June 28, 2018

Shirin Barfjani
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California Air Resources Board
1001 I Street, P.O. Box 2815
Sacramento, CA 95812-2815

Re: Innovative Clean Transit Proposed Rule as Presented at the ICT Workshop on 6/13/18

Submitted online via CARB's Web Comment Submittal Form

Dear Ms. Barfjani:

We, the undersigned members of the Advanced Clean Transit (ACT) Coalition Partners, appreciate the opportunity to provide comments on the ICT Proposed Rule as represented in the Draft Proposed Regulation Summary at the June 13, 2018 CARB Workshop. We view the adoption of a strong ICT program as a key component of California's overall drive to zero emission transportation technologies to protect public health while achieving our clean air and climate standards. We appreciate the work of the board and staff to move this proposal forward and offer the following comments in support of adopting a strong rule this year.

Recommendations

1. **Rapid Progress Means this Rule Should be Passed in 2018** – The tenor of the last workshop shows that this rule has been thoroughly debated, and we should push to finalize this rule this year. The proposed rule should go to the Board in September and then come back for final approval by the end of 2018. We are concerned that the second

hearing before the Board was potentially listed for 2019, and we think it would be unwise to delay final adoption of this rule beyond 2018.

2. **Achievement of 2040 Goal** – In the Proposed Regulation Summary, the first listed "Key element of the proposal…" is that "Transit agencies develop individual plans to transition to a zero-emission bus fleet by 2040." We fully support this goal and interpret this to mean that by 2040, all transit agency buses covered by this rule will be zero emission by no later than 2040. There was some discussion at the workshop suggesting that so long as an agency meets the purchase requirements, that if they were, for example, to have diesel buses that they purchased in 2028 that they could continue to operate them as long as they want even if it extends beyond 2040. This would violate achievement of the rule's primary objective. 2040 is twenty- two years from now and provides more than sufficient time for agencies to plan their fleet turnover to meet this goal. If, for example, the agency turns over buses every fourteen years, then the agency should insure in its plan that all buses it purchases after 1/1/27 must be zero-emission buses (ZEBs). We recommend that the final rule language make it very clear that only 100% ZEB buses be in operation at transit agencies by 2040 and thereafter in the state of California.

3. **Transit Agency Plan Creation** – The proposed rule calls for large agencies to complete their ZEB rollout plans by July 1, 2020 and July 1, 2023 for small agencies. This is an unnecessary three-year delay for small agencies and we recommend that they should complete their plans by July 1, 2021. Planning is the first step for an agency in transitioning to ZEBs and its delay will delay deployment for small agencies and ultimately impair their ability to transition their fleets by 2040. Assuming the rule is approved this year, all agencies will have 18 months to prepare their plans. By giving the small agencies another year, they can learn from the large agency plans and will have a total of two and a half years for planning. Preparing a plan for a smaller agency should be far less complex than for a large agency, making this eminently doable.

4. **Planning Requirement Should Explore Providing Benefits of Zero Emission Buses to Disadvantaged Communities First** – The planning should require transit agencies to include analysis of how to provide benefits to disadvantaged communities first.

5. **The Proposed Purchase requirement** schedule below should be accelerated.

Calendar Year	ZEB Percentage of New Bus Purchases	
	Large Transit Agency	Small Transit Agency
2023	25%	-
2024	25%	-
2025	25%	-
2026	50%	25%
2027	50%	25%
2028	50%	25%
2029 and after	100%	100%

In our most recent submitted comments, we were supportive of delaying the start of the ZEB purchase requirement from 2020 as proposed in the December draft ICT rule to 2023. We believed that agencies needed more time to plan ZEB purchases, manage infrastructure needs and protect pre-compliance eligibility for financial incentive programs such as Hybrid and Zero-emission Truck and Bus Voucher Incentive Project (HVIP). In the current proposed regulation, CARB is defining the date of purchase as initiated with a Notice to Proceed (NPT) with up to two years to take delivery of the bus. This essentially moves the compliance date two years later or up to 2025 initially and similarly delays all the other ZEB purchase requirement dates above two years. We recommend accelerating the dates especially for the small agencies according to the schedule below:

Calendar Year	ZEB Percentage of New Bus Purchases	
	Large Transit Agency	Small Transit Agency
2023	25%	-
2024	25%	15%
2025	50%	25%
2026	50%	50%
2027	75%	75%
2028	75%	75%
2029 and after	100%	100%

Our proposed schedule would get small agencies started with some ZEB purchases sooner while still enabling them to have access to HVIP and other financial incentives especially if they procure a higher percentage of ZEBs than are required. Were small agencies to unnecessarily delay their transition, they may miss the opportunity to take advantage of currently available financial incentives for charging infrastructure for example.

Further, in order to ensure that the goal of having a 100% ZEB fleet by 2040, and with the understanding that a common practice for many agencies currently is to replace buses every 14 years, we recommend that the above proposed schedule be footnoted for years 2027, 2028 and 2029 and after to state:

> "Agencies that typically replace buses every 14 years must replace 100% of buses with ZEBs beginning in 2027 to avoid early retirement of buses in 2040 short of their useful lives."

6. **Waiver for Early Compliance** thresholds should be increased – We support the objective of the wavier for early compliance as an incentive but believe that the current thresholds of 1,000 and 1,150 ZEBs by December 31, 2020 and December 31, 2021 respectively should be increased. Again, compliance is achieved based on the date where an NTP has been placed so long as the buses are delivered within two years or by 2023 and 2024 respectively. We believe that a threshold of 1,100 buses by 2020 and 1,250 by 2021 are more appropriate and achievable. Accounting for buses already on the road, buses ordered, and existing allocations of incentive funding (Hybrid and Zero-Emission

Truck and Bus Voucher Incentive Project, Transit and Intercity Rail Capital Program, Volkswagen Environmental Mitigation Trust, Federal Transit Administration Low or No Emission Vehicle Program and Low Carbon Transit Operations Program), an estimated 1,250 ZEBs will already be deployed or on order across the state without additional actions in the next few years.

7. **Bonus credits** – The proposed bonus credit system rewards fuel cell buses more than battery electric buses. We recommend that a single bonus credit be allowed for any ZEB put in service before 1/1/2019. While fuel cell buses are more expensive than battery electric buses, much of the increased cost has been paid for with grants and other financial incentives. Creating two credit levels based on current technology status may create programmatic problems related to technology and cost advances in later years.

8. **Excluded buses** - The new proposed rule states that cutaway, over-the-road (motor coaches), and articulated buses are excluded from the ZEB purchase requirements until January 1, 2026. We support that these bus types may be excluded from this rule initially but recommend that transit agencies should be required to purchase buses in these other categories two years after at least two commercial buses have been Altoona tested and become HVIP eligible in a bus class. Further, we agree that transit agencies should prioritize their initial efforts on ZEB transition with standard transit buses which make up the majority of transit agencies' vehicles. Bus makers are rapidly developing ZEB vehicles in these other categories and many vehicles are already available. You can see the current CARB HVIP list of eligible clean vehicles here: https://www.californiahvip.org/eligible-technologies/#your-clean-vehicles.

   It is probable that using our recommended criteria above most or all of these categories will be required for replacement with ZEBs beginning in 2023.

9. **Deferral from ZEB purchase Requirements** – This part of the proposed rule allows agencies to apply for deferral for circumstances outside of their control such as a delay in installation of infrastructure or the failure of a bus maker to deliver a bus when promised. While we believe this is reasonable, it does lend itself to potential abuse. We recommend that the final rule must contain language that requires transit agencies to make plans for bus deliveries, completion of infrastructure projects, etc. using commercially reasonable guidelines. This would include planning for reasonable contingencies, building in reasonable slack time in project management schedules for infrastructure delays and performing due diligence on the ability of a bus maker to make timely deliveries based on knowledge of current back orders, production capacity, putting in delivery delay financial penalties, etc. Lack of good planning should not be rewarded with a deferral while circumstances truly beyond the control of the agency may be supported.

10. **Zero-emission Mobility Options** – Tracking zero-emission passenger miles in lieu of ZEBs must be done in a clear, transparent manner to ensure accuracy and environmental benefits.

11. **Use of renewable fuels** – The proposal requires large agencies to use renewable fuels for diesel and CNG buses when fuel contracts are renewed after 1/1/2020. Currently, the LCFS program is a strong incentive to agencies to utilize renewable fuels and most are doing so. Before CARB makes a determination like this, we recommend that they do research on the availability of RNG, all potential uses, which applications make the best use of this limited resource and then develop a state-wide recommendation on the highest priority, best and most cost-effective use of these resources.

12. **Educational Technical Workshop on Electrical Infrastructure** – In speaking with many transit agency staff over the past few years, it is our experience that the biggest hurdle to overcome in transitioning to battery electric buses is designing, installing and operating the electric charging infrastructure and budgeting for and optimizing electricity costs. This is a new domain for transit agencies who may not yet posess the knowledge and experience in new tariffs, etc. We recommend that just as CARB did in putting together an excellent two-day technical workshop on ZEBs in February of 2016, that it put together a similar two-day technical workshop dedicated to electric infrastructure.

    Presenters could be invited from publicly owned utilities, investor owned utilities, the CPUC, bus manufacturers, vendors of supporting services and products (such as load management systems, EVSE for crowded existing bus depots, wireless charging, real time bus monitoring systems, etc.), infrastructure installation project design planners and project managers including solar and battery storage developers, safety standards by skilled and trained workforce and best practices / lessons learned presentations from experienced transit agencies, etc. When this workshop is presented need not be related to the finalization of this rule. It could be held this year or early next year.

We believe that with so much good news over the last two years in so many areas including greatly increased financial support for capital and operating costs, the Department of General Services announcing that it will accomplish a statewide transit bus procurement process similar to what Seattle did three years ago, the CPUC's recent favorable rulings to support charging infrastructure, increases in bus ranges / gradeability and new categories of buses, the adoption of inter-operable bus charging standards, increased adoption of 100% ZEB commitments from a growing list of transit agencies, etc. that California is poised to cost effectively transition its entire fleet to ZEBs no later than 2040 and most likely much sooner than that.

As transit agencies continue their transition at an accelerating rate, bus costs will continue to come down, range and utility will continue to increase, and transit agencies will experience the cost-effective operation inherent in ZEBs. This may very well incentivize them to move as fast as they can to have these savings available to expand service or lower fares. The combination of a strong planning process and a clear purchase requirement will support these benefits to transit agencies, public health and our environment.

Sincerely,

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