

# Agenda Report

TO: Honorable Mayor and Members of the City Council

FROM: , City Manager

DATE:

**SUBJECT: Low Emissions Vehicle Policy**

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## **SUMMARY**

It is recommended that the City Council adopt a Low Emission Vehicle/Zero Emission Vehicle/Alternative Fuel Vehicle purchasing policy as attached hereto, and approve Resolution 07-015 supporting the use of low emission/zero emission/alternative fuel vehicles and encouraging others to do the same.

## **BACKGROUND**

In November of 2005, the City of South Pasadena first adopted a Low Emission Vehicle Purchase Policy. Subsequently, in October of 2006, the City of South Pasadena approved a resolution supporting the Plug-In Electric Hybrid campaign. The City also voted to support the adoption by other San Gabriel Valley Cities of similar policies and resolutions.

## **ANALYSIS**

The City of \_\_\_\_\_ recognizes that the Southern California area has an air quality problem, which is partly related to the operation of vehicles of all sizes and uses. Air pollution can cause or aggravate lung illnesses such as acute respiratory infections, asthmas, chronic bronchitis, emphysema and lung cancer. In addition to health impacts, air pollution imposes significant economic costs and negative impacts on our quality of life.

Motor vehicle emissions are a primary source of ozone precursors in Southern California. These same emissions are also a source of carbon monoxide, particulate matter, toxic air contaminants and greenhouse gases. While new vehicles have become cleaner through improved emission control technologies, the rapid growth in the number of motor vehicles, and miles driven, further challenges continued improvements in regional air quality. \_\_\_\_\_ recognizes that many public agencies in the region operate large vehicle fleets and that through the practice of sound fiscal and environmental policies these agencies may play a significant role in improving air quality through emissions reduction and further encouraging the development and growth of

LEV/ZEV/AFV technologies.

City staff has not traditionally included low or zero emissions vehicles, or alternative fuel vehicles, in bid specifications. In the last several years, however, the City has begun to explore the purchase of these types of vehicles. At the present time, \_\_\_\_\_ has the following low or zero emissions vehicles, or alternative fuel vehicles, in its fleet:

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In addition, as the City turns over the gasoline powered sedans in the fleet, the replacement vehicles will be CNG powered sedans.

As time goes by, the range of alternative fuel vehicles continues to expand. There are low and zero emissions vehicles, including alternative fuel vehicles, and hybrids, available from Ford, General Motors, Chrysler, Toyota, Nissan, Honda, Mitsubishi and the list continues to expand with time. Available types of vehicles include sedans, sport utility vehicles, and light and medium duty trucks. In addition, with new technology and alternative fuels reaching the market at an ever escalating pace, the possibilities for the present and future include:

- **Compressed natural gas** – more widely available than many other alternative fuels; reduces Particulate Matter (PM) and NOx emissions. CNG vehicles often have a lower range than gasoline vehicles. Many buses are CNG powered. Special training and maintenance are required for the engine/fuel system.
- **Ethanol** – a gasoline alcohol mix in which the alcohol often comes from vegetative matter such as corn or soy. Clean burning fuel. The federal government has been encouraging the growth of ethanol fuel, although availability in California can be problematic.
- **Clean diesel** – low sulfur diesel; new emissions regulations for diesel engines require catalytic converters. The first of the compliant engines, include urea injection are now coming to market. This will result in cleaner vehicles that have substantially lower PM and NOx emissions and should offer the same mileage benefits traditionally associated with diesel.
- **Biodiesel** – a diesel fuel replacement made from soybeans and other vegetative sources. Biodiesel has lower NOx emissions and slightly less PM emissions. May be mixed with

regular diesel to produce a blended fuel. This is a renewable fuel with a low sulfur content that will allow for more advanced emissions controls, and reduction.

- **Hydrogen** – one of the better fuels for low temperature fuel cells. As a light gas it is difficult to store. Hydrogen powered vehicles are in the test phase right now. The potential exists for a zero emissions vehicle that is hydrogen powered.
- **Fuel cells** – a nomenclature associated with a variety of similar technologies that generate electricity through chemical reactions. There are high and low temperature fuel cells. Fuel Cell technology is expensive but as development becomes more widespread the cost per unit continues to drop. Fuel cell drive trains are often based on existing electric vehicle drive trains.
- **Pure electric vehicles** – solely powered by batteries. The limiting factor is battery technology which continues to evolve. Recently, lithium ion batteries, first used in laptop computers, have come into use in electric vehicles. These batteries offer the potential for an extended range. Most electric vehicles take several hours to fully charge. As battery technology evolves, and development becomes more widespread, the cost per unit will continue to decrease.
- **Hybrid electric vehicles** (including plug-ins) – a nomenclature used to denominate vehicles that use battery power to supplement a traditional power train. There are a variety of technologies, which make more or less use of the traditional power train, and may or may not include the ability to plug in the battery for recharge. These vehicles have improved mileage and low emissions. Plug in electric hybrid vehicles offer the potential for low to zero emissions and mileage that exceeds 50 mpg, thereby greatly reducing demand for imported oil.

*If the city has done any other related projects, such as working on or installing a CNG station, these actions can be included here.*

### **FISCAL IMPACT**

The adoption of a LEV/ZEV/AFV policy could potentially increase costs to the City when purchasing vehicles. This amount cannot be quantified until the time of purchase, however, and must be evaluated on a case-by-case basis.

### **PUBLIC NOTICE PROCESS**

This item has been noticed through the regular agenda notification process. Copies of this report are available at the City Hall public counter and the \_\_\_\_\_ Public Library.

**RECOMMENDATION**

It is recommended that the City Council adopt a Low Emission Vehicle/Zero Emission Vehicle/Alternative Fuel Vehicle purchasing policy as attached hereto, and approve Resolution 07-015 supporting the use of low emission/zero emission/alternative fuel vehicles and encouraging others to do the same.

Attachments:

1. Low Emission Vehicle/Zero Emission Vehicle/Alternative Fuel Vehicle Policy
2. Resolution \_\_\_\_\_

SAMPLE

## **LOW EMISSION VEHICLE/ZERO EMISSION VEHICLE/ALTERNATIVE FUEL VEHICLE (LEV/ZEV/AFV) POLICY**

### **Goal**

The goal of the LEV/ZEV/AFV policy is to establish a procurement policy and program for the City of \_\_\_\_\_ that supports and encourages the acquisition of LEV/ZEV/AFV vehicles when and where practical, while taking into account the acquisition cost, maintenance cost, and expected use and life of the vehicle.

### **Policy Statement**

The City of \_\_\_\_\_ recognizes that the Southern California area has an air quality problem, which is partly related to the operation of vehicles of all sizes and uses. Air pollution can cause or aggravate lung illnesses such as acute respiratory infections, asthmas, chronic bronchitis, emphysema and lung cancer. In addition to health impacts, air pollution imposes significant economic costs and negative impacts on our quality of life.

Motor vehicle emissions are a primary source of ozone precursors in Southern California. These same emissions are also a source of carbon monoxide, particulate matter, toxic air contaminants and greenhouse gases. While new vehicles have become cleaner through improved emission control technologies, the rapid growth in the number of motor vehicles, and miles driven, further challenges continued improvements in regional air quality. \_\_\_\_\_ recognizes that many public agencies in the region operate large vehicle fleets and that through the practice of sound fiscal and environmental policies these agencies may play a significant role in improving air quality through emissions reduction and further encouraging the development and growth of LEV/ZEV/AFV technologies.

### **LEV/ZEV/AFV Program**

The City of \_\_\_\_\_ commits to being a regional leader in the improvement of air quality by showing how LEV/ZEV/AFV vehicles can be practically and efficiently incorporated into fleet operations, including acquisition, maintenance, and where applicable refueling infrastructure development. As the City replaces and/or purchases new vehicles for its fleet operations, \_\_\_\_\_ will focus on the acquisition of LEV/ZEV/AFV vehicles that will contribute to the improvement of air quality throughout the region.

1. Prior to issuance of a vehicle bid spec, the City will examine its performance needs to determine the specific minimum requirements applicable to the intended vehicle use.
2. All vehicle bidding procedures will include a LEV/ZEV/AFV alternative in the process.
3. LEV vehicles include all variations thereof (ULEV, SULEV, etc...); ZEV vehicles include all variations thereof (PZEV, etc...); AFV vehicles include all variations thereof (natural gas, biodiesel, fuel cell, etc...). Hybrid vehicles (including plug-in hybrids) will be evaluated on the basis of their emissions and may therefore be classified as either LEV or ZEV vehicles, as appropriate.

4. LEV/ZEV/AFV vehicles will be evaluated against other vehicles on the basis of:
  - a. Comparison to required vehicle specifications for intended use
  - b. Purchase price of vehicle
  - c. Expected maintenance costs of vehicle including specialized training or equipment required
  - d. Vehicle life expectancy
  - e. Expected vehicle fuel costs
  - f. Expected vehicle resale costs
  - g. Emissions delta comparison with non-LEV/ZEV/AFV vehicles
  - h. Grant funds or tax rebates applicable to LEV/ZEV/AFV vehicles
5. The City of \_\_\_\_\_ is committed to the replacement of light, medium and heavy duty vehicles with practical LEV/ZEV/AFV alternatives whenever feasible. If an alternative LEV/ZEV/AFV vehicle does not meet the minimum performance specification required by \_\_\_\_\_ for the intended vehicle use, the City will examine the vehicle operations to determine if the LEV/ZEV/AFV alternative can be feasibly integrated into existing fleet operations.
6. Where applicable, user fees/service charges may be increased to cover any initial acquisition cost and/or maintenance/operation cost delta applicable to LEV/ZEV/AFV vehicles.
7. LEV/ZEV/AFV vehicles, because of their environmental benefits, will be granted the following cost discount for evaluative purposes only:
  - a. LEV Light Duty vehicles – \_\_\_\_\_ (fill in %; ex: 5%)
  - b. LEV Medium/Heavy Duty vehicles – \_\_\_\_\_ (fill in %; ex: 10%)
  - c. ZEV/AFV Light Duty Vehicles – \_\_\_\_\_ (fill in %; ex: 10%)
  - d. ZEV/AFV Medium/Heavy Duty Vehicles – \_\_\_\_\_ (fill in %; ex: 15%)
  - e. Cost comparisons shall include all the factors listed in 3A-H. LEV/ZEV/AFV vehicles whose cost differential exceeds the specifications listed above may be purchased subject to availability of funds, life expectancy, and adequacy of the vehicle specifications for the intended use. Where possible, staff will attempt to quantify the emissions reductions over the life of the vehicle to provide sufficient justification to offset additional cost differentials exceeding the specifications noted above.

**RESOLUTION NO.**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF \_\_\_\_\_, CALIFORNIA, SUPPORTING THE ACQUISITION OF LOW EMISSIONS VEHICLES, ZERO EMISSIONS VEHICLES AND ALTERNATIVE FUEL VEHICLES, IN ALL THEIR VARIATIONS AND ADOPTING A POLICY THERETO**

**WHEREAS**, the over-reliance of America on foreign oil is a serious and growing threat to the economic vitality and national security of the United State of America; and

**WHEREAS**, automobile emissions are a major contributing factor to global warming and smog in our cities, which threaten the health of our citizens and the sustainability of our planet; and

**WHEREAS**, the imbalance between gasoline resources and worldwide demand is escalating gasoline prices at an alarming rate and to levels that overburden commerce, hurt economic growth and cause serious hardship on our citizens; and

**WHEREAS**, the technology exists and is being rapidly developed to build low emissions vehicles, zero emissions vehicles and alternative fuel vehicles, including hybrid and plug-in hybrid vehicles, in all sizes and for a variety of uses, that will reduce oil imports and improve air quality substantially; and

**WHEREAS**, the City of \_\_\_\_\_ hereby partners with other United States cities and agencies to urge automakers to mass produce build low emissions vehicles, zero emissions vehicles and alternative fuel vehicles, including hybrid and plug-in hybrid vehicles, in all sizes and for a variety of uses, for the substantial economic, environmental and strategic reasons outlined above.

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF \_\_\_\_\_ DOES RESOLVE, DECLARE, DETERMINE AND ORDER AS FOLLOWS:**

**SECTION 1.** That the City of \_\_\_\_\_ strongly supports the effort to create and expand the market for low emissions vehicles, zero emissions vehicles and alternative fuel vehicles, including hybrid and plug-in hybrid vehicles, in all sizes and for a variety of uses.

**SECTION 2.** That the City of \_\_\_\_\_ hereby commits to support, local, state and federal policies that will promote low emissions vehicles, zero emissions vehicles and alternative fuel vehicles, including hybrid and plug-in hybrid vehicles, in all sizes and for a variety of uses.

**SECTION 3.** That the City of \_\_\_\_\_ will work with other local governments, education, business and environmental associations to promote low emissions vehicles, zero emissions vehicles and alternative fuel vehicles, including hybrid and plug-in hybrid vehicles, in all sizes and for a variety of uses.

**SECTION 4.** That the City Clerk shall certify the adoption of this resolution and shall cause the same to be processed in the manner required by law.

**PASSED, APPROVED AND ADOPTED** this \_\_\_\_\_ day of \_\_\_\_\_ by the following vote.

AYES:

NOES:

ABSTAIN:

ABSENT:

\_\_\_\_\_  
, Mayor

ATTEST:

APPROVED AS TO FORM:

\_\_\_\_\_  
, City Clerk

\_\_\_\_\_  
, City Attorney