Santa Cruz Metropolitan Transit District

SANTA CRUZ METRO

September 20, 2018

California Air Resources Board, Members
1001 I Street, Suite
Sacramento, CA 95814

RE: Response to the Initial Statement of Reasons for the Proposed Innovative Clean Transit Regulation
Chair Nichols and Members of the California Air Resources Board:

On behalf of Santa Cruz Metropolitan Transit District (METRO) I submit the following comments in response to the Initial Statement of Reasons for the Proposed Innovative Clean Transit (ICT) Regulation. METRO provides service to urban and rural areas of Santa Cruz County with a transit fleet comprised of ninety-eight 35' and 40' fixed-route buses and thirty-one paratransit vehicles, composed of cutaways, raised top vans and transit vans.

On May 19, 2017 METRO's Board of Directors adopted a policy to attempt to have the fixed-route fleet 100% zero emissions by 2040. Of course this position is subject to both funding and significant improvements in battery energy density and/or bus range. METRO's bus electrification model is one of charging all night and running all day, which is comparable to the current model in which METRO fuels CNG buses at night and runs them all day without additional refueling. METRO does not plan to construct in-route opportunity recharging stations. Buses operating on the METRO system must be able to be placed in service on runs that go up to 300 miles/day. Therefore, buses purchased must have a range of at least 300 miles end of life (including battery degradation). The current zero emissions Buses (ZEBs) available on the market today fall significantly short of this reasonable operating range.

As currently drafted, the proposed regulation improves on the Draft Regulatory Concept for the Proposed Innovative Clean Transit Regulation, released December 2017. Improvements to the proposed regulation reflect ongoing discussions between California Air Resources Board staff and the leadership of the California Transit Association. While the progress made on the proposed regulation is substantial, we remain concerned that the imposition of the zero-emission bus (ZEB) purchase requirement is not tied to benchmarks for ZEB cost and performance, infrastructure buildout costs, and funding availability. Moreover, we see significant risks in assuming, as CARB staff has, that data gathered from limited, short-term ZEB deployments will accurately reflect the realities of ZEB deployments at-scale. We assert that, despite the claims of some interest groups, ZEB cost and performance, infrastructure buildout, and the cost of electricity as fuel, are still issues.

Santa Cruz Metropolitan District's current concerns are as follows:

Large vs. Small Transit Agency

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.

   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.

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, 2026, subject to vehicles passing Altoona testing, consider making January 1, 2026 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

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.

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 engine overhauls on CNG buses as 2040 approaches, which may result in CNG buses continuing to run in service beyond 2040. Depending on funding, transit agencies may not be able to retire CNG buses purchased, for example in 2028, and instead, due to resource limitations, they may spend far less money by performing an engine 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 forward are to be 100% ZEB. Therefore, what does zero emissions by 2040 mean?

Benchmarking and Regulatory Assessment

This provision would require the California Air Resources Board to conduct a regulatory assessment – *before* a ZEB purchase requirement goes into effect – that evaluates real-world ZEB cost and performance with benchmarks for ZEB cost and performance established at the time of rule adoption. This regulatory assessment should allow the Board to issue an across-the-board suspension of the ZEB purchase requirement, much like the original Transit Fleet Rule did, if real-world ZEB cost and performance is not yet at parity with the cost and performance of conventionally-fueled transit buses. This provision would have no impact on the ZEB purchase requirement, if benchmarks for ZEB cost and performance are being met, as anticipated by CARB staff and interest groups.

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/mandate. 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.

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 CARB's final Regulation.

Respectfully submitted,

Alex Clifford
CEO
Santa Cruz Metropolitan Transit District

cc: Richard Corey, Executive Officer, California Air Resources Board
Steve Cliff, Deputy Executive Officer, California Air Resources Board
Jack Kitowski, Chief, Mobile Source Control Division, California Air Resources Board
Tony Brasil, Heavy Duty Diesel Implementation Branch, California Air Resources Board
Shirin Barfjani, Mobile Source Control Division, California Air Resources Board