



Metro

Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000 Tel
metro.net

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TO: BOARD OF DIRECTORS

THROUGH: ROGER SNOBLE
CHIEF EXECUTIVE OFFICER

FROM: JOHN B. CATOE JR.
DEPUTY CHIEF EXECUTIVE OFFICER

SUBJECT: METROLINK EMISSIONS REDUCTION UPDATE

ISSUE

Report on progress of motion introduced by Directors La Bonge, Fasana, and Proo, to explore new opportunities to reduce air quality emissions from Metrolink Operations.

DISCUSSION

Metro Vehicle Technology staff has met with Metrolink staff and the Advanced Technology Vehicle Consortium (ATVC) consultant to review past studies and actions, discuss current activities, and investigate future opportunities and technologies aimed at reducing locomotive emissions.

Metrolink has always strived to improve air quality in the Southern California basin by providing transportation alternatives to the single passenger commuter car with the most efficient equipment available.

In 1991 the Southern California Regional Rail Authority (SCRRA) participated in The Southern California Accelerated Rail Electrification Program. At that time, this plan carried an estimated cost of \$1.855 billion to electrify the commuter routes but was never implemented due to the high cost, and lack of support from the freight carriers.

Previous manufacturer support for alternative fuel vehicles has been lacking with only a handful of experimental CNG, LNG, and hybrid locomotives being produced and sold in recent years.

In May 2004, the "*Clean Air Rules for 2004*" was signed by the Bush Administration. This is a suite of rules that addresses ozone and fine particle pollution, non-road diesel emissions and power plant emissions of sulfur dioxide, nitrogen oxides and mercury.

To meet these emissions standards, engine manufacturers will produce new engines with advanced emission-control technologies, and high efficiency catalytic after-treatments similar to those already expected for highway trucks and buses. The new non-road diesel emissions standards will reduce emissions by more than 90 percent. Implementation of these technologies will be phased in for new vehicles, and during remanufacturing/re-powering of existing equipment between 2008 and 2015.

In order to utilize these advanced technologies to reduce emissions, diesel fuel will need to be reformulated from “low sulfur” diesel with 500 ppm (parts per million) to “ultra low sulfur” with 15 ppm. The reduction of sulfur alone in diesel will have a drastic reduction in soot from all engine types.

MetroLink is currently using 15 ppm “ultra low sulfur” diesel fuel. Use of this fuel type allows MetroLink to reduce its current soot output, and to pave the way for the introduction of advanced exhaust system treatments and technologies yet to be developed.

In addition to looking at engine, and exhaust treatments that meet the clean air standards, MetroLink will continue to look into other technologies that will reduce their emission output, and implement where appropriate.

NEXT STEPS

As emissions component technologies mature and come to market, Metro Vehicle Technology staff will update the Board on their implementation on MetroLink equipment.