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EXECUTIVE MANAGEMENT AND AUDIT COMMITTEE
OCTOBER 19, 2006

SUBJECT: CARB ZERO EMISSION BUS REGULATIONS

ACTION: APPROVE STAFF RECOMMENDATION ON CARB REGULATION

RECOMMENDATION

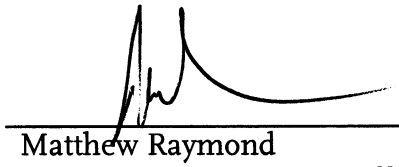
Adopt the following position:

A. CARB ZERO EMISSION BUS REGULATIONS- **OPPOSE** - The California Air Resources Board (CARB) will consider regulations that will require large transit agencies to initiate Zero Emission Bus programs that are economically and operationally not feasible to implement and threaten basic bus service for our transit riders.

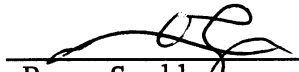
ATTACHMENTS

Attachment A: Legislative Analysis

Prepared by: Michael Turner
Government Relations Manager



Matthew Raymond
Chief Communications Officer



Roger Snoble
Chief Executive Officer

ATTACHMENT A

BILL: AMENDMENTS TO THE CALIFORNIA CODE OF REGULATIONS 2023.1 THROUGH 2023.4

AUTHOR: CALIFORNIA AIR RESOURCES BOARD (CARB)

TITILE: CARB FLEET RULE FOR TRANSIT AGENCIES – URBAN BUS REQUIREMENTS

STATUS: CARB MEETING OCTOBER 19-20, 2006

POSITION: OPPOSE

RECOMMENDATION

Staff recommends that the Board of Directors adopt an OPPOSE position on the proposed amendments to the CARB Zero Emission Bus Regulations.

ISSUE

CARB staff is proposing to amend the existing Fleet Rules for Transit Agencies to mandate large transit agencies to initiate new Zero Emission Bus (ZEB) programs that are economically and operationally not feasible to implement.

PROVISIONS

Existing CARB fleet rules for transit agencies were adopted in February of 2000. Each transit agency was required to select a compliance path – either the "diesel" path or the "alternative fuel" path. Metro selected the "alternative" fuel path. The path selection set the fuel type for new urban bus acquisitions through model year 2015. Transit agencies were required to achieve fleet reduction requirements for emissions. The zero emission bus portion of the rule promoted advanced technologies by requiring a demonstration and a fifteen percent acquisition or purchase requirement . The alternative fuel path agencies were exempt from the initial demonstration because they were required to invest in new infrastructure, such as high pressure natural gas tanks.

Under the proposed regulations, CARB staff recommends amending the existing fleet rules by:

- Postponing the fifteen percent purchase requirement by three years for diesel path agencies, and one or two years for transit agencies on the alternative fuel path (Metro).
- Begin an Advanced Demonstration by January 1, 2009 for diesel path agencies and January 1, 2010 for alternative fuel path agencies. Agencies not participating in the

Advanced Demonstration on either fuel path would be required to start the purchase requirement on January 1, 2011.

- Alternative fuel path agencies that opt for the Advanced Demonstration would be given additional year, January 1, 2012 to begin the purchase requirement .
- Since the purchase requirement will be delayed in all scenarios, staff proposes to extend the purchase requirement from 2015 to model year 2026.
- The Executive Officer would be directed to evaluate the purchase cost, the fuel cell durability or warranty and reliability and reduce the percentage purchase requirement for a specified model year if specified criteria are not met. The Executive Officer would repeat this process annually.

IMPACT ANALYSIS

Metro's primary concern with CARB's proposed ZEB regulations is with the economics and operational viability of implementing a ZEB program at the scale recommended. Metro's independent technology expert, Dr. Adi Arieli, estimates that any of three proposed ZEB program levels (2%, 8% or 15%) would cost Metro $40 million or more annually. Additionally, the cost and operational impacts of developing hydrogen fueling infrastructure has not yet been evaluated[1]. At this time, Metro is reluctant to program funding to a ZEB program at the level suggested in the proposed regulation; doing so will require corresponding reductions to both Metro's fleet replacement plans and its core operation.

Metro is concerned by the preference given for hydrogen fuel cell technology. This approach negates our billion dollar investment in CNG technology and infrastructure, and makes it impossible to have an evolutionary transition from our current CNG technology experience to the future hydrogen technology. Metro suggests that the regulation be rewritten in a way that is fuel/technology neutral, giving a level playing field for all developing technologies. Ideally, CARB as a regulatory agency (and not a technology development or operational agency) should establish a requirement, and to then leave it up to the transit agencies to select the best approach for meeting the requirement.

Metro has doubts about the usefulness of the proposed Advanced Demonstration Program. There are only two viable fuel cell manufacturers available (Ballard and UTC) and one integrator (ISE). Buses using Ballard and UTC fuel cells are currently under test in Northern California, as well as elsewhere in the world. In the case of the Northern California tests, after the expenditure of tens of millions, today there is only a token amount of actual operational experience (A recent report on the AC Transit experience indicated that over $18 million was spent on their demonstration).

Requiring transit agencies to buy 100+ of the same fuel cell buses (at an expense exceeding $300 million) will not add to our common experience. Baring significant technical advancements, we would expect to see the same problems that are now being encountered in Northern California.

Metro observes that in the case of ZEB, many of the proposed regulations are predicated on technology advancements that are not demonstrated or commercially available today. As is frequently the case with advanced R&D efforts, the companies that are developing and demonstrating these new technologies are not firms with experience or facilities required to support the scale and scope of our industry's operations. Rather than dealing with established manufacturers with extensive distribution and support networks (e.g. Cummins, Allison, etc...), all of the ZEB project technology developers are all smaller companies...primarily start-ups and joint ventures. The bus manufacturers that actually deliver, warrant and support buses at the transit agencies have not indicated that they are ready to manufacture fuel cell buses commercially at any time in the near future. Metro suggests that CARB staff contact these manufacturers (i.e. NABI, Gillig, New Flyer and Orion, the four companies that supply over 90% of transit buses 40 ft and larger) and obtain their written commitment prior to establishing procurement requirements.