Innovative Clean Transit (ICT) Regulation
Implementation Guidance Document
October 2019

The Innovative Clean Transit (ICT) regulation became effective October 1, 2019. The ICT regulation requires all public transit agencies to gradually transition their bus fleets to zero-emission technologies. The zero-emission bus (ZEB) purchase requirements begin in 2023 for large transit agencies, as defined in the regulation, and 2026 for small transit agencies. The ZEB purchase requirements are based on a percentage of new bus purchases each year that must be zero-emission. In 2029, 100-percent of new bus purchases by all transit agencies must be ZEBs, with a goal for full transition by 2040. These questions and answers provide guidance for meeting the requirements of the ICT regulation. This guidance does not replace the adopted regulatory text, which controls in all instances. For questions of interpretation, please see the regulatory text, available at https://ww3.arb.ca.gov/regact/2018/ict2018/ictfro.pdf.

What is a zero-emission bus (ZEB)?

A ZEB is a bus without any tailpipe emissions. It is either a battery electric or a fuel cell electric bus. Hybrid and internal combustion engine (ICE) buses are not ZEBs.

Does the ICT regulation apply to small transit agencies?

Yes, the ICT regulation applies to all California public transit agencies that own, operate, lease, or rent buses with gross vehicle weight rating (GVWR) over 14,000 lbs. or that contract out the operation of such buses to another entity. The ICT regulation applies to all types of rubber-tire buses, like standard, articulated, over-the-road, double-decker, and cutaway buses. The regulation excludes school buses and vehicles that operate on rails, like trolleybuses, even if they are operated by transit agencies.

Does the ICT regulation apply to Caltrans, Caltrain, Amtrak, and local school districts?

No, the ICT regulation does not apply to buses owned, operated, or contracted out by Caltrans, Caltrain, Amtrak, or local school districts.

Are the ICT requirements specific to the size of my fleet? If so, what is the size threshold?

Yes, the ICT regulation has different requirements for large and small transit agencies. A transit agency is considered large if it operates at least 100 buses in annual maximum service[1] in an urbanized area with a population of at least 200,000 as last published by the Bureau of the Census before December 31, 2017. However, if it operates in either the

[1] Annual maximum service means buses in revenue service that are operated during peak season of the year, on the week and day that maximum service is provided. The number of buses during the annual maximum service includes all buses with a GVWR >14,000 lbs., but excludes demand response buses.

South Coast or San Joaquin Valley Air Basin with more than 65 buses in annual maximum service, it is also considered as a large transit agency. All others are small transit agencies.

What are the main requirements of the ICT regulation?

The ICT regulation includes the following major elements:

- ZEB Rollout Plan;
- ZEB purchase requirements with various exemptions and compliance options that can provide safeguards and flexibility to transit agencies;
- Low NOx-engine purchase requirements for conventional buses;
- Requirements for large transit agencies to use renewable fuels; and
- Reporting and record-keeping requirements.

What is a ZEB Rollout Plan and what should it include?

A ZEB Rollout Plan or Rollout Plan serves as a blueprint for how a transit agency is planning to achieve a full transition to zero-emission technologies by 2040, considering minimum useful life of buses to avoid their early retirements. The ZEB Rollout Plan has to be approved by the transit agency's board or governing body and then submitted to CARB. Rollout Plans are not binding and can be updated by a transit agency as needed. A ZEB Rollout Plan must include all of the following information to be considered complete:

- A goal of full transition to ZEBs by 2040;
- Type(s) of ZEB technologies a transit agency is planning to deploy;
- A schedule for all ZEB and conventional bus purchases and lease options regardless of fuel types, and a schedule to convert conventional buses to ZEBs if applicable;
- Plan for deploying ZEBs in disadvantaged communities;
- A schedule for infrastructure upgrades and modifications along with specification of each facility's location, type of infrastructure, service capacities, and construction timelines;
- A training plan and schedule to train operators and maintenance and repair staff; and
- Identification of potential funding sources and needs.

When is my Rollout Plan due to CARB?

Large transit agencies must submit their complete and Board approved Rollout Plan to CARB by July 1, 2020, and small transit agencies by July 1, 2023. A copy of the transit agency's resolution showing the Rollout Plan has been approved by the transit agency's governing body must be submitted along with the complete Rollout Plan. A new transit agency must submit a Rollout Plan within 18 months of its existence.

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How does the ICT regulation define a bus purchase?

A bus is considered purchased when a transit agency executes one of the following documents after funds are identified, committed, and encumbered:

(1) A written "Notice to Proceed" (NTP) to the bus manufacturer to begin with production of a bus under a previously-entered bus purchase contract or to execute a contract option;

(2) If no NTP is issued, a written purchase agreement that specifies the date when a bus manufacturer is to proceed with manufacturing of the bus; or

(3) A signed written lease agreement between a transit agency and a bus manufacturer or sales representative for placing a new bus in revenue service for a minimum contract term of five years.

What are the ZEB purchase requirements?

Starting in 2023, if a large transit agency is purchasing <u>new</u> buses in any given calendar year, there is a required minimum number of ZEBs that must be met. This minimum number of ZEBs is determined based on the ZEB purchase schedule shown in Table 1 below. Such purchase requirements start in 2026 for small transit agencies.

Table 1. ZEB Purchase Requirement Schedule

	ZEB Percentage of Total New Bus Purchases	
Year	**Large Transit Agency**	**Small Transit Agency**
2023	**<u>25%</u>**	-
2024	**<u>25%</u>**	-
2025	25%	-
2026	50%	25%
2027	50%	25%
2028	50%	25%
2029 and after	100%	100%

The ZEB purchase requirements for articulated, over-the-road, double-decker, and cutaway buses do not start until 2026 or later regardless of the size of a transit agency. The ZEB purchase requirements for these types of buses will start on January 1, 2026, or later, if the bus passes the Altoona testing and obtains a bus testing report (whichever comes later). Before the ZEBs purchase requirements for these types of buses start, any purchase of conventional buses of these types will not count towards the total new bus purchases. However, if a transit agency is voluntarily purchasing zero-emission version of these types of buses ahead of their purchase requirement, they will still be counted towards the minimum number of ZEBs in the year of purchase to recognize their purchases. Examples of how to comply with the ZEB purchase requirements are provided later in this document.

What is the discharge provision in the regulation?

The ZEB purchase requirements in 2023 and 2024, highlighted above in Table 1, ZEB purchase requirement schedule, in **bold** and underlined, could be discharged under the following circumstances. The 2023 ZEB purchase requirement would be discharged, if California transit agencies collectively have at least 850 ZEBs purchased or in active fleets by December 31, 2020. The 2024 ZEB purchase requirement would be discharged, if at least 1,250 ZEBs have been purchased or are in active fleets by December 31, 2021.

Does the ICT regulation recognize my early actions?

Yes, the ICT regulation has a built-in credit system to recognize early actions. Transit agencies that deployed ZEBs before the regulatory requirements were in place took on more risks and provided early health benefits to their communities; therefore, they are recognized and awarded with bonus credits. Each bonus credit has the same value as having one ZEB in the fleet and it counts towards the purchase of one ZEB in compliance accounting.

How do transit agencies earn the bonus credits?

Transit agencies earn the bonus credits once according to the schedule shown in Table 2.

Table 2. How to Earn Bonus Credits

Technology	Vehicle In Service Date	Bonus Credits
Fuel cell electric bus	As of January 1, 2018	2
Fuel cell electric bus	Between January 1, 2018 and December 31, 2022	1
Battery electric bus	As of January 1, 2018	1
Electric trolleybus	Between January 1, 2018 and December 31, 2019	0.1

How can I use the bonus credits?

Each bonus credit may only be used once to meet the required minimum number of ZEBs. All bonus credits will expire December 31, 2028, once the 100 percent ZEB purchase requirement starts, except for bonus credits for electric trolley buses, which will expire December 30, 2024. Bonus credits cannot be transferred to another transit agency, but may be used by transit agencies participating in a Joint Group to comply with the ZEB purchase requirements collectively.

What is the Zero-Emission Mobility Option?

Transit agencies have the option of providing zero-emission transportation services with zero-emission modes other than buses to generate zero-emission mobility credits. Transit agencies can use these credits in lieu of making ZEB purchases to meet the required minimum number of ZEBs. Each mobility credit is treated as having one ZEB operated in the fleet. In order to generate zero-emission mobility credits, transit agencies must opt-in to the Zero-Emission Mobility Option and meet its requirements. This option provides flexibility for transit agencies to meet the ZEB purchase requirements, encourages innovation in first- and last-mile connectivity, and improves mobility for transit riders.

What are the eligibility criteria of the Zero-Emission Mobility Option?

This option applies to zero-emission mobility services provided by using scooters, bicycles, or any other zero-emission vehicles with a GVWR of 14,000 lbs. or less. Transit agencies must also meet the following requirements to be able to use the Zero-Emission Mobility Option:

- The transit agency must be able to track and record actual passenger miles provided by each zero-emission vehicle;
- The program must be either directly operated by the transit agency or operated by a contractor to the transit agency; and
- The transit agency must submit a request to CARB's Executive Officer to opt-in to the Zero-Emission Mobility Option.

How can my transit agency opt-in to the Zero-Emission Mobility Option? How are the mobility credits calculated?

Your transit agency has to opt-in to the Zero-Emission Mobility Program in order to generate mobility credits. To opt-in to the program, your transit agency has to submit a request to the CARB's Executive Officer and provide all of the following information:

- A description of types of vehicles plan to use in this program, including their GVWR and types of propulsion systems;
- Documentation to show who will operate these services; and
- Details of how zero-emission passenger miles per vehicle will be collected and how records will be kept.

Once your transit agency has successfully opted-in, it can start accumulating zero-emission passenger miles and generating mobility credits. Mobility credits are calculated based on the total zero-emission passenger miles accumulated in each calendar year per the following criteria:

- One mobility credit for each accumulated 320,000 passenger miles per year provided by a large transit agency;
- One mobility credit for each accumulated 180,000 passenger miles per year provided by a small transit agency; and
- A multiplier of three (3) is applied to each actual passenger mile provided by bicycles. Bicycles may have lower passenger miles than other modes of

transportation, but provide critical short-trips and first- and last-mile connections to transits to avoid single-occupant vehicle miles.

If the calculated number of mobility credits does not result in a whole number, the number must be rounded to the nearest integer for determination. Credits generated in a calendar year can be used in the immediate following calendar year when new bus purchases take place. A transit agency may opt-out of the program at any time by submitting a request to CARB's Executive Officer along with an expected date of program termination.

How does the Zero-Emission Mobility Option work?

The following examples illustrate how this provision works.

Example 1. Greenwood Transit is a large transit agency and plans to purchase eight 40-foot standard buses in 2023. Greenwood Transit does not have any existing ZEBs in its fleet or bonus credits. In 2022, Greenwood Transit starts a bike-sharing program that accumulates 100,000 passenger miles by the end of the year. How can Greenwood Transit comply with the ICT regulation in 2023?

According to the ZEB purchase schedule, 25% of the buses purchased have to be ZEBs. Since Greenwood Transit does not have any existing ZEBs in its fleet or bonus credits, two out of these eight buses will have to be ZEBs. The mobility credits for Greenwood Transit are calculated as follows:

Total zero-emission passenger miles through the bike-sharing program in 2022
= 3 x 100,000 miles= 300,000 miles
Mobility credit = 300,000 miles ÷ 320,000 miles = 0.94

Because the calculated mobility credit is not a whole number, it must be rounded to the nearest integer. Therefore, Greenwood Transit is generating one zero-emission mobility credit at the end of 2022 that it may use in 2023, and only needs to purchase one ZEB in 2023 to be compliant.

Example 2. As in Example 1, Greenwood Transit will purchase eight buses in 2023, two of which must be ZEBs. Greenwood Transit now has an expanded mobility service with different zero-emission transportation modes available. In 2022, Greenwood Transit generates 100,000 passenger miles from the bike-sharing program, 250,000 passenger miles from electric scooters, and 110,000 passenger miles from an electric car-sharing program. How can Greenwood Transit remain compliant with the ICT regulation in 2023?

The mobility credits for Greenwood Transit are calculated as follows:

Total zero-emission passenger miles = 3 x 100,000 miles + 250,000 miles + 110,000 miles = 660,000 miles
Mobility credit = 660,000 miles ÷ 320,000 miles = 2.06

Because the calculated mobility credit is not a whole number, it must be rounded to the nearest integer. Therefore, Greenwood Transit generates two zero-emission mobility credits and does not need to purchase any ZEBs in 2023 to meet the ZEB purchase requirements.

Example 3. Rush Valley Transit is a large transit agency and it does not have any existing ZEBs in its fleet or any bonus credits. This agency is purchasing buses and operating a zero-emission mobility program in various years as shown in the Table 3. How can Rush Valley Transit comply with the ICT regulation?

The Table 3 illustrates how zero-emission mobility credits can be earned and used to meet the ZEB purchase requirements.

Table 3. Generation and Use of Zero-Emission Mobility Credits in Example 3

Years	Total Buses Planned to Purchase	Total ZEBs Required	Annual Accumulated Zero-Emission Passenger Miles	Generated Mobility Credits for the Next Year Use	Mobility Credits Used for the Year	# ZEBs Required to Purchase
2022	0	0	1,152,000	1,152,000 ÷ 320,000 = 4	0	0
2023	20	20 x 25% = 5	1,152,000	1,152,000 ÷ 320,000 = 4	4	1
2024	0	0	1,152,000	1,152,000 ÷ 320,000 = 4	0	0
2025	20	20 x 25% = 5	1,380,000	1,380,000 ÷ 320,000 = 4	4	1
2026	0	0	1,380,000	1,380,000 ÷ 320,000 = 4	0	0
2027	0	0	576,000	576,000 ÷ 320,000 = 2	0	0
2028	30	30 x 50% = 15	2,496,000	2,496,000 ÷ 320,000 = 8	2	13
2029	100	100 x 100% = 100	576,000	576,000 ÷ 320,000 = 2	8	92

Example 4. Pearl Cove Transit is a small transit agency and needs to purchase one ZEB in 2026 in order to comply with the ICT regulation. Instead of buying one ZEB, this agency decides to opt-in to the zero-emission mobility program and uses mobility credits. Pearl Cove Transit generates 20,000 passenger miles from electric scooters and 50,000 passenger mile from electric car-sharing programs in 2025. How can Pearl Cove Transit remain compliant with the ICT regulation?

Total zero-emission passenger miles = 20,000 miles + 50,000 miles = 70,000 miles
Mobility credit = 70,000 miles ÷ 180,000 miles = 0.39

Because the mobility credit is not a whole number, it must be rounded to the nearest integer, which is zero in this example. Therefore, Pearl Cove Transit did not earn any zero-emission mobility credits for use in 2026 and must purchase or lease a ZEB, or convert one conventional bus to ZEB to remain compliant.

How can a transit agency use bonus credits and zero-emission mobility credits to comply with the ZEB purchase requirements?

The required minimum number of ZEBs can be met with any combination of the following: (1) bonus credits; (2) zero-emission mobility credits; (3) existing ZEBs in the fleet; and (4) new ZEB purchase. Bonus and zero-emission mobility credits must be used before the existing ZEBs are used for compliance. In addition, bonus and zero-emission mobility credits and existing ZEBs may only be used once and will be used first before new ZEB purchases are counted towards compliance. Existing ZEBs include any ZEBs from previous purchases, any leased ZEBs, and any ZEBs converted from a conventional bus.

The following examples illustrate these provisions.

Example 5. San Almona Transit Authority (SATA) is a large transit agency. SATA purchased five battery electric buses (BEBs), four of which were put in service in May 2017, and one of which was put in service in 2019. All these five BEBs are in operation in 2023. In 2023, SATA is planning to purchase 100 standard 40-foot buses and 40 articulated buses. What is the minimum number of ZEBs required for SATA to comply with the ICT regulation?

The ZEB purchase requirements in 2023 would only apply to standard buses, not articulated buses. Therefore, the minimum number of ZEBs this transit agency would be required to purchase and operate is calculated as follows:

ZEB purchase obligation in 2023: 100 standard buses x 25% = 25 ZEBs
Bonus credits: 4 (for 4 BEBs placed in service before January 1, 2018)
Existing ZEBs: 5
Actual required ZEBs to purchase: 25 ZEBs – 4 bonus credits – 5 existing ZEBs = 16 ZEBs.

Example 6. San Almona Transit Authority from the previous example continues with bus purchases. SATA plans for purchase of additional 200 standard 40-foot buses and 10 cutaway buses in 2024. Out of 10 cutaway buses, six are planned to be zero-emission, although the regulation does not require them. The five ZEBs that were already in the fleet in 2019 continue to remain in the fleet although their associated bonus credits were used

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previously in 2023. What is the required minimum number of ZEBs that SATA should purchase in order to comply with the ICT regulation in 2024?

SATA's compliance obligations are calculated as follows:

> ZEB purchase obligation in 2024: 200 standard buses x 25% = 50 ZEBs
> Because SATA is purchasing six zero-emission cutaway voluntarily, the regulation still counts them towards the minimum number of ZEBs required. Therefore, SATA needs to purchase only 44 standard ZEBs in 2024 to be compliant.

Example 7. Rocky Road Transit (RRT) is a large transit agency and purchasing 100 standard 40-foot buses and 20 cutaway buses in 2023. This agency decides that 50 of the standard buses and 10 of the cutaway buses should be ZEBs. What is the minimum number of ZEBs that RRT should purchase to comply with the ICT regulation in 2023?

ZEB purchase requirements in 2023 apply only on standard buses, not cutaway buses. Therefore, RRT compliance obligations are calculated as follows:

> ZEB purchase obligation in 2023: 100 standard buses x 25% = 25 ZEBs
> This transit agency is voluntarily purchasing 60 ZEBs instead of 25 ZEBs in 2023.
> The additional 35 purchased ZEBs will help the agency in the next purchase cycle and its ZEB compliance obligations.

Example 8. Continued from example 7, Rocky Road Transit is purchasing an additional 200 standard 40-foot buses and 50 cutaway buses in 2026. All cutaway buses that RRT is purchasing are zero-emission and have passed the Altoona testing. All ZEBs which were purchased in 2023 remain active in the fleet. What is the minimum number of ZEBs that RRT should purchase in order to comply with the ICT regulation in 2026?

RRT's compliance obligations are calculated as follows:

> ZEB purchase obligation in 2026: (200 standard + 50 cutaway buses) x 50% = 125 ZEBs.
> Because Transit Agency RRT has purchased additional 35 ZEBs in the previous purchase in 2023, the minimum ZEB purchase in 2026 should be only 90 ZEBs to be compliant:
> 125 required ZEBs - 35 ZEBs from previous purchase = 90 ZEBs.
> These 90 ZEBs can be in any combination of standard and cutaway buses.

Can a transit agency work with other transit agencies to comply with the ZEB purchase requirements?

Yes, the ICT regulation has a Joint Zero-Emission Bus Group (Joint Group) option that allows two or more transit agencies to work together and form a joint zero-emission bus group to meet the ZEB purchase requirements. This option allows transit agencies to pool resources and utilize infrastructure more efficiently.

What are the eligibility criteria to form a Joint Group?

At least one of the following eligibility criteria must be met by all participating transit agencies to form a Joint Group:

- They are located in the same service area of a Metropolitan Planning Organization (MPO) or Regional Transportation Planning Organization;
- They are located within the same air basin;
- They are located within the same Air Quality Management District, or Air Pollution Control District, or Air Resources District; or
- They utilize the same infrastructure (it is permissible if the participating transit agencies do not share ownership, but do share utilization).

What is the procedure to form a Joint Group?

Transit agencies that are forming a Joint Group must provide the CARB Executive Officer a notice at least one year before the Joint Group takes effect. The notice must include all of the following information:

- A list of all participating transit agencies;
- A statement of intent from a responsible official for each participating transit agency;
- A proposed start and end dates of the Joint Group;
- A description on which eligibility criteria identified above are met.

The Executive Officer will approve the Joint Group if at least one of the eligibility criteria has been met and all of the required information has been provided. The Executive Officer will assign a Joint Group Number to the group to be used by each participating transit agency for the purpose of annual reporting. If there is any change in the Joint Group's membership, all participating transit agencies must collectively submit a member change request to the Executive Officer explaining the change and its expected effective date. The member change request must be signed by the responsible official of each participating transit agency, including the new or departing transit agency, and coupled with board approval of each participating transit agency.

How do Joint Group members comply?

Participating transit agencies in a Joint Group may jointly submit one Rollout Plan. They must collectively purchase and operate at least the same total number of ZEBs annually as if each transit agency were complying individually. If the largest transit agency in a Joint Group is a large transit agency then that agency must purchase at least the required minimum number of ZEBs as if it would have operated alone. The other transit agencies in the Joint Group may allocate zero-emission buses as they see fit. If a Joint Group fails to comply with the total ZEB purchase requirements in a given calendar year, each participating transit agency will be evaluated for compliance individually. The following examples illustrate this provision.

Example 9. Large transit agencies Greenwood Transit, Rush Valley Transit and Pearl Cove Transit are forming a Joint Group, with Greenwood Transit being the largest transit agency in this group. In 2023, Greenwood, Rush Valley and Pearl Cove Transit are planning to purchase 60, 20, and 12 standard 40-foot buses, respectively. How many ZEBs should each transit agency purchase in order to comply with the ICT regulation?

ZEB purchase obligation for Greenwood in 2023: 60 standard buses x 25% = 15 ZEBs
ZEB purchase obligation for Rush Valley in 2023: 20 standard buses x 25% = 5 ZEBs
ZEB purchase obligation for Pearl Cove in 2023: 12 standard buses x 25% = 3 ZEBs
The minimum number of ZEBs this Joint Group must purchase and operate in 2023 is 23 ZEBs (15 + 5 + 3 = 23 ZEBs).
Since Greenwood is the largest transit agency in this group, it must have at least the required minimum number of ZEBs as a percentage of its total new bus purchases in 2023. Therefore, Greenwood has to buy at least 15 ZEBs. The remainder of 8 ZEBs can be achieved with any combination.

Example 10. Large transit agencies Greenwood Transit and Rush Valley Transit are now forming a Joint Group with the small transit agency, Rocky Road Transit; as before, Greenwood Transit is the largest transit agency in this group. In 2023, transit agencies Greenwood, Rush Valley, and Rocky Road are planning to purchase 60, 20, and 12 standard 40-foot buses, respectively. How many ZEBs should each transit agency purchase in order to comply with the ICT regulation?

ZEB purchase obligation for Greenwood Transit in 2023:
60 standard buses x 25% = 15 ZEBs
ZEB purchase obligation for Rush Valley Transit in 2023:
20 standard buses x 25% = 5 ZEBs
Rocky Road Transit does not have any ZEB purchase obligation in 2023 because it is a small transit agency. The minimum number of ZEBs this Joint Group must purchase and operate in 2023 is 20 ZEBs (15 + 5 + 0 = 20 ZEBs).

Since Greenwood is the largest transit agency in this group, it must have at least the required minimum number of zero-emission buses as a percentage of its total new bus purchases in 2023. Therefore, Greenwood has to buy at least 15 ZEBs. The remainder of 5 ZEBs can be achieved with any combination.

Example 11. Small transit agencies Rush Valley, Pearl Cove, and San Almona Transit are forming a Joint Group. Rush Valley is the largest transit agency in this group. In 2026, Rush Valley, Pearl Cove, and San Almona Transit are planning to purchase 12, 8, and 4 standard 40-foot buses, respectively. How many ZEBs should each transit agency purchase in order to comply with the ICT regulation?

ZEB purchase obligation for Rush Valley in 2026: 12 standard buses x 25% = 3 ZEBs
ZEB purchase obligation for Pearl Cove in 2026: 8 standard buses x 25% = 2 ZEBs
ZEB purchase obligation for San Almona in 2026: 4 standard buses x 25% = 1 ZEBs
The minimum number of ZEBs this Joint Group must purchase and operate in 2026 is 6 ZEBs = 3 + 2 + 1 = 6 ZEBs
Since there is no large transit agency in this Joint Group, the minimum number of 6 ZEBs in 2026 can be purchased with any combination.

What should my transit agency do, if it cannot meet the ZEB purchase requirements because of some external factors that are affecting its success? Does the ICT regulation provide any exemptions?

Yes, to ensure transit service is not adversely impacted, the ICT regulation has provided exemptions for circumstances that are beyond a transit agency's control. If all required information is correct and complete, exemptions will be granted upon request under the following circumstances:

- When there is a delay in construction of ZEB infrastructure;
- When daily mileage needs cannot be met by available ZEBs;
- When gradeability needs cannot be met by available ZEBs;
- When a needed ZEB type for an applicable weight class is not available;
- When incremental capital cost of all available ZEBs and associated infrastructure cannot be offset or estimated incremental managed, net electricity cost for available depot-charging battery electric buses cannot be offset after applying for all available incentive and funding programs; or
- When a transit agency declares a financial emergency.

The Executive Officer grants an exemption from ZEB purchase requirements until your next bus purchase. Once an exemption is granted, your transit agency may purchase conventional buses instead of ZEBs.

A transit agency's infrastructure is not ready to operate ZEBs. Should such transit agency still purchase ZEBs?

No, a transit agency may defer the ZEB purchase requirements if the needed infrastructure cannot be finalized within two years of the initial bus purchases and in time to operate the purchased ZEBs after delivery. ZEB infrastructure includes charging stations and associated electrical and power supply, hydrogen stations and associated storage and power supply, maintenance facilities, etc. The reasons for delay must be beyond a transit agency's control and may include one or more of the following circumstances:

1. Purchase of new rights-of-way or construction of new facilities;
2. Change of the general contractor;
3. Delays in utilities' power supply;
4. Delays in construction permits;
5. Discovery of archeological, historical, or tribal cultural resources; or
6. Natural disaster.

The request for exemption due to construction delay must include the following information:

1. A letter from transit agency's board or governing body; and
2. A letter from the licensed general contractor of the project, related utility, building department, or other related third parties explaining the reasons for delay and estimating the project's completion data.

Can a transit agency request an exemption if available ZEBs cannot meet the daily mileage needs of its operation?

Yes, a transit agency may request an exemption if available depot-charging BEBs in the market at the time of purchase cannot be placed in service to meet the daily needs of any similar bus type in the fleet. The request for exemption must include all of the following information:

1. Explanation of why an exemption is needed by including the following:
    a. Description of how previously purchased ZEBs have been suitable for transit operation (if applicable);
    b. Explanation of why the daily mileage range of a depot-charging BEB is insufficient to meet the service needs of any conventional bus of the same type.
2. Current monthly mileage report for each bus type in the fleet to show their average daily usage;
3. Copy of the ZEB request for proposal and resulting bids that shows battery capacity of each bus when new;
4. If available, over one month of empirical data showing energy usage of ZEBs operated on daily assignments in the transit agency's regular revenue service. Such data includes, but is not limited to battery degradation, air conditioning, passenger

loading, grades, and driving behavior. If energy use data is not available, the Executive Officer will use the Orange County Bus Cycle to determine the energy use per mile. The exemption will be granted, if the minimum required range is higher than 80 percent of the range on available BEBs (determined by using the largest available battery pack).

Can a transit agency request an exemption if available ZEBs cannot go uphill on a specific route?

Yes, a transit agency may request an exemption if available ZEBs do not have adequate gradeability performance to meet the daily needs in its operation. The request for exemption must include the following information:

1. Documentation that shows no other buses in the fleet can meet the transit agency's gradeability requirements and that the available ZEBs of that bus type cannot be placed in service anywhere else in the fleet;
2. Topography information, which includes measurement of the grades where ZEBs would be placed in service;
3. A description of bus types that currently serve these routes and data showing their performance, including passenger loading, bus speed, and grade;
4. An explanation of why the gradeability of all available ZEBs are insufficient to meet the transit agency's service needs;
5. A copy of the ZEB request for proposal, specifying the transit agency's required gradeability and minimum sustained speed, and the resulting bids;
6. If available, empirical data including grades, passenger loading, and speed data from available ZEBs comparing their performance with conventional buses of the same types operated on the same grade, speed, and condition.

What will happen if a ZEB type that a transit agency needs is not available?

A transit agency may request an exemption from the ZEB purchase requirements if the required ZEB type for the applicable GVWR is not available. A ZEB type is considered not available if <u>any</u> of the following circumstances exists:

1. It has not passed the complete Altoona testing;
2. It does not meet the Americans with Disabilities ACT (ADA) requirements; or
3. Is not compliant with any law, regulation, or ordinance.

A transit agency's request for exemption must include the following information:

1. A summary of all bus body-types, vehicle weight classes being purchased with their GVWR, chassis (if applicable), and the reasons why existing zero-emission buses are unavailable for purchase;
2. Current fleet information showing how many zero-emission buses of that bus type are already in service and how many are on order and a demonstration that any available zero-emission bus that would meet the purchase requirement has been

purchased and that the zero-emission bus purchase requirement cannot be met with other zero-emission bus purchases in that year;

3. If the zero-emission bus type and vehicle weight class to be purchased cannot be adequately equipped to meet applicable Americans with Disabilities Act requirements, then the transit agency must submit documentation to show what Americans with Disabilities Act requirement cannot be met and why the manufacturer cannot meet it by submitting information from the manufacturer; and
4. If the zero-emission bus would result in a transit agency violating any federal, state, or local law, regulation, or ordinance, then the transit agency must submit a letter from its governing body that details how the physical characteristics of the zero-emission bus would violate such federal, state, or local law, regulation or ordinance and how the violation would be avoided with the purchase of a combustion engine bus of the same type. This letter must include all relevant citations to state and federal regulatory code sections.

Can a transit agency request an exemption if it cannot afford purchasing a ZEB or cover the electricity costs?

Yes, a transit agency may request an exemption due to financial hardship. To request an exemption from the zero-emission bus purchase requirement for a financial hardship, a transit agency must demonstrate that at least one of these following scenarios exists:

1. It has declared a fiscal emergency through a resolution by its governing body following a public hearing;
2. 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
3. It cannot offset the managed, net electricity cost for depot charging battery electric buses when compared to the fuel cost of the same type of conventional internal combustion engine buses.

The transit agency must support the exemption request with the following documentation as appropriate to the basis for the request:

1. A resolution by a transit agency's governing body declaring a fiscal emergency; or
2. Documentation showing a transit agency cannot offset the initial capital cost of purchasing zero-emission buses, including:
    a. A letter from a transit agency's governing body declaring the transit agency in good faith has applied for all available funding and financing options that could be used to offset the higher capital costs of zero-emission buses, electricity costs, and associated infrastructure;
    b. Documentation to show the transit agency has been denied financing, or financing options are not available, e.g. documentation that include denial of an action taken, like an official loan denial letter from a bank or financing institute; and

c. Documentation to show the transit agency cannot offset the higher incremental costs of available zero-emission buses or estimated net electricity cost for managed depot charging batter electric buses.

A transit agency may purchase conventional internal combustion engine buses instead of zero-emission buses once the Executive Officer grants the exemption. A transit agency should provide estimated electricity costs using applicable utility rates and charging strategy and include all available tax and fuel credits, including the Low Carbon Fuel Standard and Alternative Fuel Excise Tax Credit.

Do transit agencies have any requirements on the purchase of conventional buses?

Yes, starting January 1, 2020, transit agencies, regardless of their fleet size, are required to purchase low-NOx engines — if they are available — for all new conventional internal combustion engine bus purchases. The requirement does not apply to buses that are dispatched from areas defined as NOx exempt areas.[2] The low-NOx engine or the hybrid propulsion system paired with the engine must have been commercially available for at least two years, and must be certified to the lowest level of NOx emissions that is suitable for the bus and fuel type being purchased. Transit agencies are not required to change the fuel type if a low-NOx engine is not available on the bus type being purchased. Any early voluntary low-NOx engine purchase, including repower, will count towards meeting the compliance with the low-NOx engine requirements.

Are transit agencies required to purchase renewable fuels as well?

Yes, but this requirement applies only to large transit agencies. Small transit agencies are exempt from this requirement. A large transit agency, starting January 1, 2020, is required to purchase renewable diesel or renewable natural gas for conventional diesel or compressed natural gas buses, respectively, when fuel contracts are renewed.

When should transit agencies start reporting all their bus purchases and fleet information?

Every transit agency must report annually to CARB starting 2021. Each transit agency must submit information on agency, bus, fuel, and vehicle purchases by March 31st of each year. If a transit agency is participating in the Zero-Emission Mobility Option, it must also report the total accumulated annual zero-emission passenger miles for the eligible vehicles.

[2] "NOx Exempt Areas" means the following counties: Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, Eastern Kern (portion of Kern County within the Eastern Kern Air Pollution Control District), Glenn, Humboldt, Inyo, Lake, Lassen, Mariposa, Mendocino, Modoc, Mono, Monterey, Nevada, Northern Sonoma, Plumas, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz, Shasta, Sierra, Siskiyou, Northern Sutter (portion of Sutter County that is north of the line that extends from the south east corner of Colusa County to the southwest corner of Yuba County), the portion of El Dorado that is within the Lake Tahoe Air Basin, the portion of Placer that is East of Highway 89 or within the Lake Tahoe Air Basin, Trinity, Tehama, Tuolumne, and Yuba.

Should transit agencies maintain copies of the reported information? How long should these copies kept?

Yes, every transit agency must maintain copies of the information reported to CARB and retain the records for at least 3 years after a bus is retired, or a contract is expired. Record retention begins in 2020.

Where can I go for more information?

Fact sheets and regulatory documents on the Innovative Clean Transit are available at https://ww2.arb.ca.gov/our-work/programs/innovative-clean-transit For questions, please contact, Yachun Chow, Manager of the Zero Emission Truck and Bus at yachun.chow@arb.ca.gov, (916) 322-7450, or Shirin Barfjani, Lead Staff at shirin.barfjani@arb.ca.gov, (916) 445-6017.