Metro

Metropolitan Transportation Authority

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AIR RESOURCES BOARD
CLERK OF THE BOARD

Robert F. Sawyer, Ph.D.
Chairman
California Air Resources Board (CARB)
Headquarters Building
1001 "I" Street
P.O. Box 2815
Sacramento, CA 95812

October 16, 2006

XC: Board Members 06-9-4
Chairman CEW 10/19/06
TJ TAC
KQ Legal (AM/VD) MSCD

Dear Dr. Sawyer,

The Los Angeles County Metropolitan Transportation Authority (Metro) is widely acknowledged as one of the world's leaders in clean fuel technologies. Metro, along with several of our fellow transit properties, pioneered the research and development of natural gas fuel in large vehicles. To date Metro itself has spent over ONE BILLION DOLLARS in perfecting the technology and purchasing 2,345 CNG powered buses, the largest fleet in California and one of the largest in the world. No agency in the state has done more to achieve clean air than Metro. We not only operate clean buses but our fleet of rail cars operates with zero emissions. In fact everything Metro does helps to improve air quality by either eliminating car trips, speeding up traffic, clearing broken-down vehicles on freeways and encouraging car pooling, biking and better land use patterns through joint development. Metro is not only committed to improving air quality but is doing it- everyday and in many ways.

Although natural gas buses are a very common sight on urban streets in California the same is not true for other large engine vehicles. Transit operators have proven the value of alternatively fueled large engine vehicles but the technology has not been moved to the other 99% of vehicles that are still pouring thousands of tons of deadly pollutants into the air every day.

Metro welcomes working with CARB to make a real difference in achieving cleaner air in California and in eventually getting to the point where none of the vehicles we operate have any harmful emissions. However, we view the proposed Zero Emission Bus (ZEB) regulations now being proposed as a slap in the face to YOUR BEST PARTNERS. As proposed, these regulations severely punish us for doing the most to clean our air. It is not simply a matter of the extraordinary cost of complying with these proposed regulations but rather the meager benefit derived by pursuing such a strategy. In light of the very disappointing results we have seen from our extraordinary investment and efforts to develop natural gas technology and the lack of will to spread it to other vehicles, we have no confidence that if we are able to perfect zero emission technology that it will be passed on to the 99% of vehicles that will really make a difference. And why should the burden of perfecting zero emission vehicles fall on the meager resources of the transit industry?

As stated earlier, Metro has invested ONE BILLION DOLLARS in developing natural gas technology. That same ONE BILLION DOLLARS invested in providing quality transit service would have produced far greater air quality improvements than developing technology that has produced absolutely no measurable results.

We are very disappointed in your approach to try to severely limit our ability to carry out our mission and your complete lack of understanding of what that mission is and how it is one of your best strategies to achieving your mission.

Attached is a more detailed summary of our concerns with the proposed regulations. PLEASE DO NOT ACT ON THE PROPOSED REGULATIONS. Instead we ask that you work with us and the transit industry to develop a meaningful way to actually improve the air for all Californians.

Sincerely,

Roger Snoble
Chief Executive Officer

Attachment: Detailed Response to CARB ZEB Proposed Regulations

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Copies: Metro Board of Directors
Joshua Shaw, President, California Transit Association
Dr. William Burke, Chairman, South Coast Air Quality Management District

Attachment - Detailed Response to CARB ZEB Proposed Regulations
October 13, 2006

Metro has followed closely CARB's proposed rule making[1] including recent updates that would affect testing requirements and proposed ZEB program levels. The following comments are directed at the ZEB regulations in general, as well as the specific proposed changes made since last May:

- 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. Our 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 a hydrogen fueling infrastructure has not yet been evaluated[2]. 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 capital program, 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). Collectively, the proposed ZEB test regulation for 2009 might result in testing of several dozen additional fuel cell buses (at an expense reaching $100 million or more). This additional testing will not add to our common experience. Barring significant technical advancements, we would expect to see the same problems that are now being encountered in Northern California.

- At this time, it is unclear whether a transit property will legally be able purchase such vehicles with Federal funds until after the ZEB vehicle(s) has been demonstrated as compliant with Federal regulations, Unless the entire purchase is locally funded and/or Federal waivers are granted, bus manufacturers would be required to meet these significant vehicle testing requirements. The Surface Transportation and Uniform Relocation Assistance Act (STURAA) of 1987, Section 317: Bus Testing, establishes a requirement for all new model buses to be tested prior to purchase with federal funds, and it specifically requires alternative fuel buses be tested to meet these requirements.

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[1] CARB has proposed changes in California Code of Regulations, Title 13, Sections 2023.1 to 2023.4.

[2] Hydrogen storage might turn out to be a very thorny issue. Our divisions are located in the neighborhoods close to homes, businesses, schools and churches. These communities could object to hydrogen being stored at high pressures at these locations and could initiate litigation blocking the storage of hydrogen.

- Metro questions the proposed service, durability and reliability levels proposed in Section 2023.3.d of the proposed rulemaking. Metro plans for a minimum of 95% of active fleet buses to roll-out daily. Our average base run is between 250-350 miles at an average speed of 11 mph, and each transit vehicle is expected to last 500,000 miles (about 45,000 hours) with just one mid-life engine rebuild. Buses that do not meet these operational levels have limited utility at a large transit property, and sustaining such buses in service can be disruptive to core services. Given the potentially severe operational impacts of mandating the use of large buses (as defined under the urban bus rule), CARB may want to consider smaller vehicles that could more easily be incorporated into Metro services.

- 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.