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September 27, 2018

Ms. Mary D. Nichols, Chair
California Air Resources Board
P.O. Box 2815
Sacramento, CA 95812-2815

RE: Proposed Innovative Clean Transit Regulation

Dear Ms. Nichols:

Thank you for the opportunity to provide comments on the proposed Innovative Clean Transit (ICT) regulation that will have its first hearing before the CARB Board on September 28. The Metropolitan Transportation Commission (MTC) is the transportation planning and funding organization for the nine-county San Francisco Bay Area. MTC is also the designated recipient of federal transit formula funds in the region, and distributes Federal Transit Administration (FTA) funds to 22 independent transit operators to help procure new buses when fleets are due for replacement.

MTC continues to share CARB's goal of reducing GHG and other emissions through electrification of transit fleets, and is supportive of constructive policies that would accelerate the transition to zero-emission buses (ZEBs). MTC's letter dated July 23, 2018 provided our comments on the Draft Proposed Regulation Summary that was released by CARB staff in June. Since the final proposal going to the Board is consistent with the draft summary, our July 23 comments still stand, but we want to use the new opportunity for public comment to reiterate our views on what we consider the key issues with the regulation.

Funding Issues

Sufficient funding levels continue to be critical to the successful transition to zero-emission fleets. CARB staff's analysis of the proposal acknowledges that up-front capital costs – for the buses and especially for the required charging or fueling infrastructure – will be higher than for conventional buses. MTC staff estimates that these incremental costs for the Bay Area alone will be roughly $1.9 billion through 2040. CARB's analysis projects that these incremental costs will be more than offset by reduced operating costs for ZEBs, but early adopter transit agencies argue that that conclusion is not supported by their experiences with ZEB operating and maintenance costs.

Even if CARB's analysis is correct and ZEBs will save money in the long run, there is still a need for additional funding for the incremental capital costs, as operating cost savings would not begin to accumulate until after the buses are in service. CARB staff's proposal suggests that existing federal and state transit funding programs are sufficient, but current funding sources for transit capital projects, such as FTA formula funds, the Transit and Intercity Rail Capital program or the Low Carbon Transportation Operations Program, are already oversubscribed, so relying on those sources for the higher costs of ZEBs and required infrastructure is unrealistic and would diminish funding for other important needs.

The proposal also points to funding programs that are dedicated to clean vehicle technology projects, such as CARB's Heavy Duty Zero Emission Pilot Deployment Program or FTA's LoNo program, but funding from these programs is very limited relative to the demand, which makes getting a grant somewhat akin to winning the lottery – great, but unlikely. If ZEB purchases are to become routine events, transit operators need reliable, recurring funding sources rather than the uncertainty and volatility of discretionary funding programs.

In our view, the two most suitable current funding sources for the incremental costs of ZEB procurements are programs managed by CARB – the Hybrid Voucher Incentive Program (HVIP) and the Volkswagen Environmental Mitigation Trust. However, ZEBs procured to comply with the purchase requirement schedule would not be eligible for either of these sources; only ZEBs purchased earlier or in greater numbers than required would be eligible.

This policy is intended to create an incentive for early compliance, but operators do not have much discretion over when they procure buses. Buses are typically replaced every 12 to 14 years, and cannot be replaced early due to federal funding requirements. CARB's incentive funding approach will therefore result in inequitable treatment of operators based solely on the vagaries of their bus replacement cycles. For example, a large operator whose next major procurement is due in 2022, the year before the purchase requirement takes effect, could use HVIP funds for all of the ZEBs they purchase, while a similar operator whose next replacement does not start until 2029, when the ZEB requirement would be 100%, would not be eligible for any vouchers.

Funding for charging, fueling and maintenance infrastructure is of particular concern. Zero-emission conversion has high initial infrastructure investment requirements, as the electric substations and hydrogen fueling equipment are installed for the first buses in service. Over time, the marginal costs of these improvements will be reduced, but operators will need financial assistance to begin their fuel source transition. Further, because the charging and fueling infrastructure for ZEBs is a prerequisite, and not ancillary, to ZEB purchasing, additional funding sources for this purpose need to be identified early in the process for operators to be successful in meeting the deadlines for transition to zero-emission fleets.

HVIP vouchers currently include a small enhancement (additional funds) for infrastructure costs, but CARB staff is proposing to eliminate the enhancement after FY2018-19 to streamline HVIP administration. There are currently no other CARB funding programs that could help cover ZEB-related infrastructure costs. The California Public Utilities Commission recently approved PG&E's expenditure of $236 million on transportation electrification, but these funds will likely be spent on a variety of transportation sectors besides transit.

To address these serious concerns, MTC recommends that CARB:

- Seek funding levels for HVIP that are sufficient to provide vouchers for <u>all</u> ZEBs procured in the state (other than those funded with VW Trust funds);
- Redirect funding from CARB's discretionary funding programs to HVIP to provide a reliable, non-discretionary source for ZEBs and related infrastructure;
- Make HVIP funds available for mandated ZEB purchases as well as early adopters.

- Retain the infrastructure enhancements for HVIP vouchers or develop another funding source for infrastructure costs.

- In addition, transit operators need to be able to lock in HVIP funds at least two years before the vouchers are needed to pay for ZEBs, so the operators know they have sufficient funds when planning procurements. As the current timely use policy requires vouchers to be cashed in within one year of award, MTC also suggests CARB extend the timely use policy to better align with actual procurement practices.

This funding is particularly critical for transit operators, which are public agencies with limited funding options for these types of major capital investments. MTC looks forward to supporting CARB's advocacy in the Legislature for this funding realignment.

Regulation Starting Date & Implementation Plans

The ZEB purchase requirements that form the core of the ICT proposal would take effect in 2023 for large operators and 2026 for small operators. If the funding issues discussed above can be addressed, these dates should provide sufficient lead time for operators large and small to plan procurements and line up needed funding. For operators that are able to procure ZEBs prior to the start dates, they would allow those operators to take advantage of the HVIP and VW funding opportunities. They should also allow more time for ZEB prices to continue to come down due to greater economies of scale, reducing the incremental cost of procuring ZEBs compared to conventional buses.

MTC also supports CARB's proposal for operators to develop plans to achieve the 2040 all-zero-emission goal, including types of ZEBs, schedule for ZEB procurements, plans for infrastructure and staff training, and funding needs. In conjunction with the later start date, this element will assist operators in moving forward strategically with ZEB rollout. Further, MTC fully endorses the proposal's flexibility to comply with the regulation through the use of individual and group implementation plans, which will allow operators to meet local needs such as bus replacement schedules and emergency response requirements.

Additionally, the inclusion of waivers for early compliance is a welcome addition to the proposal and could motivate operators to collaborate on procurements to meet the minimums to achieve the waivers. Similarly, we appreciate CARB providing flexibility for deferrals or exemptions if available ZEBs do not have sufficient range to meet daily mileage requirements. Finally, we also support exclusion of zero-emission cutaways and smaller buses, over-the-road coaches, and articulated buses until 2026 or until such vehicles have completed Altoona testing.

ZEB Bonus Credits & SFMTA Trolley Coaches

CARB's revised proposal includes a provision to grant bonus credits for battery-electric buses (BEBs) put in service before 2018 and for fuel-cell electric buses (FCEBs) placed in service before 2023, with double credit for FCEBs placed in service before 2018. MTC supports the bonus credits as an effective way to reward the early adopters who incurred high costs to help push the development of ZEB technology toward commercialization, and for operators of FCEBs that have substantially higher costs – and greater range and performance – than BEBs.

Electric trolley coaches operated by SFMTA are treated as ZEBs under the current Transit Fleet Rule, but not under the ICT proposal. SFMTA's zero-emission electric trolley coach fleet is the largest such fleet in the United States, representing a significant investment in zero-emission bus technology. The use of electric trolley coaches clearly advances CARB's goal of reducing GHG and other emissions and improving air quality. On a well-to-wheel basis, SFMTA's trolley coaches are actually cleaner than other ZEB technologies, as the source of their electric power is hydroelectric. Additionally, because of the unique topographic challenges in San Francisco, electric trolley coaches are the only ZEBs currently available that can scale the 23% grades that exist on some of their routes. MTC, therefore, supports SFMTA's position that the proposed regulation be revised to:

- Give one bonus credit to operators for each electric trolley coach placed in service between January 1, 2018 and January 1, 2020.

MTC would further recommend that the proposed regulation be revised to be generally technology-neutral, allowing operators to choose locally the ZEB technology that best suits their service provision needs.

Operating Costs & Regulatory Assessments

CARB's revised proposal does not address the concern expressed by transit operators that the operating costs of ZEBs already in service have been higher than for conventional buses, primarily for electricity and maintenance. This experience contradicts CARB staff's analysis that operating cost savings over the life of a battery electric bus would more than offset the higher up-front capital costs. To address these concerns, MTC recommends that CARB work collaboratively with the transit operators and other stakeholders to:

- Conduct an independent third-party analysis of costs (operational and capital) and work collaboratively with transit agencies to establish benchmarks for ZEB cost, performance and weight.
- Conduct periodic assessments of whether ZEB technology and the market are meeting the benchmarks, and of barriers to electrification, including funding.
- If the benchmarks have not been met or funding or other barriers are inhibiting ZEB implementation plans, CARB should consider revisions to ZEB purchase requirements or other strategies to overcome barriers to implementation.
- However, if the benchmarks have been met or funding barriers have been resolved, CARB may enforce the purchase requirements established by the regulation, as reflected in transit operators' individual or group ZEB roll-out plans.

We believe this approach strikes the right balance between providing assurance to the transit operators and their funding partners, including MTC, that the transition to zero emission fleets will not impair the ability to provide transit service and fund other transit priorities on the one hand, and providing assurance to CARB and other stakeholders that transit operators will be held accountable in implementing their transition plans on the other.

MTC looks forward to continuing to work with CARB and the Bay Area transit agencies to support the transition of the region's transit fleet to zero emission, while minimizing financial and operational risk to the transit fleet particularly in the early years of the transition. If you have any questions about our comments, please contact Kenneth Folan at kfolan@bayareametro.gov or 415-778-5204. Thank you for your consideration.

Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

cc: Bay Area State Legislative Delegation
Jack Broadbent, Bay Area Air Quality Management District

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