



Chairman John Fasana  
LA County Metropolitan Transportation Authority

April 2017

**Re: Bus procurement policies**

CC: Metro Board members

Dear Chairman Fasana and Metro board members:

Metro is now considering its policies toward future bus purchases. I urge the Metro board to adopt the policy recommended by your staff to purchase both electric powered buses and near-zero emission natural gas buses powered by Renewable Natural Gas (RNG), sometimes called biogas or biomethane. It should be clear with these procurements, perhaps with all Metro procurements, that preference will be given to products manufactured in Los Angeles County.

My recommendation reflects the observation that transit fleets play a vital role in facilitating future deployment of cleaner advanced technologies in the much larger heavy-duty truck marketplace, Southern California's greatest clean air challenge. Transit operators should be cognizant of this role and reflect that role in their procurement decisions.

Metro should certainly strive to ensure that the Metro bus fleet consists of the cleanest possible bus technologies. Your staff and consultants have made a case on the merits for inclusion of RNG-powered technologies in your fleet, both because ultra-clean natural gas engines have been certified as near-zero emission technologies and merit inclusion, but also because use of RNG serves to remove methane, a more powerful greenhouse gas than carbon dioxide, from evaporation into the atmosphere. Other transit operators (e.g., the Big Blue Bus) have had success with RNG. Metro should assume a leadership role in efforts to expand applications for RNG.

According to information provided at the California Air Resources Board website more than 80% of all methane emissions come from renewable sources such as dairies, landfills, and wastewater processing.

[https://www.arb.ca.gov/cc/inventory/slcp/data/slcp\\_ch4\\_100yr1.pdf](https://www.arb.ca.gov/cc/inventory/slcp/data/slcp_ch4_100yr1.pdf)

Transforming such methane into a fuel for use in buses and other vehicles constitutes an excellent way to redirect it from evaporating directly into the atmosphere by reconstituting the gas as something much less harmful. This will significantly reduce greenhouse gases overall.

However, in addition, transit fleet operators have another role to play in the effort to clean our air and your policy should reflect this.

**Bus fleets serve to demonstrate the operational readiness of advanced heavy-duty engines and power systems for deployment in far more complex and demanding duty cycles, especially heavy-duty medium and long-haul trucking.**

Truck operators learn a lot from transit operator use of these technologies in terms of the reliability and suitability for trucking use of these newer more-advanced heavy-duty engines. As such transit is a kind of "proving ground" that can be crucial for cleaner technologies to gain acceptance in the heavy-duty truck marketplace. This is especially important since neither California nor the South Coast AQMD have direct regulatory authority over emissions from trucks used in California.

A crucial point: emissions from heavy-duty trucks are the great unfinished challenge of our clean air planning in Southern California and diesel emissions are among the most pernicious. Diesel emissions have been formally declared a toxic air contaminant by the California Office of Health Hazard Assessment. They are heavily implicated in asthma and lung cancer incidence in our county.

Thus, the role that transit bus fleets play as a proving ground for clean heavy-duty engine technologies that might then enter use in trucking operations has great significance beyond your own immediate emissions.

Battery electric vehicles still have range challenges. There may simply be a limit to the role that battery powered electric engines can play in the larger heavy-duty vehicle universe: good for drayage trucking or in-basin delivery, but not appropriate for medium range or long haul trucking.

For those longer trips and more demanding duty cycles natural gas technologies perform well. Facilitating the deployment of heavy-duty engines powered by RNG in transit bus applications readies this technology to enter the longer haul heavy-duty marketplace.

That is an exceptionally important role for environmental purposes and Metro should treat that role as an important part of its mission. In the entire heavy-duty vehicle sector, it is not electric versus natural gas that is the relevant comparison here – it is both versus diesel.

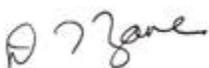
Awareness of this important additional role for transit systems was taught me by the late Carl Moyer with whom I worked back in the 1990s on legislation that now bears his name, the Carl Moyer Program, one of our state's most important clean air programs for advancing clean alternatives to diesel power in heavy-duty on and off-road applications. Carl was a technology expert, often used by the California Air Resources Board, when it came to questions about heavy-duty vehicles, principally trucks. Carl had a deep understanding of both the operational elements as well as the emissions and environmental implications of all engine technologies that were candidates for the heavy-duty vehicle sector.

Carl would emphasize that while cleaning up transit buses was a vital agenda on its own, for public health and environmental justice reasons, the larger agenda needed to be getting all heavy-duty vehicles – trucks, trains, off-road vehicles like bulldozers and the like – off diesel fuel.

Before the trucking industry will integrate new engine technologies into their fleet they will want confidence in the performance of those vehicles. It is in the use of these technologies in the transit fleet where that confidence is built. The public, in this case Metro, has direct authority over purchase of technologies for bus fleets. But the public has no similar authority over truck fleets. So, this indirect role of transit fleets demonstrating the efficacy of potential truck engines is an important part of the overall clean air agenda.

If Carl Moyer were here today I believe that he would say that the transit bus sector best serves our larger community's environmental goals as well as its own performance objectives by treating both electric powered and near-zero emission RNG technologies as important components of our fleet. Otherwise we will be conceding to diesel a continuing and dominant role in long-haul trucking.

Thank you



Denny Zane  
Executive Director

