


Office of the City Manager

INFORMATION CALENDAR

December 17, 2002

To: Honorable Mayor and
Members of the City Council

From: ~~Weldon~~  Rucker, City Manager

Subject: Initiation of 100% Biodiesel Fuel Program for Refuse Trucks and Other Equipment
(CF191-2001 and CF26-2001)

INTRODUCTION

This report provides an analysis of the costs of converting the City's diesel-fueled vehicles to 100% Biodiesel. Staff has determined that the additional costs to convert the vegetable oil content from 20% Biodiesel (B20) to 100% Biodiesel (B100) for use in refuse trucks and other city vehicles can be absorbed within the current year's budget. However, in future years, minimal increases in the Refuse Disposal Fee and other funds would be needed to pay for the additional costs.

CURRENT SITUATION AND ITS EFFECTS

Out of the City's approximate 600 vehicles, trucks and small equipment; approximately 200 use diesel-type fuel and most of these are using B20 Biodiesel. To reduce emissions into the air and study the effects of B20 on our fleet, the City first began using B20 in fiscal year 2002. Our vehicles and equipment formerly fueled by diesel have successfully run on B20 without any major modifications or problems. By increasing the percentage to 100% vegetable oil (B100), these vehicles and equipment can significantly reduce emissions of unburned hydrocarbons, carbon monoxide and particulate matter into the air.

Studies, including those of the United States Environmental Protection Agency (EPA) have identified the negative health and environmental effects of diesel. City staff has researched various fuels and decided to try B20 Biodiesel for the majority of our diesel type vehicles and equipment and thereby reduce pollutants. Most significant is that 100% Biodiesel can reduce particulates approximately 50%. Meanwhile, the Ecology Center converted to 100% Biodiesel and has advocated that the City increase to Biodiesel with 100% vegetable oil content, to further reduce pollution. In addition, the following six City Commissions have recommended to Council that the City evaluate the impacts of converting to 100% Biodiesel:

- 1) Public Works Commission
- 2) Solid Waste Management Commission

- 3) Community Environmental Advisory Commission
- 4) Energy Commission
- 5) Transportation Commission
- 6) Peace and Justice Commission.

In addition to immediate health and environmental benefits of increased use of Biodiesel, some of these City commissions have also noted other benefits. These have included less dependence on highly polluting domestic and foreign oil, less demand for environmentally destructive drilling and pursuit of oil in the natural environment, and less military intervention, violence, and wars related to pursuit and domination of oil markets around the world

BACKGROUND

Any increase in the amount of vegetable oil in a Biodiesel form decreases fuel pollution. Existing diesel vehicles and equipment only require minor modifications to convert to Biodiesel use. Robert Clear of the California Air Resources Board (CARB) provided the following information to the Energy Commission:

It is estimated that diesel particulate exhaust represents three-fourths of the cancer risk from toxic air pollutants. CARB is responsible for controlling and reducing diesel exhaust and has substantially reduced diesel emission rates from those of 1990. Despite new regulations expected to further reduce these rates, diesel emission will still remain a significant air pollution hazard unless further steps are taken. One such step, which can have a strong influence at a local level, is that of fuel substitution. Substantial reductions in emissions can be obtained by switching to ultra-low sulfur, diesel, Biodiesel, or by converting an engine to bi-fuel operation.

For over 20 years, the City has made its own commitments to conversion to cleaner fuels in numerous City documents including its energy, health and environmental plans, and resolutions, as well as, the Valdez Principles passed by the City Council. This report is also in response to two requests from the City Council to prepare a timetable and budget for the conversion of City vehicles to energy efficient and environmentally acceptable fuel in consultation with City Commissions (CFs191-2001 and 26-2001).

POSSIBLE FUTURE ACTION

With the conversion to B-100 fuel for selected fleet vehicles, the City Council will likely need to consider increases in future fees for some of the funds impacted by increased costs. In addition, the Council may wish to consider conversion of vehicles to other alternative fuels, as these vehicles are due for replacement.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

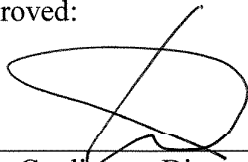
Conversion of the City's diesel fleet, excluding fire engines, to B100 biodiesel is estimated to increase fuel costs by 32%, or \$109,000 a year. Of this amount, \$88,000 is for our refuse trucks, and \$21,000 is for conversion of other vehicles and equipment currently fueled by B20 at the corporation yard. This estimate will vary as the cost for this fuel fluctuates significantly. In future years, increases in the refuse fund (approximately 0.4%) as well as other funds will be needed to pay for the additional costs. Any fee increases required for increased fuel costs would be in addition to the increases necessary to fund the increased costs of employee salaries, fringe benefits and other increased operational costs.

Among the additional costs to be reviewed in the next budget review process will be conversion of all City Fire Stations to Biodiesel. This would represent an increase in General Fund costs for which there is no identified funding source. Since it is more expensive for the supplier to make small deliveries to these locations, conversion of these vehicles to B100 biodiesel is estimated to double the current cost of conventional diesel, from \$30,000 to \$60,000 per year.

CONTACT PERSON

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Approved:



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