

## State Fleet

### **SECTOR BACKGROUND**

The state fleet consists of approximately 50,000 vehicles and pieces of mobile equipment, operated by over 100 entities. About 40,000 of the state's vehicles are light-duty, passenger vehicles. The state fleet represents about 0.2% of the 33 million vehicles registered with the California Department of Motor Vehicles. A rough estimate of the GHG emissions of the fleet is 340,000 tons per year, compared to about 171,000,000 tons for all the vehicles registered in California.<sup>1</sup>

This plan consists of practical strategies on coordination, vehicle management, operations, and legislation that California state government should implement to reduce the greenhouse gas emissions of its fleet. Many of the recommendations can be applied to other fleets and vehicles outside of government.

While the sub-group's recommendations are focused on the executive branch, the state should actively share information and practices with the UC, CSU, and Community College systems, the Bureau of Automotive Repair, local agencies that purchase vehicles through state contracts, and federal agencies.

### **STATE FLEET SUBGROUP PROPOSALS**

#### Coordination & Information Management Strategies

To understand the emissions of the fleet, the sub-group recommends the use of a single database that contains detailed information on each vehicle with fuel use and maintenance history included for accurate management and emissions calculations. At the end of 2008, DGS Fleet is due to complete the installation of a computer Fleet Asset Management System (FAMS) to capture this data from state agencies and fuel purchasing systems. On a regular basis, agencies will upload a list of their vehicles into FAMS, which will then standardize information through Vehicle Identification Number analysis and verification. While consolidated, standardized information will improve the accuracy of the current system and enable a more fleet-wide perspective than is available today, the data will remain dependent on what is essentially an honor system of agencies uploading their information into FAMS.

To increase the state's cognizance of vehicle procurements and sales, the sub-group recommends that DGS Fleet work with the Department of Finance and the DMV to consider becoming the title-holder for state vehicles, with the exception of CalTrans which has an existing vehicle title management process. This would require a major reorganization of DGS Fleet resources to provide efficient service to operating agencies and to ensure a close working relationship with the DMV. The State Equipment Council exists to assist in the management of the state's mobile assets, so DGS Fleet should also work through the Council to determine whether or not to proceed with this recommendation. A reduction in the number of title-holding entities from about 100 to just a few could make fleet data more accurate, which would enable the state to set and monitor objectives to meet the goal of reducing emissions to 1990 levels.

Following a common practice of most trucking and delivery services, the sub-group recommends GPS tracking (aka vehicle telematics) of certain percentages of fleet vehicles to better understand travel routes and coordinate trips and alternative fueling. Real-time vehicle

---

<sup>1</sup> Calculations derived from ARB, Feb 28, 2008 AB32 Implementation Update: Transportation. Information by fuel is available at <http://www.arb.ca.gov/cc/inventory/data/data.htm>

## State Fleet Sector Summary for Public Distribution

management programs could also improve the safety and responsiveness of emergency vehicles.

The sub-group recommends that state agencies report their entire fleet into FAMS to insure the most accurate emissions calculations and other vehicle related measures. Through analysis of the data collected by FAMS, it will become obvious that some agencies successfully operate “leaner and cleaner” fleets than others – practices that could be modeled and implemented statewide.

### Vehicle Management Strategies

One of the fastest ways to reduce fleet emissions is to replace old vehicles with new ones. Newer vehicles usually have more advanced pollution control systems and, in general, operate more efficiently than older vehicles. Therefore, the sub-group recommends that the state identify the most polluting vehicles in the fleet and replace those vehicles or determine redundancy. With FAMS information, DGS Fleet, DGS Procurement, and the Bureau of Automotive Repair should work with operating agencies to present cost-benefit analyses of vehicle replacement or redundancy opportunities to the Department of Finance for appropriate budgetary action to support the state’s emissions reduction objectives.<sup>2</sup> During this process, DGS Fleet should work through the State Equipment Council to identify inefficient vehicle assignments and work to consolidate those assignments to reduce the overall number of vehicles in the fleet.

#### --Fuels and infrastructure

About 2/3 of the fuel used by the state fleet is purchased at private sector gas stations, and DGS Fleet is working with CalTrans and US Bank, manager of the Voyager Fleet Credit Card system, to demonstrate the locations of these gas stations to the ARB and CEC. The sub-group recommends that, with this information, the ARB and CEC should direct some alternative fuel infrastructure funds to locations with the highest amount of state use to make the fueling of the state’s alternative fuel vehicles seamless to the driver.

The sub-group recommends an immediate, concerted effort to make alternative fuel available to state vehicles and the private sector. This recommendation is primarily focused on fuels with lower carbon emissions than fossil fuels, although hybrids can reduce emissions through lower fuel use. Considering the array of alternative fuel technologies available today, the sub-group recommends a portfolio approach for the state fleet which, in the near term, would mostly consist of biofuels, hybrids, electric, and CNG.

To comply with EPA<sup>3</sup> and other laws, the state has adjusted its procurement policies to buy alternative fuel vehicles, and the principal technology that California’s fleet and many others have adopted is flex-fuel E85 (flexible-fuel from 100% gasoline to 85% ethanol/15% gasoline). Today, there are over 3,000 flex-fuel vehicles in the state fleet, and possibly 350,000 flex-fuel vehicles<sup>4</sup> on the road in California.

The use of bio-fuels is detailed in the state’s Bio-Energy Action Plan, the Low-Carbon Fuels Standard, and the CEC’s Alternative Fuels Plan. But the implementation of these plans is hamstrung by a confusing, unpredictable, and contradictory regulatory environment for

---

<sup>2</sup> The federal government keeps passenger vehicles for 3 years or 60,000 miles. See FMR 102-34.280 at <http://tinyurl.com/3tum57>

<sup>3</sup> The federal Energy Policy Act (EPA 1992, 2005) requires certain fleets to purchase alternative fuel vehicles for 75% of their light-duty vehicles acquired in each model year (Sept 1 - Aug 31).

<sup>4</sup> According to the California Ethanol Vehicle Coalition, there are an estimated 350,000 flex-fuel vehicles in California. <http://www.calevc.org/docs/CEVC1007Support.pdf>

## State Fleet Sector Summary for Public Distribution

alternative fuel distribution. A statewide infrastructure of commercial, alternative fuel stations could contribute to the reduction of emissions far more than any strategy that affects the state's fleet alone. The existing regulatory environment has made it so difficult to distribute alternative fuel that, today, only four E85 pumps are available to the public, and there may be only a few more by the end of 2008. In contrast, there are thousands of retail gasoline service stations in California.<sup>5</sup> Obviously, the majority of the flex-fuel vehicles in the state are operated on gasoline only, even though it could be argued that a flex-fuel vehicle driven on E85 uses less gasoline than a comparable hybrid. The state already has experience with Methanol (M85), so there should be some regulatory precedent for E85.

Without an overhaul of the regulatory environment for alternative fuel infrastructure, the state will continue to be almost completely dependent on gasoline for its vehicle transportation sector. Therefore, the sub-group recommends immediate action by the ARB to convene a taskforce of federal, state, and local regulatory agencies to design and implement a "one-stop-shop" for the permitting of alternative fuel manufacturing and distribution infrastructure. This program should be closely coordinated with funding from AB1811 (2006), AB118 (2007), and any federal programs.

For diesel vehicles, biodiesel is a viable option as most manufacturers warrant their engines for the use of biodiesel up to 20% (aka B20), although some are still limited to 5% (B5). A transition by CalTrans from 100% petroleum diesel to various percentages of biodiesel could result in a reduction of hundreds of thousands of gallons of petroleum diesel annually and a resulting reduction in GHG emissions. The sub-group recommends that all bulk diesel contracts are required to provide at least 5% biodiesel. As diesel engine technology re-enters the passenger vehicle category in California, it will be important to ensure a streamlined regulatory process for this fuel as is needed for E85.

Hybrid electric vehicles are popular with state employees and can make a significant reduction in petroleum use; however, they do not qualify for EPA credits and are generally more expensive than flex-fuel vehicles. Plug-in hybrid electrics promise to make an even greater contribution to the reduction in petroleum use, although they are not yet available on the market. The sub-group recommends that DGS work through the State Equipment Council to study the infrastructure needed to plug in the state's dedicated-electric and plug-in hybrid vehicles where they will be stored. The subgroup also recommends that state agencies study their facilities to determine if their building electrical systems are sufficient for vehicle recharging. Based on the cost, which could be the cost of a mere extension cord in many cases, the sub-group recommends that the state consider funding the infrastructure as part of its strategy to reduce emissions.

Manufacturers no longer produce bi-fuel CNG vehicles, and Honda remains the only bidder for annual state vehicle procurement contracts in the dedicated CNG passenger vehicle category. CNG, and its relative, propane, will probably continue to play important roles in centralized, municipal fleet operations, especially in EPA non-attainment areas for criteria pollutants. But CNG seems to be a technology that has been abandoned by most light-duty passenger vehicle manufacturers. Today there are 193 natural gas fueling stations located in California.<sup>6</sup> Many of these stations have public access but do not recognize or accept the Voyager card. While CNG remains in use by the state, the sub-group recommends that DGS Fleet work through the State Equipment Council to identify CNG and propane fueling stations and to work with US Bank to enable those stations to accept the Voyager card. This would make it easier for state employees to use the stations and increase the state's ability to track the use of these fuels.

---

<sup>5</sup> CEC, 2001-2002 data, [http://www.energy.ca.gov/gasoline/gasoline\\_stations/index.html](http://www.energy.ca.gov/gasoline/gasoline_stations/index.html)

<sup>6</sup> DOE Alternative Fueling Station Locator: <http://afdcmap2.nrel.gov/locator/FindNearResult.asp>

## State Fleet Sector Summary for Public Distribution

To analyze the state's use of transportation fuels, the sub-group recommends that DGS develop a comprehensive, annual report of fuel purchases and make the report available to the public online.

### --Operations & Maintenance

Other strategies that can reduce fuel use and emissions immediately include a strict adherence to proper tire inflation pressures, the use of correct viscosity oil as recommend by the vehicle manufacturer, and the replacement of engine air filters based on environmental operating conditions. Cruise control, though sometimes viewed as a luxury, should be required in state passenger vehicles as it can also reduce fuel consumption.<sup>7</sup>

The sub-group also recommends that DGS work with the Energy Commission, Air Resources Board, and vehicle manufactures to develop ways to efficiently reduce vehicle cabin temperatures. Some suggestions include passive air circulation, reflective roof paint, and improved glazing. Vehicle air conditioning uses a significant amount of energy, and in many passenger cars today, the air conditioner is automatically engaged when using the windshield defrost. Generally, the driver is not able to control whether or not the air conditioner remains on while the vehicle defrost is engaged. DGS Procurement should work with DGS Fleet and operating agencies to add a requirement to vehicle procurement specifications to enable the driver to control the use of the air conditioner in any air handling mode.

For about the last ten years, DGS Fleet has coordinated the use of re-refined motor oil throughout the fleet, which has contributed to a reduction in petroleum use. The sub-group recommends that this program should be studied by an appropriate regulatory agency to determine its success and share any best practices with other fleets and the private sector.

There are additional best practices for passenger vehicle maintenance. For example, the federal General Services Administration (GSA) manages the maintenance and repair of approximately 300,000 vehicles through five call centers that approve and track maintenance costs. Once call center staff collect repair data from commercial vendors previously authorized to perform specific services, GSA notifies its fuel card provider (Voyager) to initiate payment of the charges. This system allows GSA to control maintenance and repair costs, and to collect operational data. Payments to vendors are expedited using the Voyager card as a payment tool rather than utilizing the government's regular invoice payment system. Usually, this type of information is not collected by state vehicle operating agencies, but it has the potential to significantly improve the management of the fleet and reduce energy use and environment impacts. Therefore, the sub-group recommends that DGS Fleet implement a program similar to GSA's.

High parking costs can be an incentive to carpool or use public transportation, so the sub-group recommends that DGS Fleet should examine parking costs at state garages and compare them to local private lots. If rates charged to drivers are significantly lower, then the rates should be increased to discourage individual driving and reduce emissions.

The sub-group also recommends that DGS Procurement propose modifications to the vehicle and equipment bidding process to increase the variety of vehicles available for departments' needs. This is consistent with the need to consider total value, not just lowest bid, in procurement. For example, the cost of replacing tires that require frequent changing due to lower quality may outweigh any savings gained by accepting the lowest bid. Fewer tires purchased generally means fewer emissions through the entire product lifecycle, particularly as the state increases its efforts to calculate end-to-end emissions of its procurement and operations.

---

<sup>7</sup> ARB and CEC ongoing efforts on cool paints, tire inflation, cruise control, and air conditioning.

## State Fleet Sector Summary for Public Distribution

### Legislation & Policies

Today, the procurement and operations of the state fleet are regulated by numerous state and federal laws, executive orders, and management memorandums. Some of these policies are inconsistent with strategies to reduce fleet emissions. For example, the policy mandating the overview of the acquisition of fleet assets is primarily concerned with discouraging excess spending, and the standards used to measure necessity are based on maximizing use on a daily basis. These standards could have the unintended consequence of encouraging state departments to drive their vehicles more when, considering emissions, less may be better.

The sub-group recommends a comprehensive review of existing fleet legislation with the goal of recommending a "clean-up" bill or an executive order to reconcile conflicting or redundant policies. A prerequisite to this effort would be a concise interpretation of the policies defined in the Bio-Energy Action Plan, the Low-Carbon Fuels Standard, and the CEC's Alternative Fuels Plan.

On a federal level, the sub-group recommends that the Administration work to reduce or eliminate import tariffs on ethanol and other biofuels, or at least offer more favorable terms to sustainably grown and processed, imported and domestic biofuels. Also, the Administration should consider requiring all new vehicles sold in the state, including hybrids, to be flex-fuel to give Californians a choice in their fuel supply.

### State Travel

Telecommuting and video/internet conferencing can play a role in reducing the need for personal transportation on state business. Improving travel services that the state uses through vendors like Southwest Airlines, Enterprise Rent-a-Car, and American Express could make travel more efficient.

The state airline contract expires in 2008, so the sub-group recommends that language should be incorporated into the contract that requires airlines to calculate emissions on frequently traveled city-pair destinations for state business. This data should be provided to DGS on a quarterly basis to enable more strategic travel planning. City destinations should be selected that require less auto travel to meeting locations.

The car rental contracts with the state also expire in 2008, which provides an opportunity for the state to require alternative and hybrid vehicles in the contracts. Enterprise Rent-A-Car Company, Alamo, and National Car Rental, currently under contract with the state, operate nationally 73,000 flex-fuel cars and trucks that can use E-85, along with 4,000 hybrid cars. The sub-group recommends that the state's new contract should require car rental companies to provide alternative fuel and hybrid vehicles to state employees traveling on business.

# Climate Action Team State Fleet Sub Group Scoping Plan Measure Development and Cost Analysis

*The purpose of this document is to provide the public with information about options considered and analyzed by the Climate Action Team (CAT) Sector Sub Groups for Air Board’s consideration and potential inclusion in the Scoping Plan. This information should be drawn from the Measure Analyses previously developed by each Sub Group. Information should only be updated to reflect significant changes in technology, staff assignments, and understanding of the issues.*

## Outline

1.	Measure: Right-size the State Fleet .....	1
2.	Agency: .....	1
3.	Measure Description .....	1
	Affected Entities .....	1
	Related Objectives .....	2
	Measure Metrics.....	2
4.	Technology.....	3
5.	Statutory Status.....	3
6.	Implementation Steps and Timeline .....	3
7.	Greenhouse Gas Emission Reductions .....	4
8.	Costs and Cost Savings.....	4
9.	Other Benefits .....	4

[Page intentionally blank]

## **Climate Action Team State Fleet Sub Group Scoping Plan Measure Development and Cost Analysis**

*The purpose of this document is to provide the public with information about options considered and analyzed by the Climate Action Team (CAT) Sector Sub Groups for Air Resources Board's consideration and potential inclusion in the Scoping Plan. This information should be drawn from the Measure Analyses previously developed by each Sub Group and submitted to the California Air Resources Board.*

### **1. Measure: Right-size the State Fleet**

#### **2. Agency:**

All vehicle operating agencies, the Department of General Services (DGS), Office of Fleet & Asset Management (OFAM), the Bureau of Automotive Repair (BAR), and the Department of Motor Vehicles (DMV).

#### **3. Measure Description**

This measure focuses on the number, type, and use of State vehicles with the goal of increasing the efficiency of vehicle uses and assignments. A typical effect of right-sizing is a reduction in the number of vehicles in the fleet overall, which can reduce the GHG emissions of the fleet.

##### Overview

There are about 50,000 vehicles in the state fleet consisting of a variety of vehicles such as cars, trucks, boats, motorcycles, and road construction and other maintenance equipment. The executive branch has over 100 government agencies that operate vehicles.

The DGS Office of Fleet & Asset Management (OFAM) is currently implementing a Fleet Asset Management System (FAMS), which is a data warehouse of State vehicles and their mileage, fuel use, and GHG emissions estimates. FAMS is due to be operational in early 2009 and depending on the data submitted by the State's vehicle operating agencies, FAMS can be used to develop a baseline of vehicle ownership and use and resulting GHG emissions.

The State Equipment Council should be used to analyze the use of the State fleet and negotiate right-sizing policies and implementation plans.

##### Affected Entities

- 1) State vehicle operating agencies
- 2) Vehicle Manufacturers, Suppliers and Distributors

##### Environmental Justice, Small Business, Public Health, Leakage and CEQA

This measure is consistent with all fleet management best practices and would meet or exceed all local, state, and federal standards and requirements to minimize exposure to air pollutants or other public health concerns, including but not limited to, communities with minority populations. For instance, California Public Resource Code Section 25722.5 (a)(1) requires State procurement specifications for passenger cars to include ultra low emission vehicle (ULEV II) standards.

To the extent that the State fleet utilizes small businesses to provide maintenance and repair services, a reduction in the number of vehicles owned by the state could affect small automotive repair shops' income.

### **Related Objectives**

This measure is motivated by multiple benefits. This measure meets its objectives by focusing on the implementation of right-sizing and reducing the size of the State fleet overall.

Removing high-polluting vehicles from the fleet, identifying and eliminating redundancy to optimize vehicle utilization, and replacing old vehicles with technologically advanced vehicles would reduce vehicle miles traveled and emissions of GHGs and criteria pollutants, in addition to improving overall fuel mileage and reduced maintenance costs.

### **Measure Metrics**

The success of this measure could be determined by the following:

- A reduction in the size and a reduced rate of growth of the state fleet: Compare and contrast the number of vehicles currently owned by the state compared to the number of vehicles owned each year beginning in 2009, based on the number of authorized positions in the Executive Branch.
- A reduction (or a reduced rate of growth) in the vehicle miles traveled by the state workforce: Measure vehicle miles traveled annually, based on the number of authorized positions in the Executive Branch.
- More technologically advanced vehicle types within the state fleet: Compare and contrast the composition of the vehicle types within the state fleet annually;
- A reduction in the amount of GHG's, carbon dioxide (CO<sub>2</sub>), and criteria pollutants emitted by the state fleet: Measure the amount of petroleum consumption annually.

### **Measure Goals and Potential Implementation Approaches**

The goal of this measure is to meet the following targets for reduced direct GHG emissions established by AB 32 and EO S-03-05 through reduced petroleum consumption based on the United States Environmental Protection Agency's fuel economy calculator ([www.fueleconomy.gov](http://www.fueleconomy.gov)):

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and,
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Another goal of this measure is to ensure that fifty percent of the new alternative fuel vehicles purchased by the State are capable of operating on renewable fuels, as required by the State's Bio-Energy Action Plan.

**State Procurement:** Continue adopting procurement rules that require certain product performance. For example, California Public Resource Code Section 25722.5 (a)(1) requires State procurement specifications for passenger cars to include ultra low emission vehicle (ULEV II) standards.

**Mandate Performance:** Continue to adopt regulatory standards that require certain performance by the State fleet. For example, in 2008 the State adopted a minimum fuel economy standard (miles per gallon) for its light duty vehicle fleet;

Information Program: Ensure the successful implementation of FAMS. A data warehouse will improve the State's analysis and reporting capabilities to improve vehicle utilization and better manage the total cost of ownership and reduction in GHG for its entire fleet.

Incentive Program: Pursue legislative changes to make the State fleet eligible to participate in the BAR's Voluntary Accelerated Vehicle Retirement Program because it would ensure a more timely removal of older and more polluting vehicles from California roadways to be replaced with newer and cleaner vehicles or alternative transportation options, thus protecting the public from exposure to air pollutants or other health concerns.

#### **4. Technology**

The size of the State fleet represents less than one percent (0.152%) of the vehicles registered in California and the State's fleet purchasing volume represents less than one percent (0.224%) of the vehicles purchased annually in California. As a result, the State is not technology forcing. The State Fleet GHG Reduction measure will rely on a broad range of technologies including improved vehicle design, establishment of an alternative fuel infrastructure throughout the State, and renewable fuel technologies. Upgrading existing fleet assets with newer, technologically advanced vehicles will reduce petroleum consumption, GHG emissions and criteria pollutants. These vehicles are typically smaller and utilize lightweight materials, low-rolling resistance tires, and alternative fuels—including electricity. This measure would work in concert with an overall reduction in the number of State vehicles accomplished by utilizing a newly developed data warehouse that acts as a central repository for State agencies' fleet data. Through the use of the data warehouse, better fleet management can take place across departmental lines to right-size and optimize utilization of the State fleet. Telematics should be used to track actual vehicle miles travelled and this data could be shared with the UC Davis Institute of Transportation Studies to examine State fleet management.

#### **5. Statutory Status**

To increase the state's cognizance of vehicle procurements and sales, DGS OFAM should work with the Department of Finance and the DMV to consider becoming the title-holder for as many State vehicles as possible. A reduction in the number of title-holding entities from about 100 to just a few could make fleet data more accurate, which would enable the state to set and monitor objectives to meet the goal of reducing emissions.

The State must review the legislative mandates and existing fleet management policies to take a divergent set of goals that exist in statutes (some dating back to 1950), and regulations and administrative rules, and create a holistic approach to managing the transportation needs of State government. While legislation may be necessary in some instances, especially as it relates to providing DGS with the authority necessary to gain complete and accurate data regarding the totality of the existing fleet inventory, it is also important to avoid further prescriptive purchasing mandates. Upon completion of a comprehensive review of existing fleet statutes, the State should pursue a "clean-up" bill or an executive order to reconcile conflicting or redundant statutes and issue a Management Memo to reconcile conflicting, redundant, or outdated fleet operating policies.

#### **6. Implementation Steps and Timeline**

To immediately implement this measure, OFAM should lead by working through the State Equipment Council to analyze the total State fleet and understand the tasks required of the operating agencies and the mobility needed to accomplish those tasks. Once that baseline is established, the OFAM can work with the operating agencies to remove inappropriate or

underutilized vehicles from the fleet. To do this, the Council should ask for financial assistance from BAR to reduce operating agency costs of removal and replacement. Also, OFAM should keep the DMV apprised of vehicle dispositions to keep ownership records coordinated. Once the least-efficient vehicle assignments are identified and reconciled, the Equipment Council should engage in the process of determining which sections of the fleet would be better served through a vehicle leasing process instead of an ownership process. By reducing the number of vehicles in the fleet and by leasing, the State could save a significant amount of money on annual capital outlays and, at the same time, increase flexibility and service.

The proceeds from the sale of underutilized vehicles could be used to offset the cost of replacing needed vehicles that have been removed from the fleet.

To achieve long term benefits, the Council should explore the future of transportation to conduct the business of the State in an era of emerging technologies offering greater efficiencies, improved asset management and reduced risk/liability exposure.

### **7. Greenhouse Gas Emission Reductions**

The successful implementation of State's fleet data warehouse is needed to establish a baseline against which to measure the state's progress in meeting the State fleet GHG reduction goals.

#### Greenhouse Gas Emission Effects:

Methodology: A complete and accurate inventory of the state fleet needs to be analyzed to establish a benchmark that can be used to measuring the success of various aspects of this measure in terms of GHG emission reduction goals.

### **8. Costs and Cost Savings**

Reducing the size of the fleet will reduce the State's capital investment in vehicles and reduce annual capital outlays for vehicle procurements. Reduced maintenance costs will also result from a right-sized fleet.

### **9. Other Benefits**

The *Right-Size the State Fleet Measure* could yield some best practices that could be utilized by local jurisdictions and private fleets and the development of a statewide, alternative fueling infrastructure that supports continued commitment to developing vehicle and fuel technologies and renewable fuels.

**Climate Action Team  
State Fleet Sub Group  
Scoping Plan Measure Development and Cost Analysis**

*The purpose of this document is to provide the public with information about options considered and analyzed by the Climate Action Team (CAT) Sector Sub Groups for Air Board’s consideration and potential inclusion in the Scoping Plan. This information should be drawn from the Measure Analyses previously developed by each Sub Group. Information should only be updated to reflect significant changes in technology, staff assignments, and understanding of the issues.*

**Outline**

- 1. Measure: Removing Higher-Polluting Vehicles from the State Fleet ..... 1
- 2. Agency: ..... 1
- 3. Measure Description ..... 1
  - Affected Entities ..... 1
  - Related Objectives ..... 2
  - Measure Metrics ..... 2
  - Measure Goals and Potential Implementation Approaches ..... 2
- 4. Technology ..... 2
- 5. Statutory Status ..... 2
- 6. Implementation Steps and Timeline ..... 3
- 7. Greenhouse Gas Emission Reductions ..... 3
- 8. Costs and Cost Savings ..... 3
- 9. Other Benefits ..... 3

[Page intentionally blank]

## **Climate Action Team State Fleet Sub Group Scoping Plan Measure Development and Cost Analysis**

*The purpose of this document is to provide the public with information about options considered and analyzed by the Climate Action Team (CAT) Sector Sub Groups for Air Resources Board's consideration and potential inclusion in the Scoping Plan. This information should be drawn from the Measure Analyses previously developed by each Sub Group and submitted to the California Air Resources Board.*

### **1. Measure: Removing Higher-Polluting Vehicles from the State Fleet**

#### **2. Agency:**

All vehicle operating agencies, the Department of General Services (DGS), Office of Fleet & Asset Management (OFAM), the Bureau of Automotive Repair (BAR), and the Department of Motor Vehicles (DMV).

#### **3. Measure Description**

One of the fastest ways to reduce fleet emissions is to replace old vehicles with new ones. Newer vehicles usually have more advanced pollution control systems and, in general, operate more efficiently than older vehicles. The State should identify the most polluting vehicles in its fleet and replace those vehicles or determine redundancy through right-sizing. With Fleet Asset Management System information, DGS Fleet, DGS Procurement, and the Bureau of Automotive Repair should work with operating agencies to present cost-benefit analyses of vehicle replacement or redundancy opportunities to the Department of Finance for appropriate budgetary action.

#### Overview

There are about 50,000 vehicles in the state fleet consisting of a variety of vehicles such as cars, trucks, boats, motorcycles, and road construction and other maintenance equipment. The executive branch has over 100 government agencies that operate vehicles.

#### Affected Entities

- 1) State vehicle operating agencies
- 2) Vehicle Manufacturers, Suppliers and Distributors
- 3) Public and private sector vehicle repair facilities

#### Environmental Justice, Small Business, Public Health, Leakage and CEQA

This measure would have the greatest effect if the higher-polluting vehicles removed from the State fleet were retro-fitted with the latest pollution controls and sold or destroyed and removed permanently from operation.

To the extent that the State fleet utilizes small businesses to provide maintenance and repair services, disposal of the oldest vehicles could impact small automotive repair shops income.

However, most of these vehicles would be sold to the public and would still need maintenance and repair services.

### **Related Objectives**

This measure is closely related to the right-sizing measure.

### **Measure Metrics**

The success of this measure could be determined by the following:

- A reduction in pollution emissions of the fleet overall: Continuously compare the number and types of vehicles in the fleet. Consider vehicle miles traveled and fuel purchases to estimate GHG emissions and reductions over time. Note that some of the highest-polluting vehicles in the fleet may be off-road construction vehicles that may not travel many miles but are operated frequently.

### **Measure Goals and Potential Implementation Approaches**

**State Procurement:** Continue adopting procurement rules that require certain product performance. For example, California Public Resource Code Section 25722.5 (a)(1) requires State procurement specifications for passenger cars to include ultra low emission vehicle (ULEV II) standards.

**Mandate Performance:** Continue to adopt regulatory standards that require certain performance by the State fleet. For example, in 2008 the State adopted a minimum fuel economy standard (miles per gallon) for its light duty vehicle fleet;

Establish a mechanism to use funds from the Bureau of Automotive Repair to pay for the removal of high-polluting vehicles from the State fleet.

**Information Program:** Ensure the successful implementation of FAMS. A data warehouse will improve the State's analysis and reporting capabilities to improve vehicle utilization and better manage the total cost of ownership and reduction in GHG for its entire fleet.

**Incentive Program:** Pursue legislative changes to make the State fleet eligible to participate in the BAR's Voluntary Accelerated Vehicle Retirement Program because it would ensure a more timely removal of older and more polluting vehicles from California roadways to be replaced with newer and cleaner vehicles or alternative transportation options, thus protecting the public from exposure to air pollutants or other health concerns.

## **4. Technology**

Upgrading existing fleet assets with newer, technologically advanced vehicles will reduce petroleum consumption, GHG emissions and criteria pollutants. These vehicles are typically smaller and utilize lightweight materials, low-rolling resistance tires, and alternative fuels—including electricity. This measure would work in concert with an overall reduction in the number of State vehicles accomplished.

## **5. Statutory Status**

This measure will require modifications to the existing legislative framework for the procurement of vehicles. The State fleet needs to maintain a diversified portfolio of regularly replaced assets that allows the State to operate its fleet as efficiently as possible, especially considering the changing pace of vehicle and fuel technologies.

## **6. Implementation Steps and Timeline**

To immediately implement this measure, OFAM should lead by working through the State Equipment Council to identify the highest polluting vehicles in the fleet. Once those vehicles are identified, agencies should begin the process of “surveying” the highest polluting vehicles and removing them from the fleet. The proceeds from the sale of these vehicles could be used to offset the cost of replacing them, although the Council should ask for financial assistance from BAR to remove the highest-polluting vehicles from service entirely. Also, OFAM should keep the DMV apprised of vehicle dispositions to keep ownership records coordinated.

## **7. Greenhouse Gas Emission Reductions**

The successful implementation of State’s fleet data warehouse is needed to establish a baseline against which to measure the state’s progress in meeting the State fleet GHG reduction goals.

Greenhouse Gas Emission Effects: A rough estimate of the GHG emissions of the State fleet is 340,000 tons per year.<sup>1</sup>

Methodology: A complete and accurate inventory of the state fleet needs to be analyzed to establish a benchmark that can be used to measuring the success of various aspects of this measure in terms of GHG reduction goals.

## **8. Costs and Cost Savings**

In 2007, DGS disposed of 2,559 fleet assets (light, medium, and heavy duty vehicles) through public auctions. These sales resulted in \$4.86 million returned to the vehicle owning departments. For the State to achieve optimal gains in reducing its overall GHG and other related emissions created by the older fleet, these vehicles should ideally be destroyed rather than being resold. However, destroying all of the older State fleet vehicles is not currently a financially feasible option.

## **9. Other Benefits**

The *Removing Higher-Polluting Vehicles from the State Fleet Measure* could yield some best practices that could be utilized by local jurisdictions and private fleets. This measure should be closely coordinated with the Bureau of Automotive Repair and the Department of Motor Vehicles.

---

<sup>1</sup> Calculations derived from ARB, Feb 28, 2008 AB32 Implementation Update: Transportation. Information by fuel is available at <http://www.arb.ca.gov/cc/inventory/data/data.htm>

**Climate Action Team  
State Fleet Sub Group  
Scoping Plan Measure Development and Cost Analysis**

*The purpose of this document is to provide the public with information about options considered and analyzed by the Climate Action Team (CAT) Sector Sub Groups for Air Board’s consideration and potential inclusion in the Scoping Plan. This information should be drawn from the Measure Analyses previously developed by each Sub Group. Information should only be updated to reflect significant changes in technology, staff assignments, and understanding of the issues.*

**Outline**

- 1. Measure: Actively manage vehicle miles traveled and reduce petroleum consumption. . 1
- 2. Agency: ..... 1
- 3. Measure Description ..... 1
  - Affected Entities ..... 1
  - Related Objectives ..... 1
  - Measure Metrics..... 1
  - Measure Goals and Potential Implementation Approaches ..... 2
- 4. Statutory Status..... 2
- 5. Implementation Steps and Timeline..... 2
- 6. Greenhouse Gas Emission Reductions ..... 3
- 7. Costs and Cost Saving..... 3
- 8. Other Benefits ..... 3

[Page intentionally blank]

## **Climate Action Team State Fleet Sub Group Scoping Plan Measure Development and Cost Analysis**

*The purpose of this document is to provide the public with information about options considered and analyzed by the Climate Action Team (CAT) Sector Sub Groups for Air Resources Board's consideration and potential inclusion in the Scoping Plan. This information should be drawn from the Measure Analyses previously developed by each Sub Group and submitted to the California Air Resources Board.*

**1. Measure: Actively manage vehicle miles traveled and reduce petroleum consumption.**

**2. Agency:**

All vehicle operating agencies, the Department of General Services (DGS), Office of Fleet & Asset Management (OFAM), the Bureau of Automotive Repair (BAR), and the Department of Motor Vehicles (DMV).

**3. Measure Description**

Overview

There are about 50,000 vehicles in the state fleet consisting of a variety of vehicles such as cars, trucks, boats, motorcycles, and road construction and other maintenance equipment. The executive branch has over 100 government agencies that own and operate vehicles. According to a recent estimate by the Department of General Services, during Fiscal Year 2007-2008, the State purchased approximately 34 million gallons of gasoline and 11 million gallons of diesel for vehicular transportation and equipment use. Also during FY 2007-2008, the State purchased 327,174 gasoline gallon equivalents of compressed natural gas and propane, and 66,183 gallons of E-85. DGS's estimates do not include aviation and marine fuels used by the State and they are assumed to be a relatively small percentage of overall fuel use. The 34 million gallons of gasoline purchased by the State is considered part of the 16 billion gallons of gasoline that were purchased throughout California during the same time.

Affected Entities

- 1) State vehicle operating agencies
- 2) Vehicle Manufacturers, Suppliers and Distributors
- 3) Fuel Manufacturers, Suppliers and Distributors

Related Objectives

Eliminating trip redundancy to optimize vehicle utilization reduces the number of vehicle miles traveled, GHG emissions, criteria pollutants, and maintenance costs. Actively managing fuel consumption meets objectives by decreasing petroleum use through the increased use of renewable and alternative fuels for necessary business travel.

Measure Metrics

The success of this measure could be determined by the following:

- A reduction in the vehicle miles traveled by the State workforce: Measure vehicle miles traveled annually, based on the number of authorized positions in the Executive Branch.
- An increase in the use of alternative fuels by the State: Measure the capacity for and the utilization of alternative fuels, by fuel type annually, and;
- A reduction in the amount of petroleum fuels purchased by the State, and;
- A reduction in the amount of GHG's and criteria pollutants emitted by the State fleet.

### **Measure Goals and Potential Implementation Approaches**

The establishment of measure goals for reductions in the use of petroleum fuels and increases in the use of alternative fuels would be arbitrary until the State better understands the current use of its fleet and begins to implement measures to right-size the fleet overall. The use of alternative fuels today is limited by the small but growing number of alternative fuel stations available to the public, so the State should put serious effort into installing alternative fuel infrastructure in locations convenient to State vehicle operations. For example, due to high use, the California Highway Patrol replaces its vehicles every two to three years and most new pursuit vehicles today are flex-fuel. So the California Highway Patrol should install E85 fuel tanks and related equipment at central locations to fuel CHP vehicles. An expanded use of E85 by the CHP would contribute greatly to an increase in the use of alternative fuels by the State fleet and a corresponding reduction in petroleum use.

#### Technology

Global Positioning System technology has declined in price over the last few years and could be employed in the State fleet to track vehicle miles traveled and analyze vehicle use. Combined with GIS information from CalTrans and UC Davis's Institute for Transportation Studies, State vehicle use could serve as a model for other fleets. Also, DGS Fleet is currently implementing a fleet data warehouse (FAMS) that will improve the State's analysis and reporting capabilities to improve vehicle utilization and better manage the total cost of ownership, across departmental lines, for its entire fleet. This system is the first step toward reducing vehicle miles traveled, reducing operation and maintenance costs, and managing fuel consumption.

#### **4. Statutory Status**

No legislation is needed to reduce vehicle miles traveled, although new legislation may be needed to improve the process for permitting alternative fuel infrastructure to reduce the time and expense of installation.

#### **5. Implementation Steps and Timeline**

To implement this measure, OFAM should lead by working through the State Equipment Council to analyze the use of petroleum products (gasoline, diesel, and motor oil and lubricants), develop a benchmark for current petroleum consumption, negotiate procurement and utilization policies for renewable and alternative fuels and recycled or synthetic motor oil and lubricants, and develop implementation plans. This effort must be coordinated with DGS Procurement to develop fuel purchasing contracts that encourage the purchase of alternative fuels and discourage the use of petroleum fuels.

The ARB and CEC should direct some alternative fuel infrastructure funds to locations with the highest amount of State use to make the fueling of the state's alternative fuel vehicles seamless to the driver. And OFAM should work with DGS Procurement and vehicle operating agencies to

make an immediate and concerted effort to increase the availability of alternative fuel to state vehicles and the private sector.

### **6. Greenhouse Gas Emission Reductions**

A baseline of GGH emissions of the State fleet must first be established to estimate potential GHG reductions from reduced vehicle miles traveled and reduced petroleum use.

### **7. Costs and Cost Saving**

Costs associated with this measure would include the installation of alternative fuel infrastructure, the installation and analysis of GPS systems and information, and the procurement or lease of vehicles that are more efficient and less polluting.

### **8. Other Benefits**

This measure could yield some best practices that could be utilized by local jurisdictions and private fleets and would support the development of a statewide, alternative fueling infrastructure that supports continued commitment to developing vehicle and fuel technologies and renewable fuels.