

ADVANCED TECHNOLOGY VEHICLE CONSORTIUM

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March 15, 2004

SUBJECT: PLAN OF ACTION TO MEET 2007 AND 2010 CARB AIR EMISSIONS REGULATIONS

ACTION: RECOMMEND ELECTRIC TROLLEY BUSES TO MTA BOARD

RECOMMENDATION

- A. Receive and File status report on status of current technologies likely to meet 2007 and 2010 emission regulations.
- B. Recommend to the LACMTA Board that they re-instate a Trolleybus Plan similar to that included in the 1992 Thirty-Year Integrated Transportation Plan.

ISSUE

Existing MTA bus fleet technologies (primarily CNG) may not meet California Air Resource Board's (CARB) Adopted Urban Bus Transit Rules for 2007 and 2010 Emission Standards. At this time, current CNG technologies do not meet proposed 2007 regulations, and Electric Trolley Buses are the only proven technology commercially available that can meet the adopted ZEV regulations for 2010.

ATVC is being asked separately to consider acquiring hybrid-electric vehicles that are capable of meeting 2007 and 2010 ULEV requirements.

POLICY IMPLICATIONS

If the MTA Board approves "Recommendation B" above, Electric Trolley Buses would be added to the mix of transit modes operated by MTA.

OPTIONS CONSIDERED

The primary alternative is to do nothing and wait for the industry to develop vehicles that meet the adopted regulation. One possible consequence to this strategy is that if no appropriate technology emerges or develops, MTA would be forced to ask CARB to postpone implementation of proposed 2010 regulations. This alternative is not recommended. Proposed CARB emission standards for 2007 and 2010 are well ahead of those for the rest of the United States, and existing engine and vehicle manufacturers are unlikely to develop suitable vehicles on their own unless incentivized by large customers such as LACMTA.

Although staff continues to monitor development work with fuel-cell buses as well as with electric buses, fuel cell technology continues to be a long way from becoming a mature, commercially and financially viable products. Failure to meet the 2010 Emission Standards may result in regulatory punitive fines including possible loss of funding, and potentially litigation.

FINANCIAL IMPACT

There is no impact to ATVC's or MTA's budget by this action. However, incorporating trolley lines into the MTA's Long Range Capital Plan will require significant new infrastructure investments after 2010, and funds for the proposed Plan of Action are not currently available. ATVC's consultant has had preliminary discussions with other local public agencies to consider the feasibility of pursuing public/public and/or public/private-partnerships (similar to the CNG fueling station partnerships). Such partnerships could mitigate or offset some of the infrastructure expenses associated with implementing a trolley-bus system.

BACKGROUND

ATVC can act as a "Skunk Works" for the Vehicle Technology Department at MTA. Technological development programs can be carried to maturity by the ATVC until it becomes a serious candidate for procurement/deployment within MTA's vehicle fleet. At the point emerging technologies have matured suitably for MTA's operational needs, then such programs can be transferred to MTA for fleetwide implementation. A few examples of this successful process are: composite-body buses; large capacity buses; analysis for the Consent Decree; analytical support for the "Hub-and Spoke" restructuring.

As ATVC has continued to review and consider new technologies that promise to meet 2010 emission regulations, at this time, electric trolley buses are the sole proven technology that can cost effectively meet 2010 emission regulations.

NEXT STEPS

ATVC staff will make a presentation to the LACMTA Board.

ATTACHEMENT

Summary of CARB Adopted Urban Transit Bus Fleet Regulations and Emission Standards.

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APPROVED BY:

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Attachement A

ALTERNATIVE-FUEL PATH

| Model Year | NOx (g/bhp-hr) | PM (g/bhp-hr) |
|-------------------|--|---|
| 2000 | 2.5 | 0.05 |
| 2001 | | |
| 2002 | 4.8 (fleet average) | |
| 2003 | | PM Retrofit Requirements <=15 PPM sulfur diesel fuel |
| 2004 | Diesel Path "Closed" | |
| 2005 | | |
| 2006 | | |
| 2007 | 0.2 | 0.01 |
| 2008 | | |
| 2009 | | |
| 2010 | 15% of new purchases are Zero Emission Buses (ZEB's) for large fleets (>200 vehicles) | |