

*Santa Cruz Metropolitan  
Transit District*



June 21, 2018

Jack Kitowski, Division Chief  
California Air Resources Board  
Via email

Dear Mr. Kitowski:

In follow-up to my verbal comments at the June 13, 2018 CARB Workshop, I am sending you my comments in writing. Thank you for CARB's continued work and flexibility in collaborating with transit agencies to achieve a Regulation that will function as best as is possible for all transit agencies in California and that will best meet the goals and objectives of CARB. On behalf of Santa Cruz Metropolitan Transit District (METRO) I am providing you the following comments on your latest version of the Draft Proposed Regulation Summary dated June 11, 2018:

**Large vs. Small Transit Agency**

During the presentation CARB staff expressed that a small transit agency is one with <100 buses. However, they went on to say that the count to 99 (<100 buses) includes cutaways, regardless of use as a paratransit vehicle or in regular service.

METRO adamantly opposes an interpretation that includes paratransit cutaways for the following reasons:

1. As explained in #2 below, an agency's vehicle count should not be a determining factor in establishing the size of a transit property. However, if such is ultimately the case, the count to 99 should not include an agency's paratransit fleet, that is, paratransit vehicles that exceed 14,000 GVWR. That because, in part, there are no zero emissions paratransit vehicles available on the market today that will meet the paratransit operational needs.
2. The FTA divides transit agencies into two categories; agencies operating in Primary Urbanized Areas (Old UZA and new UA) of <200,000 population and transit agencies operating in UAs of >200,000 population. METRO serves two separate UAs, both of which are under 200,000 population. UAs are established by the census of urbanized areas for 2012, as published in the Federal Register February 27, 2012.

This is important to METRO since Chapter 53 of title 49 U.S.C. 5307 allows transit agencies receiving federal Section 5307 dollars to use 100% of those formula dollars for operations if they operate in Primary UAs <200,000 population. There has been a longstanding acknowledgement by the FTA that it is difficult for small transit agencies to fund operations. This is also an acknowledgment by the FTA that small transit agencies are generally found in Primary UAs of <200,000 population.



49 U.S.C 5307 goes on to acknowledge that properties in UAs of >200,000 population must use their 5307 dollars for **capital**, unless they qualify under the "Special Rule." The Special Rule allows transit agencies in UAs of >200,000 to use some of their formula 5307 for operations, depending on the number of buses they operate in the peak hour, **excluding paratransit**, but including Demand Response vehicles. Included in the Special Rule is the so-called "100 bus rule" which was modified in the FAST Act to include the Demand Response vehicles in the count. Paratransit vehicles remain excluded from the count. This is also an acknowledgement by the FTA that there can be smaller transit agencies in UAs of >200,000 population, and therefore provides those properties some relief to use some of their Section 5307 formula dollars for operations.

**Conclusion:** Small properties can be distinguished by one of two factors, transit agencies operating in Primary UAs of <200,000, and, small transit agencies operating in UAs of >200,000 population, but operating 100 or fewer buses, including Demand Response vehicles, and excluding paratransit vehicles.

A quick check of FTA National Transit Database (NTD) data available through 2016 seems to reflect that 32 transit agencies operate in Primary UAs of <200,000 population. These include 13 small city operations. Determination of other small transit agencies in UAs >200,000 population that may qualify as small agencies will require further evaluation, but that number is expected to be low.

**METRO's Recommendation:** For the purpose of the CARB Regulation, and for determining a large transit agency versus a small transit agency, change the CARB interpretation of small transit agencies to match the FTA interpretation:

- a. All transit agencies operating in Primary UAs of <200,000 population, and
- b. All transit agencies operating in UAs of >200,000 population that operate 100 or fewer buses, including Demand Response vehicles, and excluding paratransit vehicles.

### **Purchase Definition**

Recommendation: Stop at "NTP." Given BYD and Proterra delayed deliveries, CARB may not want to worry about the delivery schedule. If the transit agency cancels or reduces their order after NTP, their credit towards the count should be reduced commensurate with the cancellation or reduction in the order.

### **Wavier for Early Compliance**

Still requires more discussion about the 1,000 and 1,150 targets. These targets seem too high. Keep in mind, transit agencies have twenty years to get to a 100% purchase. Assuming a statewide fleet of 10,000 buses, and assuming a relative straight-line basis, agencies will need to purchase over 500 buses a year between 2020 and 2040. Considering that bus battery technology (range) needs to improve substantially, CARB should assume fewer ZEB purchases in the earlier years and larger ZEB purchases in the out-years, as bus range improvements are made by the ZEB manufacturers.



### **Excluded Buses**

Recommendation: Instead of setting a date certain of January 1, 2016, subject to vehicles passing Altoona testing, consider making January 1, 2016 the date at which CARB, the Board, will review the state of the market for cutaways, over-the-road coaches and articulated buses and then set a date for possible inclusion, subject to the findings.

Such findings should include “real world” testing of ZEBs in the working environments of various transit properties. **not** Altoona data, and an evaluation of the data based on yet to be developed performance expectations. Such findings should also include a minimum of two vehicle manufacturers in each category and a discussion about reasonable vehicle pricing.

### **Deferral from ZEB Purchase Requirements**

Bullet number 4 requires further development. The definition of “daily mileage” needs to be further developed. It is not a standard industry term.

- (a) The term “block” might be the best term to use. In the case of METRO, this term covers buses that pullout and run until they return to the yard at the end of the day or night. A bus pulls out of the yard and operates on a particular route and continues in service, without returning to the yard, and may “interline” to another bus route that uses the same size bus. Further, when a bus operator reaches the end of his/her shift, a new bus operator will meet the bus on-route and continue with the bus in service. Metro operates bus blocks that range up to nearly 300 miles/day. Current ZEB bus range will limit operating ZEBs on about 1/3 of METRO’s blocks. This is based on an overnight charge and without mid-day or opportunity recharging. METRO does not plan to have mid-day/opportunity recharging.
- (b) Avoid oversimplifying and generalizing the interpretation of bus range and please don’t accept any Altoona testing numbers or the Orange County Bus Cycle. Bus ranges posted to-date by the manufacturers are far and away an overstatement of real life operational experiences. Variables such as the use of HVAC, the operating terrain and driver characteristics all impact the range of a bus, including stopping at bus stops.
- (c) A reasonable method of determining and monitoring improvements in bus range, inclusive of the variables noted above, needs to be established. Further, there needs to be a point somewhere in the timeframe of 2025 – 2027 in which the CARB Board reviews the state of technology and any advancement in battery energy density and bus range. In the METRO example, once METRO purchases sufficient low range ZEBs to cover the 1/3 of our bus blocks that the buses can be used, METRO should only have to continue purchasing ZEBs if the technology has advanced sufficient to schedule the ZEBs on the next group of longer range bus blocks.

Since federal grants are used to purchase buses, buses purchased today, with their limited range, are buses the transit agencies are stuck with for at least fourteen years. It is in the best interest of the public trust that we properly invest the public’s funds.



**Optional Joint-Emissions Bus Group**

Recommendation: Drop the reference to MPOs and allow transit agencies to collaborate across county and MPO boundaries.

**Other Issues**

**100% zero emissions bus fleets by 2040**

Make it clear that CARB does not intend to force transit agencies to retire non-ZEB vehicles in 2040 and that CARB understands that transit agencies may continue to perform mid-life overhauls on buses, which may result in CNG and diesel buses continuing to run beyond 2040. Depending on funding, transit agencies may not be able to retire CNG and diesel buses purchased, for example in 2028, and instead, they may spend far less money by performing a second mid-life overhaul on the buses. CARB stated at the workshop that the intent of the language was to ensure that transit agencies do not purchase anything but ZEBs from 2040 on. However, this statement is inconsistent with the draft Regulation, which as currently drafted, ensures that all buses purchased from 2029 and after are to be 100% ZEB (See Table 1 ZEB Purchase Schedule).

**Review Point**

The CARB Board needs to insert into the Regulation a Review Point at which various pieces of benchmarking data is collected and analyzed and at which the CARB Board might consider changes in the Purchase Schedule, depending on the progression of technology improvements and other analysis performed.


**HVIP**

CARB must change their interpretation of the availability of HVIP to transit agencies. Currently, CARB insists that HVIP is only available to transit agencies that purchase ZEBs ahead of the Purchase Schedule. CARB needs to change the HVIP program to allow HVIP dollars to be available to any transit agency that purchases ZEBs and at any time between now and 2040, and beyond.

CARB asserts that HVIP is intended to incentivize transit agencies into purchasing ZEBs ahead of mandates. However, CARB has not considered that ZEBs have been purchased prior to the adoption of the Regulation and the Regulation will require transit agencies to purchase more ZEBs and sooner than they were prior to the Regulation.

In closing, thank you again for your willingness to receive feedback from transit properties on the draft Regulation. I respectfully request that you consider incorporating the revisions suggested in this letter in your next version.

Respectfully submitted,

  
Alex Clifford  
CEO  
Santa Cruz Metropolitan Transit District