



# *City of Inglewood*

## *Six-Year Alternative Fuel Plan*

### **INTRODUCTION**

The Federal Energy Act of 1992 and the South Coast Air Quality Management District's (SCAQMD) Rule 1190 series requires federal and state fleet agencies to purchase alternative fuel vehicles. These same guidelines must also be implemented for local governments, which requires cities to convert their fleets to alternative fuels. Various state and local laws also encourage fleet agencies to use alternative fuels.

As a participant in the U.S. Department of Energy's Clean Cities program through the Southern California Association of Government (SCAG), the City of Inglewood is required to promote alternative fuel technology and users. The City's purchase of alternative fuel vehicles and development of a fueling infrastructure is a proactive effort to improve air quality within the community and to encourage the use of alternative fuels.

### **BACKGROUND**

To reduce both toxic and smog-forming air pollutants, the South Coast Air Quality Management District (SCAQMD) is seeking to gradually shift public agencies to low-emission and alternative-fuel vehicles. SCAQMD has proposed that whenever a public fleet operator with 15 or more vehicles replaces or purchases new vehicles, they are required to be either low-emission or alternative-fueled. The proposal also covers vehicles in fleets used to transport passengers to and from the region's airports.

Staff from Engineering, Fleet Services, Finance, and the City's consultant, Burnett and Burnette, met to discuss options and funding available to convert the City's fleet to alternative fuels. There were 143 vehicles identified for replacement, and alternative fuel technologies have been evaluated for each vehicle. The City currently receives AB2766 DMV registration fees for the purpose of reducing vehicle air emissions. Additional matching funds are available through the SCAQMD's Mobile Source Air Pollution Reduction Review Committee (MSRC) and the Carl Moyer program. If the City Council decides to purchase alternative fuel vehicles at this time, the City can improve air quality for the community at the lowest possible cost while complying with the SCAQMD's Rule 1190 series.

The City of Inglewood is required to purchase alternative fuel vehicles mandated by the SCAQMD under the Fleet Vehicle Rules 1190:

- ✱ **ADOPTED RULE 1191** Clean On-Road Light- and Medium-Duty Public Fleet Vehicles
- ✱ **ADOPTED RULE 1192** Clean On-Road Transit Buses
- ✱ **ADOPTED RULE 1193** Clean On-Road Residential and Commercial Refuse Collection Vehicles
- ✱ **ADOPTED RULE 1196** Clean On Road Heavy-Duty Public Fleet Vehicles
- ✱ **ADOPTED RULE 1186.1** Alternative-Fuel Sweepers

## **THE BENEFITS OF ALTERNATIVE FUEL TECHNOLOGY**

In addition to the benefits of reducing air pollution, the cost of fueling compressed natural gas vehicles (CNG) is less than the cost of fueling vehicles that require diesel fuel and gasoline. With the rising cost of gasoline and diesel, a fleet that is not reliant on these two fuel sources can take advantage of savings provided by alternative fuel. Currently, the City owns 12 dedicated CNG vehicles. The use of CNG vehicles enables the City to comply with SCAQMD's rideshare requirements.

A fueling infrastructure is in the process of being installed at the Inglewood City Service Center and is scheduled to be completed by May 1, 2004.

With new advancements on fueling infrastructures and the availability of a larger variety of alternative fuel vehicles, CNG is seen as the best alternative fuel in the industry. Technology for CNG fueling is so advanced that it is as simple as fueling with gasoline. CNG vehicles including Maintenance Trucks, Police Vehicles, Sweepers, and Transit buses are currently used by the MTA and other local cities. A network of over 100 CNG fueling stations is already available in Los Angeles and its neighboring counties.

Although CNG infrastructures are more common in the greater Los Angeles area, other alternatives vehicles need to be considered that lower emissions and reduce cost; Electric, Hybrid, and propane vehicles are commonly used in private fleets, states, and other local municipalities.

## **FUNDING**

Assembly Bill 2766 passed in 1992 and imposed an additional \$4.00 on motor vehicle registration fees to fund and implement programs that would reduce air pollution from mobile sources. AB2766 provides that 40 cents of every dollar be distributed to local governments. The City receives AB2766 registration fee funds for projects that will reduce vehicle emissions.

Another source of funding for vehicle emission reduction programs is through the SCAQMD's Mobile Source Air Pollution Reduction Review Committee (MSRC). This agency is sponsoring a local Governmental Subvention Fund Match Program. The Match Program is designed to encourage local governments to spend AB2766 funds on projects that have been identified as having a high potential for reducing mobile source emissions. *The MSRC will match AB2766 funds that are used to reduce mobile source emissions.*

In FY 1998-99, the State legislature created the Carl Moyer Program. The Program, named in honor of a key figure in developing state air quality measures, was established to facilitate the move to cleaner burning engines. During the first year of the Carl Moyer Program, the SCAQMD was allocated a share of \$11.3 million from the California Air Resources Board (CARB) to help speed the introduction of low-emission, heavy-duty engines in refuse haulers, over-the-road trucks, transit and school buses, marine and port application, construction equipment, alternative power units, off-road vehicles, forklifts, and other vehicles and equipment. Currently, the Carl Moyer Program funding has \$50 million dollars available for new and converted alternative fuel engines.

### **ECONOMIC JUSTICE – QUALIFICATIONS REQUIRED FOR GRANT FUNDS**

With air pollution from the freeways and the continuous, low-altitude commercial aircraft, Inglewood has some of the most polluted air in the region. Alternative fuel vehicles will reduce the tailpipe emissions for diesel and gasoline vehicles and improve the existing poor air quality in the City.

Under SCAQMD standards, the criteria for qualifying for grant funds includes the following:

#### **Poverty Level**

Projects in communities with at least 10 percent of the population below the federal poverty level based on the Year 2000 census data, and;

#### **PM Exposure**

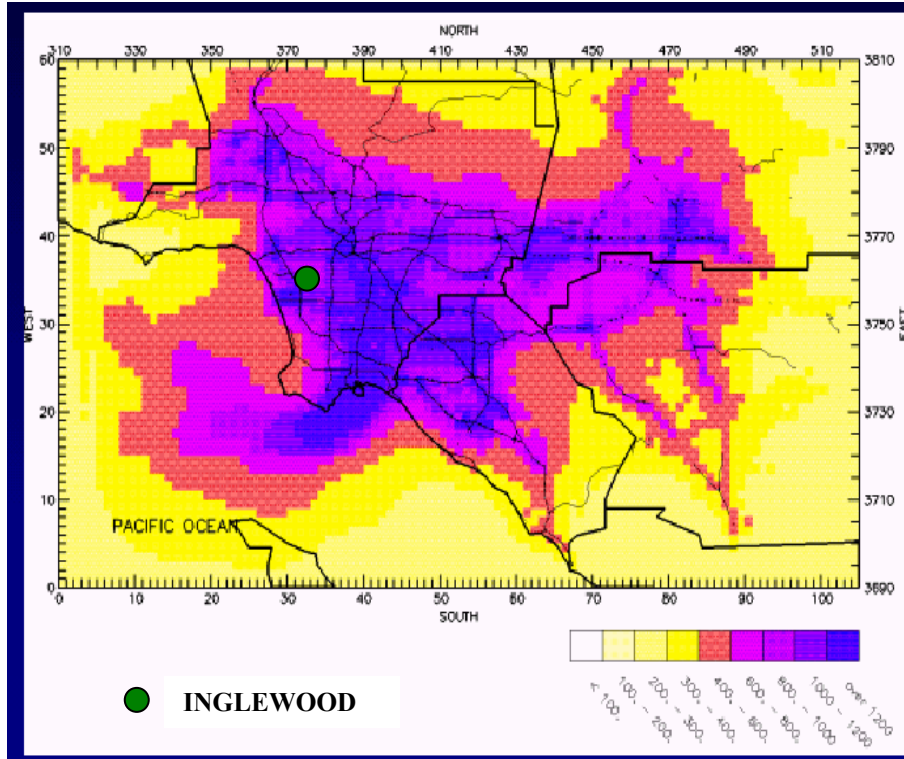
Projects in communities with the highest 15 percent of PM concentration. The highest 15 percent of PM concentration is 46 micrograms per cubic meter and above, on a federal annual average, or;

#### **Toxic Exposure**

Projects in communities with a cancer risk of 1,000 in a million and above. Other projects will be ranked on a cost-effective basis, with the most cost-effective vehicles and equipment receiving the highest priority.

*(Data for the poverty level and PM and toxic exposures were obtained from the U.S. Census, the 1998 AQMD monitoring data and Mates II study, respectively)*

## SCAQMD MATES-II Model-Estimated Risk From All Emission Sources



The City of Inglewood is in the highest category of pollutants. This justifies the City's need to develop and implement an Alternative Fuel Vehicle Plan, which will help improve air quality for the community while complying with the SCAQMD's Rule 1190.

### VEHICLES REPLACEMENT

The City of Inglewood has 513 mobile units in its fleet. Out of 513 mobile units, 143 vehicles were identified to be replaced with alternative fuel. The vehicle selection criteria was based upon mileage, age, maintenance costs, and suitability for use as an alternative fuel vehicle.

Here is a breakdown of the 513 total vehicles or units currently in the City's fleet:

| <u>Miscellaneous Passenger Vehicles</u> | <u>Miscellaneous Equipment</u> |
|---|--------------------------------|
| 15 Motorcycles                          | 15 Tractors                    |
| 181 Passenger Sedans*                   | 20 Trailers                    |
| 38 Vans                                 | 86 Others                      |
| 88 Pickup Trucks                        | <u>121</u>                     |
| 24 Light Duty Trucks                    |                                |
| 22 Medium Duty Trucks                   |                                |
| <u>24</u> Heavy Duty Trucks             |                                |
| <b>392</b>                              |                                |

\* 12 EXISTING CNG ALTERNATIVE FUEL VEHICLES ARE INCLUDED IN THE 181 PASSENGER SEDAN TOTAL.

**COST FOR REPLACEMENT AND INCREMENTAL FUNDING**

The grants that are received from the Mobile Source Air Pollution Reduction Review Committee (MSRC) and Carl Moyer Program can only be used to fund the *incremental* difference in cost between an alternative fuel vehicle and a standard gasoline-powered unit.

Each year, the City receives AB2766 DMV registration fees. AB2766 funds that are used to reduce mobile-source emissions will be equally matched by the MSRC.

Over the next 6 years, Inglewood would need about \$1.5 million in State and Federal grant funds from programs such as the MSRC matching fund program, AB2766 DMV funds, and the Carl Moyer program, to cover the **incremental** cost of converting 143 vehicles. The projected cost for the purchase of the 143 vehicles that Inglewood will have to spend using the City’s general funds is estimated at \$3 million dollars. The cost savings for converting from diesel and gasoline-fueled vehicles to CNG vehicles for the next 6 years is estimated at \$30,000.

The estimated incremental cost to convert diesel and gasoline-fueled vehicles to CNG vehicles per class is as follows:

|                           |          |
|---------------------------|----------|
| Passenger Cars and Trucks | \$4,500  |
| School Buses              | \$25,000 |
| Transit Shuttle Buses     | \$45,000 |
| Full-size Transit Buses   | \$60,000 |
| Street Sweepers           | \$35,000 |

**RECOMMENDATIONS FOR IMPLEMENTING A VEHICLE REPLACEMENT PROGRAM**

Recommendations for achieving vehicle replacement includes the following:

- Adoption of a **6-year** Alternative Fuel Plan, which identifies **143 vehicles** that can be replaced with alternative fuel vehicles within a 6-year time frame.  
[Go to **Exhibit A** on Page 7]
- Implementation of a program where existing diesel fuel contract trash trucks are required to use alternative fuel or clean diesel with particulate traps. *(Similarly, diesel-fueled school buses are covered under the SCAQMD Rule 1195 and \$2.9 million is available for new CNG or clean diesel with particulate traps for existing buses. These measures will further reduce diesel fuel emissions in the City.)*
- Selection of low-emission Hybrid vehicles when CNG vehicles are not available or required by law. *(The premium cost for a Hybrid vehicle is about 1/3 the cost of a CNG vehicle although only 1 or 2 Hybrids are available for sale today.)*

## **SUMMARY**

The City has restricted funds available for the purpose of improving air quality. Additional funds are now available from the MSRC local Match Program, AB2766 DMV funds, and the Carl Moyer Program for alternative fuel vehicles and infrastructure. The City currently owns and operates 12 CNG vehicles. The purchase of additional alternative fuel vehicles would not only address air quality improvement regulations, but it would also fulfill the City's commitment to improve air quality as required by SCAG Clean Cities program. This proactive effort could be done without using incremental General Fund monies and would alleviate the potential threat of the City not getting its fair share of available grant funds.

**[Exhibit A]  
INGLEWOOD VEHICLE FLEET – 6-YEAR ALTERNATIVE FUEL PLAN**

| AFV Replacement Year              | Vehicle Type | Eligible Vehicles Count | Number of Vehicles Replacing | Remaining Vehicles Eligible for AFV |
|-----------------------------------|--------------|-------------------------|------------------------------|-------------------------------------|
| <b>Year 2004</b>                  | Class 2      | 28                      | 1                            | 27                                  |
|                                   | Class 3      | 29                      | 2                            | 27                                  |
|                                   | Class 4      | 22                      | 1                            | 21                                  |
|                                   | Class 5      | 76                      | 6                            | 70                                  |
|                                   | Class 7      | 21                      | 2                            | 19                                  |
|                                   |              |                         | <b>12</b>                    |                                     |
| <b>Year 2005</b>                  | Class 2      | 27                      | 2                            | 25                                  |
|                                   | Class 3      | 27                      | 5                            | 22                                  |
|                                   | Class 4      | 21                      | 1                            | 20                                  |
|                                   | Class 5      | 70                      | 9                            | 61                                  |
|                                   | Class 6      | 17                      | 2                            | 15                                  |
|                                   | Class 7      | 19                      | 4                            | 15                                  |
|                                   | Class 8      | 13                      | 2                            | 11                                  |
|                                   |              |                         | <b>25</b>                    |                                     |
| <b>Year 2006</b>                  | Class 2      | 25                      | 6                            | 19                                  |
|                                   | Class 3      | 22                      | 5                            | 17                                  |
|                                   | Class 4      | 20                      | 2                            | 18                                  |
|                                   | Class 5      | 61                      | 10                           | 51                                  |
|                                   | Class 6      | 15                      | 1                            | 14                                  |
|                                   | Class 7      | 15                      | 2                            | 13                                  |
|                                   | Class 8      | 11                      | 2                            | 9                                   |
|                                   |              |                         | <b>28</b>                    |                                     |
| <b>Year 2007</b>                  | Class 2      | 19                      | 4                            | 15                                  |
|                                   | Class 3      | 17                      | 5                            | 12                                  |
|                                   | Class 4      | 18                      | 3                            | 15                                  |
|                                   | Class 5      | 51                      | 7                            | 44                                  |
|                                   | Class 6      | 14                      | 2                            | 12                                  |
|                                   | Class 7      | 13                      | 3                            | 10                                  |
|                                   | Class 8      | 9                       | 2                            | 7                                   |
|                                   |              |                         | <b>26</b>                    |                                     |
| <b>Year 2008</b>                  | Class 2      | 15                      | 4                            | 11                                  |
|                                   | Class 3      | 12                      | 5                            | 7                                   |
|                                   | Class 4      | 15                      | 2                            | 13                                  |
|                                   | Class 5      | 44                      | 5                            | 39                                  |
|                                   | Class 6      | 12                      | 1                            | 13                                  |
|                                   | Class 7      | 10                      | 1                            | 15                                  |
|                                   | Class 8      | 7                       | 2                            | 5                                   |
|                                   |              |                         | <b>20</b>                    |                                     |
| <b>Year 2009</b>                  | Class 2      | 11                      | 5                            | 11                                  |
|                                   | Class 3      | 7                       | 5                            | 7                                   |
|                                   | Class 4      | 13                      | 3                            | 13                                  |
|                                   | Class 5      | 39                      | 14                           | 39                                  |
|                                   | Class 6      | 13                      | 2                            | 13                                  |
|                                   | Class 7      | 15                      | 2                            | 15                                  |
|                                   | Class 8      | 5                       | 1                            | 5                                   |
|                                   |              |                         | <b>32</b>                    |                                     |
| <b>Total Replacement Vehicles</b> |              |                         | <b>143</b>                   |                                     |

| <b>CLASS CODE DESCRIPTIONS</b>                                      |
|---|
| Class 2 Standard Sedans, Gross Vehicle Weight (GVW) < 3,000 lbs.    |
| Class 3 Law Enforcement, GVW > 3,000 lbs.                           |
| Class 4 Vans, GVW > 3,500 lbs.                                      |
| Class 5 Pickup Trucks > 5,000 lbs.                                  |
| Class 6 Light Duty Trucks and Aerial Equipment, GVW > 10,000 lbs.   |
| Class 7 Medium Duty Trucks and Special Equipment, GVW > 15,000 lbs. |
| Class 8 Heavy Duty Trucks and 3-axle Equipment, GVW > 26,000 lbs.   |