

13 Wyndemere Vale  
 Monterey, CA 93940  
 June 10, 2008

Monterey Salinas Transit  
 One Ryan Ranch Road, Monterey, CA 93940

Monterey Regional Waste Management District  
 PO Box 1670, Marina, CA 93933

Monterey Regional Water Pollution Control Administration  
 5 Harris Court, Bldg D, Monterey, CA 93940

Dear sirs,

Monterey Salinas Transit is now paying over \$5.00 per gallon for diesel fuel, primarily from imported oil. This high price will probably increase in coming years as oil fields are depleted. I suggest that MST consider powering its buses with biogas, that is, methane from biological sources. Biogas is naturally produced, sustainable, and potentially available at low cost in large volumes. Biogas has been used in Europe as a clean burning, low pollution fuel for power buses for over a decade.

<http://blogs.iht.com/tribtalk/business/green/?p=162>  
<http://www.agores.org/Publications/CityRES/English/Lille-FR-english.pdf>

MST operates 17 buses powered by compressed natural gas (CNG) but intends to replace them with clean diesel buses because of their higher maintenance costs. While this replacement may have made sense when diesel fuel was \$2.00 a gallon, I doubt if it still does. MST's CNG buses could burn biogas with little or no modification.

Specifically, I suggest that MRWMD and MRWPCA expand on their present recycling programs to produce biogas from yard and agricultural wastes and sewage sludge. MRWMD already produces over 1.5 million cubic feet of biogas per day to generate electricity. MRWPCA already has an excellent project to recycle waste water, increasing water supplies and reducing sea water intrusion. Initially, biogas would be substituted for natural gas to power MST's CNG buses and later, to power additional buses.

Many proposed fuels have undesired side effects, will not be available in large quantities for years, or require new infrastructure. For example, ethanol is not cost effective, particularly if it is made from corn, and is one of the major reasons for the current global food crisis. We should save our corn for people, not SUVs. Biodiesel can be made from crops such as soybeans and sunflowers but again these are food and the volumes available will not come close to meeting the demand. Other proposals such as hydrogen fuel cells and cellulosic bacteria to make biodiesel from agricultural wastes are years in the future.

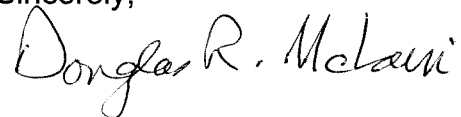
A Monterey County Bus Biogas Project could demonstrate how local agencies can cooperate on a common goal. Too often we read of agencies squabbling over turf or other apparently

petty reasons. Here is a way three local agencies can cooperate on a project we can all understand and appreciate. We must reduce our dependence on imported oil -- we can start locally and not wait for the Federal Government.

How to pay for it all? Ideally, MRWMD and MRWPCA could expand biogas production and sell the gas to MST. If biogas production can not be easily expanded, MRWMD could retire one or more of their older diesel generators. Fueling buses with biogas would be more efficient than converting it to electricity and then using the electricity somewhere else to power motors.

Thank you for considering my proposal.

Sincerely,

A handwritten signature in black ink that reads "Douglas R. McLain". The signature is written in a cursive style with a large initial 'D'.

Douglas R McLain, PhD

# MST

MONTEREY-SALINAS TRANSIT

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JOINT POWERS AGENCY MEMBERS:

*City of Carmel-by-the-Sea • City of Del Rey Oaks • City of Marina • City of Monterey • City of Pacific Grove  
City of Salinas • City of Seaside • County of Monterey • City of Gonzales (ex. officio)*

June 23, 2008

Mr. Douglas R. McLain, PhD  
13 Wyndemere Vale  
Monterey, CA 93940

Dear Dr. McLain:

Thank you for your detailed letter regarding alternative fuels and public transit. Please note that MST has retired its CNG fleet and has auctioned these vehicles. Federal Transit Administration (FTA) regulations identify the usable life of a 35-foot transit bus as 12 years and a 30-foot transit bus as 10 years. In that regard, MST's 35-foot and 30-foot CNG buses had all reached the end of their respective usable lives by the time they were retired and auctioned.

Although the cost per gallon/gallon equivalent for diesel may be higher than CNG right now, please keep in mind that the fuel efficiency of MST's CNG fleet was much lower than that of its ultra low sulfur clean diesel fleet, and the costs of maintaining the CNG fleet were much higher. The operation, repair and upkeep of the CNG fueling infrastructure, the limited range of CNG vehicles, the frequency of breakdowns, and other difficulties associated with these vehicle led MST to make the decision to follow the single ultra low sulfur clean diesel fuel path that was already powering 80% of its transit buses.

In a pilot biofuel project already well underway, MST is about to harvest 20 acres of mustard seed outside of King City, which will then be processed into biodiesel at the BioEASI refinery in Gonzales for use in MST's buses. After the oil is pressed out of the seed, excess mustard meal will be used as natural pesticides for use on local organic fields. I invite you to visit [www.mst.org](http://www.mst.org) to learn more about this exciting, sustainable project and to view pictures of the planting and growing of the crop.

The Monterey Regional Waste Management District has captured landfill gas to fuel engine/generators to produce renewable power, saving the District \$350,000 per year in electricity purchases. In addition, the District sells nearly \$2 million worth of electricity, with the revenue supporting the power project and related operations. Converting landfill gas to vehicle fuel is an expensive proposition, but may be worth re-evaluating in light of present fuel prices. For further information on the District's operations visit: [www.mrwmd.org](http://www.mrwmd.org).

Sincerely,



Carl G. Sedoryk  
General Manager/CEO

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C: MRWMD; MRWPCA