB deployment within a region, where they would comply as if they were one joint agency, submitting one annual report. To do this, the agencies would have to jointly comply with the number of ZEB purchases the partners would otherwise have to purchase individually, which they could jointly fund through a common MPO, RTPA, air district, air basin, or the agencies share joint infrastructure. Various other requirements must be met, including submitting a joint rollout plan.

Zero-Emission Mobility Option:

A transit agency can opt into this option in lieu of making a ZEB purchase requirement if the following requirements are met:

- The program provides a zero-emission mobility service through bicycles or zero-emission vehicles with a GVWR of 14,000 lbs or less.
- Program is operated by the transit agency or contractor to transit agency.
- Transit agency is able to track and record zero-emission passenger miles for each vehicle.
- A large transit agency must achieve 320,000 zero-emission passenger miles per year to be eligible for a mobility credit.

To opt-in to the program, the transit agency must provide the ARB Executive Director with various information including a description of the vehicles to be used, documentation to show who will operate the services, and the method of collecting accurate zero-emission passenger miles per vehicle.

One zero-emission credit is equivalent to the operation of one ZEB. To calculate zero-emission credits, the following rules apply:

- A multiplier of 3 is to apply with quantifying zero-emission passenger miles from a bicycle
- Divide total zero-emission passenger miles in each calendar year by 320,000 (for large transit agencies).
- If the same credits are maintained in each calendar year, they will continue to count as a credit

Extensions or Exemptions from ZEB Purchase Requirements:

ARB Executive Officer can provide a 1-year extension based on specific situations. A request for an extension for a specific calendar year must be submitted to the ARB Executive Director by November 30th of that calendar year. The covered situations include:

- If a delay in bus delivery is caused by the bus manufacturer
- If a delay in bus delivery is caused by setback of construction schedule, including the inability to finalize zero-emission bus infrastructure in time to operate the purchased buses. Such circumstances include space limitations which may require a transit agency to purchase new rights-of-way or construct new facilities, change of a general contractor, delays obtaining power from a utility, delays obtaining construction permits, natural disaster, or archeological discovery of historical or tribal resources under the California Environmental Quality Act.
 - If the issue cannot be addressed within the extension period, an exemption can be requested until the agency's next purchase cycle.
- When available ZEBs at the end of battery or fuel stack warranty period cannot meet a transit agency's daily mileage need. The transit agency must prove that the bus cannot meet the "daily operational needs for any bus in the existing fleet."

An exemption from the purchase requirements may be requested in the following situations:

- When a required ZEB bus type of the applicable weight class based on GVWR is unavailable for purchase. A ZEB is considered unavailable if the bus has not completed Altoona testing or received an Orange County Bus Cycle report, cannot be configured to meet ADA requirements, or the physical characteristics of the bus would violate any federal, state or local law, regulation or ordinance.
- When a required ZEB type cannot be purchased by a transit agency due to financial hardship. This is restricted to situations where a fiscal emergency has been declared under resolution by a transit agency's Board of Directors. A transit agency must demonstrate it cannot offset the incremental cost of purchasing all available zero emission buses when compared to the cost of the same type of conventional bus, or a transit agency can demonstrate that it cannot offset the managed, net electricity cost for depot charging electric buses when compared to the fuel cost of the same type of conventional internal combustion engine buses.
- Because of space constraints for necessary charging equipment.

Report to ARB: The Executive Director is to annually report back to the ARB on the progress of implementation, including use of exemptions, and suggest any adjustments that may be warranted.

Renewable Fuel Requirements:

Starting January 1, 2020, large transit agencies are required to purchase renewable fuels when diesel or natural gas contracts are renewed.

Low-NOx Engine Purchase Requirement:

Starting January 1, 2020, when conventional internal combustion engine bus purchases are made, transit agencies must purchase the bus with a low-NOx engine if the engine has been commercially available for at least two years and the engine has been certified to the lowest level of NOx emissions at the time of purchase for the bus and fuel type.

- Early action credit for low NOx engines purchased previous to the requirement.
- Only applies to areas that do not meet federal NOx requirements.

Reporting and Recordkeeping Requirements:

Starting March 31, 2021, and continuing every year through March 31, 2050, each transit agency will be required to annually report by March 31st of that year, a compliance report.

- Initial report is due March 31, 2021 which includes number and information of active buses in the agency's fleet as of December 31, 2017.
- Following reports must detail the following:
 - Transit agency information: location, National Transit Database id number, MPO, etc.
 - Information on each bus purchased, owned, operated, leased or rented including vehicle information such as make, model and curb weight; information on engine and propulsion system; information on bus purchases; and information on converted buses.
 - Information related to a zero-emission mobility option, if transit agency opts to participate
 - Low-NOx engine compliance, if the agency is subject to the requirements.
 - Renewable fuel usage, including date purchased, fuel contract number, and effective date, if transit agency subject to associated requirements.
- Each agency subject to the reporting requirements must maintain copies of the following records:
 - Records of all purchased, leased, rented, or operated conventional combustion engine buses, ZEBs, and converted buses including: every notice to proceed, bus purchase contracts, lease agreements, documentation to show ownership transfer, documentation to show that a bus was converted to a ZEB, copy of vehicle registration, and proof of bus delivery date.
 - If using the zero-emission mobility option, records of zero-emission miles generated by eligible vehicles and bicycles.
 - Low-NOx engine purchase records
 - Fuel contracts for renewable fuel compliance
- A transit agency must make available any required records to the ARB within 10 calendar days of its request to audit.
- A transit agency must maintain the records for three years after the bus is retired, ownership is transferred or the fuel contract expired.