

CITY OF OAKLAND  
AGENDA REPORT

FILED  
OFFICE OF THE CITY CLERK  
OAKLAND

2003 MAY 15 PM 6:37

TO: Office of the City Manager  
ATTN: Robert C. Bobb  
FROM: Public Works Agency  
DATE: May 27, 2003

RE: REPORT AND RECOMMENDATION ON A "GREEN FLEET" RESOLUTION  
ESTABLISHING POLICIES TO REDUCE THE ENVIRONMENTAL IMPACT  
OF THE CITY'S FLEET

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**SUMMARY**

In his State of the City speech, Mayor Brown committed to converting the City's fleet to less-polluting forms of energy within the next seven years. As a result, the Public Works Agency's Equipment Services Division recommends that the City Council approve a resolution to ensure that the City purchase alternative fuel vehicles whenever financially possible. Staff will implement the resolution through policies that will reduce greenhouse gas emissions, increase the fleet's fuel efficiency, and improve local air quality.

**FISCAL IMPACT**

The proposed "green fleet" resolution will not increase the City's fleet acquisition budget; the costs of implementation are limited, as described below.

The green fleet resolution directs the City to purchase alternative fuel vehicles (AFVs) whenever financially possible. At this time, purchasing an AFV is in most cases more expensive than purchasing a gas-powered vehicle. However, the Equipment Services Division seeks out grants, rebates, and early payment discounts in order to partially or fully offset the additional cost. For example, the City receives a \$4,500 "incentive" from the Bay Area Air Quality Management District for each super low emissions vehicle (SULEV) that the City purchases. With this \$4,500 credit, the purchase price of a compressed natural gas (CNG)-powered Honda Civic is \$100 less than a gasoline-powered Ford Focus (the most common vehicle in the City's automobile fleet). Factoring in the reduced fuel costs, the CNG-powered Honda Civic costs \$500 less than a Ford Focus over a seven-year life cycle.

Because both the relative cost of AFVs and grants and rebates to mitigate the additional costs will change over time, staff recommends that the City establish a policy to pay as much as a 10% premium for AFVs, relative to the total lifetime cost of a comparable gasoline- or diesel-powered vehicle, and that the purchase of AFVs not exceed the amount budgeted for vehicle acquisitions in that fiscal period.

**S-18-15CC**  
**ORA/COUNCIL**

**JUN 3 2003**

Item #: \_\_\_\_\_  
Public Works Committee  
05/27/03

**BACKGROUND**

Vehicle Emissions-Related Public Health Hazards

Oakland residents have one of the highest exposures to hazardous emissions in the country, and vehicle emissions are the single largest contributor to cancer causing air pollution. Since 1998, ozone concentrations at the Oakland monitoring station on Alice Street have surpassed the national ozone standard three to six times each year. Furthermore, a recent federal study found that the Bay Area’s air pollution-related cancer rate is 208 times higher than is acceptable by the Clean Air Act. Other studies have found that child asthma rates are three-times higher in areas with increased concentrations of ozone.

Greenhouse Gasses

The City’s vehicles produce thousands of tons of greenhouse gasses each year. Most scientists are in agreement that greenhouse gasses are linked to global warming.

The average automobile in the City’s fleet produces a small amount of greenhouse gasses compared to the average vehicle on the road. Still, some of the older and larger City-owned cars produce many tons of greenhouse gas annually. The following table lists some the vehicles in Oakland’s fleet that have the highest greenhouse gas emissions.

**City of Oakland – High Emission Vehicles**

Vehicle Type	Annual Greenhouse Gas Emissions*
2003 Crown Victoria	7 tons
1985 Ford Escort	6.8 tons
1996 Ford Taurus	6.2 tons

\*Assumes 10,000 annual mileage; 90% City-driving/10% freeway driving

Fuel Consumption & Dependence on Oil

The City spends a substantial and fluctuating amount on fuel for its fleet, as is demonstrated in the following table. Recently, expenditures on fuel have decreased, reflecting the City’s replacement of older vehicles with newer, more fuel-efficient vehicles. By continuing to decrease the number of gasoline-powered vehicles in the fleet in favor of AFVs, fuel expenditures will continue to decrease, and the City will be somewhat insulated from the effects of major fluctuations in conventional fuel prices. Equally importantly, by reducing the number of gasoline-powered vehicles in the City’s fleet, the City will also reduce its dependence on foreign oil.

**City of Oakland Annual Fuel Expenditures**

Expenditures	Percent change from previous year	Fiscal Year
\$853,084 (to date)	N/A	2003
\$1,343,981	-23%	2002
\$1,744,280	18.2%	2001
\$1,475,795	30.6%	2000

It is not currently possible to track the City's fuel expenditures according to type of fuel; this will be possible with the implementation of a computerized Fleet Management System, a recommendation that will be brought before the Council in a separate report.

Alternative Fuel Vehicles and Infrastructure

The City of Oakland's Equipment Services Division has been a leader in purchasing alternative fuel vehicles and related infrastructure. Approximately 15% of the City's existing fleet is powered by alternative fuel, a rate that is 50% higher than the average municipal fleet. East Bay Clean Cities has recognized the City's leadership position in advancing clean air vehicles by awarding its 2002 "Clean Air Champion Award" to the City's Equipment Services Manager.

The Division has also worked aggressively to obtain funding for its alternative fuel vehicle program. Since 1991, the Equipment Services Division has been awarded cash grants totaling \$1,066,500 to support the acquisition or conversion of alternative fuel vehicles and their related infrastructure. In addition, in 1992 Oakland was the only city in the Bay Area to be awarded a Pacific Gas and Electric Company \$500,000 compressed natural gas fueling facility, which was placed at the City's Municipal Service Center.

The Equipment Services Division continues to explore opportunities to advance energy efficiency and improve air quality. The division, in partnership with the Port of Oakland, recently applied for a State Energy Program matching fund grant from the California Energy Commission to construct a jointly owned- and operated-CNG refueling station at One Market Street in downtown Oakland.

The division has also applied to the California Fuel Cell Partnership for the opportunity to be a fleet demonstration site for hydrogen fuel cell vehicles. As a demonstration site the City would be able to test fuel cell vehicles and fuel cell infrastructure, in order to prepare the California market for this new technology.

A Council report on the feasibility of implementing a biodiesel pilot project is being submitted at the same time as this report

**KEY ISSUES AND IMPACTS**

The City has 264 vehicles in its non-emergency automobile fleet, predominantly Ford Focuses (70), Ford Escorts (64), and Honda Civic CNG-powered vehicles (74). These vehicles in total produce approximately 1,232 tons of greenhouse gas each year (see Attachment A).

At this time, compressed natural gas is the most advanced alternative fuel that is commercially available, and it is also one of the cleanest burning fuels. It is estimated that if the City were able to transition the compact vehicle fleet entirely to natural gas, that portion of the fleet's total greenhouse gas emissions would be reduced by approximately 180 tons per year. Fuel costs would ultimately be reduced by approximately \$16,600 per year. The table below illustrates the reductions in other harmful emissions that would also be expected when switching from gasoline to compressed natural gas.

Compound	Emissions Reduction CNG compared to gasoline
Benzene	99%
Nitrogen Oxides	35 – 60%
Carbon Dioxide	25%
Carbon Monoxide	90 – 97%
Non-methane Hydrocarbons	50 – 75%
Lead & Sulfur	100%
Particulate Matter (PM10)	Significant reduction

**PROJECT DESCRIPTION**

The plan to green the City’s fleet will encompass four strategies, which will be led by the Equipment Services Division.

Strategy #1: Strategic Procurement of Vehicles

The Maximus Consulting group is currently compiling and analyzing data on the City’s fleet that will allow the Equipment Services Division to determine the minimum annual mileage for which it is practical for the City to own and maintain a vehicle. Based on this information, the Equipment Services Division will be able to establish a policy to ensure that no vehicles will be added to the City’s fleet unless the requesting division can guarantee that the requesting vehicle will meet the established minimum mileage standard.

Strategy #2: Reduce Fleet Size/Increase Vehicle “Pooling”

This strategy will ensure that City agencies work to increase inter-departmental and inter-agency vehicle sharing. The City does not currently have the necessary infrastructure to facilitate sharing of vehicles between agencies, or even between departments. However, with the implementation of the computerized fleet maintenance software, increased vehicle pooling will be possible. This will increase the efficiency of vehicle usage, and diminish the need to increase the size of the fleet. The Equipment Services Division already has undertaken the task of reducing the size of the fleet by removing older, underutilized vehicles from its fleet to encourage maximum utilization of the remaining vehicles.

Strategy #3: Commit to Purchasing Alternately-Fueled Vehicles Whenever Financially Possible

This strategy will establish a formal plan to purchase alternative fuel vehicles rather than gasoline-powered vehicles whenever possible. The City will not purchase an AFV if the lifetime cost is more than 10% greater than the lifetime cost of a comparable gasoline- or diesel-powered vehicle, or if the purchase exceeds the amount budgeted for vehicle acquisitions in that fiscal period. This standard will not apply to any motor vehicles that are used for public safety purposes, including police vehicles, fire vehicles, or other emergency response vehicles. However, the City will endeavor to acquire the lowest emission vehicles that are available for this purpose.

Strategy #4: Monitoring Vehicle Emissions and Fuel Expenditures

As part of its Performance Measures, the Equipment Services Division will utilize the “full fuel-cycle estimate” model developed by the US Department of Energy, to report on greenhouse gas emissions (carbon dioxide, nitrous oxide, and methane) from fleet automobiles, with the goal of

decreasing emissions every year. The full fuel-cycle estimate model considers all steps in the use of a fuel, from production and refining, to distribution and final use. This gives a complete picture of how using a particular fuel contributes to global warming. The current greenhouse gas emissions from the City's automobile fleet are included in this report as Attachment A.

The Equipment Services Division will also report annually on the City's expenditures on vehicle fuel, with the goal of decreasing expenditures each year.

## **SUSTAINABLE OPPORTUNITIES**

### Economic:

Several studies have demonstrated that improving air quality has a positive effect on property values. Furthermore, decreasing vehicle emissions will improve public health, which will also have a positive effect on the economy. The proposed resolution will also decrease the City's dependence on foreign oil, which will ultimately reduce the City's fuel expenditures.

### Environmental:

This resolution will reduce emissions of hazardous compounds that have been linked to increased rates of cancer and asthma. The resolution will also decrease greenhouse gasses, which most scientists agree are a major contributor to global warming.

### Social Equity:

The areas most affected by vehicle emissions are neighborhoods close to freeways, and major transportation routes—areas that also tend to be lower-income. This resolution advances social equity by decreasing vehicle emissions in disadvantaged areas.

## **DISABILITY AND SENIOR CITIZEN ACCESS**

This resolution does not have any impact the Americans with Disabilities Act, the Older Americans Act, and other applicable laws.

## **RECOMMENDATIONS AND RATIONALE**

By approving the green fleet resolution, Council will ensure that the City of Oakland continues to reduce its greenhouse gas emissions, increase the fleet's fuel efficiency, and improve local air quality. The Council will also be exercising its power in the marketplace by ensuring that purchases and expenditures using public monies are made in a manner consistent with the desire to reduce greenhouse gasses and improve air quality. The City will also be providing a positive example to citizens about using environmentally sound and sustainable technologies and practices.

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**ACTION REQUESTED OF THE CITY COUNCIL**

Staff recommends that Council approve the “Green Fleet” resolution.

Respectfully submitted,



**CLAUDETTE R. FORD**  
Director, Public Works Agency

Reviewed by:  
Berry Weiland  
Assistant Director, Public Works Agency

Prepared by:  
Bruce Saunders  
Equipment Services Manager, Public Works Agency

APPROVED AND FORWARDED TO THE  
PUBLIC WORKS COMMITTEE:



**OFFICE OF THE CITY MANAGER**

## City-owned Full-sized, Mid-Sized, and Compact Staff Cars

Purchase Year	Manufacturer	Description	Greenhouse gas emissions in tons*	Diff btn 2002 Civic and existing vehicle
1995	FO	CRN VIC 4DR SD	7.1	3.5
2003	FO	CRN VIC 4D SD	7	3.4
2003	FO	CRN VIC 4D SD	7	3.4
1985	FO	ESCORT L/4D	6.8	3.2
1996	FO	FLX-FUEL TAURUS 4 DR SD	6.3	2.7
1996	FO	FLX-FUEL TAURUS 4 DR SD	6.3	2.7
1996	FO	FLX-FUEL TAURUS 4 DR SD	6.3	2.7
1996	FO	FLX-FUEL TAURUS 4 DR SD	6.3	2.7
1996	FO	FLX-FUEL TAURUS 4 DR SD	6.3	2.7
1996	FO	FLX-FUEL TAURUS 4 DR SD	6.3	2.7
1996	FO	FLX-FUEL TAURUS 4 DR SD	6.3	2.7
1996	MER	SABLE 4DR SD	6.2	2.6
1996	MER	SABLE 4DR SD	6.2	2.6
2003	FO	TAURUS	6.2	2.6
2003	FO	TAURUS	6.2	2.6
2003	FO	TAURUS	6.2	2.6
2003	FO	TAURUS	6.2	2.6
2003	FO	TAURUS	6.2	2.6
2003	FO	TAURUS	6.2	2.6
2002	FO	TAURUS	6.1	2.5
1997	FO	BI-FUEL CONTUR LX 4D SD	5.3	1.7
1997	FO	BI-FUEL CONTUR LX 4D SD	5.3	1.7
1997	FO	BI-FUEL CONTUR LX 4D SD	5.3	1.7
1997	FO	BI-FUEL CONTUR LX 4D SD	5.3	1.7
1997	FO	BI-FUEL CONTUR LX 4D SD	5.3	1.7
1997	FO	BI-FUEL CONTUR LX 4D SD	5.3	1.7
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1997	FO	BI-FUEL CONTUR LX 4D SD	5.3	1.7
1997	FO	BI-FUEL CONTUR LX 4D SD	5.3	1.7
1991	CHV	CAV. 4DRSW	5.3	1.7
1991	CHV	CAV. 4DRSW	5.3	1.7
1991	CHV	CAV. 4DRSW	5.3	1.7
1991	CHV	CAV. 4DRSW	5.3	1.7
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1991	CHV	CAV. 4DRSW	5.3	1.7
1991	CHV	CAV. 4DRSW	5.3	1.7
1991	CHV	CAV. 4DRSW	5.3	1.7
1991	CHV	CAV. 4DRSW	5.3	1.7
1991	CHV	CAV. 4DRSW	5.3	1.7
1991	TOY	COROLLA LE	4.9	1.3
1991	TOY	COROLLA LE	4.9	1.3
1991	TOY	COROLLA LE	4.9	1.3
1992	FO	ESCORT LX 4DSW	4.9	1.3
1992	FO	ESCORT LX 4DSW	4.9	1.3
1992	FO	ESCORT LX 4DSW	4.9	1.3
1992	FO	ESCORT LX 4DSW	4.9	1.3
1992	FO	ESCORT LX 4DSW	4.9	1.3
1992	FO	ESCORT LX 4DSW	4.9	1.3
1992	FO	ESCORT LX 4DSW	4.9	1.3
1992	FO	ESCORT LX 4DSW	4.9	1.3
1992	FO	ESCORT LX 4DSW	4.9	1.3
1992	FO	ESCORT LX 4DSW	4.9	1.3

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JUN 3 2003

PUBLIC WORKS CMTE

MAY 27 2003











FILED  
OFFICE OF THE CITY CLERK  
OAKLAND

# OAKLAND CITY COUNCIL

**REVISED**

2003 MAY 29 PM 1:41 RESOLUTION NO. \_\_\_\_\_ C.M.S.



**RESOLUTION ESTABLISHING "GREEN FLEET" POLICIES AND PROCEDURES TO REDUCE GREENHOUSE GAS EMISSIONS AND IMPROVE AIR QUALITY IN THE CITY OF OAKLAND, AND TO INCREASE THE ENERGY EFFICIENCY OF THE CITY'S FLEET**

WHEREAS, the City can play a role in improving air quality, and reducing greenhouse gas emissions by adopting policies and practices that diminish City fleet emissions; and

WHEREAS, the establishment of a green fleet policy is a result of the leadership of the American Lung Association, Vice Mayor Nancy Nadel, and Public Works Agency Equipment Services Manager Bruce Saunders; and

WHEREAS, the Mayor has committed to converting the City's automotive fleet to natural gas or other forms of alternative fuel; and

WHEREAS, air pollution is a major public health concern in Oakland; and

WHEREAS, a recent federal study found that air pollution in the four Bay Area counties could cause 208 additional cases of cancer for every million residents, which is 208 times greater than the acceptable risk of cancer caused by air pollution as established by the Clean Air Act of 1990; and

WHEREAS, motor vehicle use is the single largest source of air pollution in the Bay Area, and the top three contributors to potential cancer risk come primarily from motor vehicles; and

WHEREAS alternative fuel vehicles produce significantly lower amounts of greenhouse gas and other emissions; and

WHEREAS, the City faces high and fluctuating gasoline prices; and

WHEREAS, the City of Oakland recognizes that by improving the energy efficiency of its fleet, savings may result in the long term, and

WHEREAS, 75 of the 264 automobiles in the City's non-emergency fleet are powered by compressed natural gas, and these vehicles over time have proven to be cost effective and easily integrated into the City's fleet operations; and

WHEREAS, the City currently replaces 3 – 5% of its gasoline-powered fleet annually with alternative fuel vehicles; and

WHEREAS, the City of Oakland wishes to exercise its power in the marketplace by ensuring that purchases and expenditures of public monies are made in a manner consistent with the desire to reduce greenhouse gas emissions; and

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**CITY COUNCIL**  
**JUN 3 2003**

WHEREAS, the City, as a public body, has an opportunity to provide a positive example to its citizens about environmental actions such as recycling, and using environmentally sound and sustainable technologies and practices; and

WHEREAS, the City's long-term intent is to have a fleet that is 100% clean and green, which means using clean fuels and vehicles that are the most fuel efficient low emission vehicles available that meet the business needs of the City; and

WHEREAS, clean-burning alternative fuel vehicles can be purchased without exceeding the existing Equipment Services budget; now, therefore, be it

RESOLVED, that the City of Oakland will develop and implement "Green Fleet" administrative policies that address the management, operation and procurement of fleet vehicles in order to continue improving the energy efficiency of its fleets, reduce emissions from the fleet, and increase the capacity of the fleet to save the City money; and be it

FURTHER RESOLVED, that the City of Oakland will develop performance measures related to fuel expenditures and vehicle emissions, to help monitor how effective the City's efforts have been; and be it

FURTHER RESOLVED, that the City of Oakland will purchase vehicles powered by alternative fuel sources for its non-emergency automotive fleet whenever possible without exceeding the amount budgeted for vehicle acquisitions; and be it

FURTHER RESOLVED, that the City of Oakland will continue to actively pursue federal, state, and other incentive programs related to clean air and energy efficiency.

**In Council, Oakland, California, \_\_\_\_\_, 2003**

Passed By the Following Vote:

AYES- BROOKS, BRUNNER, CHANG, NADEL, QUAN, REID, WAN, AND  
PRESIDENT DE LA FUENTE

NOES-

ABSENT-

ABSTENTION-

ATTEST: \_\_\_\_\_

CEDA FLOYD  
City Clerk and Clerk of the Council  
of the City of Oakland, California

**5-18-15CL**  
**ORA/COUNCIL**  
**JUN 3 2003**