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To, All State Fleet Vehicle Users,

Here is a list of our SFM implementation plans that SFM is currently implementing to reduce petroleum consumption and vehicle miles traveled. I currently serve on the Greening State Government (GSG) Administrative team, the Governors Biofuel Coalition, among several others that are directly related to our energy conservation strategic plan. We will be working to develop our formal reporting within the next few months of all the items listed below. Most of the requirements in the D0012 07 Executive Order, Greening of State Government: Detailed Implementation, are the most stringent, so most of our goals and objectives are to meet or exceed the requirements of the executive order, and by doing so, we meet or exceed all the other national and state laws and initiatives in the same process.

*The primary objective is to reduce petroleum consumption 25% in 5 years. SFM is proposing the following activities as statewide "menu" items currently to each department whereas they can select the options that they feel will work best for each respective agencies operation. We are currently making suggestions to every department to purchase the most fuel efficient models that are made available through the state bids / purchasing program. SFM is certainly giving more vehicle selection **weight** to the vehicles that have higher mpg CAFE standards than we ever have in the past. We do expect to have more of these models available for your selection than ever before. One of our restrictions however, is that not all manufacturers-dealers are willing to bid these high mpg models with the deep cost reductions the state gets through the Colorado BIDS process, and if the cost variance is too great, the OSPB and JBC are hesitant to approve the spending authority without return on investment (ROI) cost justification. We are currently addressing this with the GEO, OSPB and the JBC in hopes to relax the age old low bid philosophy in order to evolve the vehicle selector purchasing process *** below.*

State Fleet Management is currently working on several programs that are being evaluated-implemented for the purpose of:

- ✓ **Reducing Petroleum Fuel Consumption and vehicle emissions,**
- ✓ **Reduce the State Fleet Vehicle Miles Traveled (VMT)**

***BOTH OF WHICH WILL HELP US TO ACHIEVE THE GOVERNORS GREENING STATE GOVERNMENT, NEW ENERGY ECONOMY, GOVERNMENT EFFICIENCY MANAGEMENT, SB06-016, HB07-1228, SB06-224, AND ENERGY POLICY ACT OF 2005, WITHOUT SIGNIFICANTLY INCREASING COST TO THE OVERALL STATE VEHICLE FLEET:

1) The State Fleet Management agency (SFM) consists of 5700 vehicles of all vehicle sizes, operates 70.6 million miles, and consumes over 4.3 million gallons of fuel per year. The SFM currently has over 500 Flex Fuel Vehicles that can use Ethanol in a blend of 85% (E85) or biodiesel at a blend of 20% (B20) or above. SFM proposes that we increase the purchase of FFV's in the State Fleet by 5% each year going forward. By using these renewable fuels, you are directly displacing the use of imported petroleum fuel and significantly reducing greenhouse gas emissions. Update, May 2008: FFV vehicles have increased to almost 700, and HEV's are over 100. The projected miles for FY09 are projected to increase by five million, and the current vehicle count is +6000 including 500+ oversized. FY09 vehicle replacement plan encompasses 217 hybrid vehicles and 300 FFV's. It is essential that we receive funding support to maintain this accelerated progress.

2) The SFM is actively pursuing funding to enable the installation of state owned E85 and Biodiesel fueling sites to maximize the consumption volumes of renewable fuels while minimizing cost to the state by utilizing the benefits associated with volume/bulk fuel purchasing agreements. Update, May 2008: Motor pool fuel site is scheduled to exclusively dispense E85 on June 30 2008. Cards have been issued by Grand Junction, and we are currently working with City of Denver to enable their usage of our site. Tentative plans have been made with Ft Collins, City of Littleton and Colorado Springs to establish same resource sharing programs as #3.

3) The SFM has established tentative agreements with twenty political subdivisions of government to partner with the state and allow the state to share alternative fuel sites. This benefits both the state and the political-subgroups by allowing the state to fuel their vehicles at their municipal / county sites at a cost less than what it costs at commercial sites, and furthermore provides a return revenue to the cities and counties to help cover the overhead expenses associated with their fuel management expenses and in-sourcing. These partnerships help to establish a much larger network that will increase usage of clean fuels that reduce greenhouse gas emissions as well as reducing reliance on imported foreign oil. Update May, 2008: These tentative agreements have grown to 25. The discovery of barriers and delay of schedule of site agreements is due to having to custom tailor each site so it is conducive to the accounting processes of billing and accounts payable. These interagency agreements often times require interface programming of fuel management programs such as CCG Faster, Petrovend, OPW, Gas Boy, Multi / Fuel Force, Fuel Master, etc. These shared resources lead to other programs such as the use of green maintenance products at facilities that are also providing vehicle maintenance used in the respective facilities at state (GEM) and non-state maintenance shops, and help to serve as an impetus to adopt other greening programs that furthermore serves to help the State Purchasing Office develop volume based cost reductions based on the collective volume needs of state and local government vehicles, parts and supplies needed to maintain the vehicles and the alternative fuels used to operate them.

4) The SFM currently has fifty hybrid electric vehicles (HEV) in the fleet, and in some situations, we are finding more ways to economically justify the purchase of more HEV's depending on the usage type and the dealer purchase price that they propose during the state BIDS / awards process each year. We typically achieve a 20% + increase of MPG when compared to the non-hybrid vehicles in the same size categories. Update, May 2008: HEV's are currently at 100+ and the FY09 order encompasses 217 additional HEV's.

5) One of the new technologies that we are currently evaluating is the plug-in hybrid electric vehicle (PHEV). This vehicle has been retrofitted with lithium-ion batteries and is currently achieving greater than 100 MPG. Although the cost of this technology currently is not economically justifiable, the state fleet will be ready to receive more in the fleet when these technologies become more affordable. Update May, 2008: Although GEO is in the process of replacing this vehicle due to problems, SFM will continue to monitor, SFM has determined that due to the OEM mfg having their OEM PHEV models being introduced in 2009-2010, this research is no longer necessary.

6) The SFM is currently evaluating the vehicle mounted global positioning systems (GPS) for the purpose of efficiently routing state delivery services, improve driving and fuel consuming behaviors, reduce idle time, reduce risk and accidents. This will help the state fleet to measure and reduce these fuel-consuming behaviors while optimizing miles traveled in the scope of state services. If you can measure it, you can manage it. Update May, 2008: The SFM evaluation is complete, the results are very favorable toward the ROI and efficiencies possible depending on the specific navigation, GPS, telematic options used in the selected applications that are yet to be determined.

7) The SFM is currently contributing to a study that identifies duplicative state services that are essentially duplicating delivery routes in the state fleet. Once we identify these duplications, we can propose plans to consolidate the routes and reduce VMT and fuel consumption in the state fleet. Update May 2008: GPS and telematics play an important role in managing this process. Evaluations of upsizing delivery vans to increase route miles and reduce the number of vehicles are also intended results.

8) The SFM is beginning an evaluation program to identify the benefits associated with the use of auxiliary power units (APU) in the bussettes and oversized equipment in the fleet. These APU's are similar to generator sets used on recreational vehicles such as motor homes. Our proposed evaluation program will enable the use of APU's on vehicles such as the bussettes that DHS uses. The DHS bussettes are built for adaptability to accommodate disabled occupants for transport. APU's will enable the vehicles to sustain cabin heat in the winter, air conditioning in the summer, and enhanced electrical back-up so that the wheel chair lifts can be used without idling the vehicle for prolonged periods. The consumption rate for and APU verses idling is approximately $1/10^{th}$ the fuel consumption. Update May, 2008: RAQC has been contacted and has SFM on the list of first available funding opportunities. 12 APU's are currently scheduled for installation.

9) SFM is working to rollout a new vehicle user survey in the fall. This website will enable users of the state vehicles to better identify the activities the vehicle is expected to perform. By matching the vehicle more precisely to the types of jobs it needs to sustain, the vehicle will have an improved MPG for a longer-increased lifecycle, improved reliability, and reduced maintenance. An example of this is also being demonstrated by upgrading in some instances to diesel vehicles when off-road, heavy cargo and towing is required. This will enable cost justification with benefits of a longer vehicle life cycle, a better durability and reliability, while reflecting at least a 20% reduction of fuel consumption, and enable more biodiesel usage to displace petroleum. On the smaller -lighter spectrum of vehicles, the new crossover type 2WD and AWD of vehicle can generally replace most 4WD SUVs with a greatly improved MPG. SFM intends to add as many of these vehicle types as possible to reduce the number of low MPG SUV's in the fleet. Some of the new clean diesel sedans offer improved mpg CAFÉ standards and improved reliability including longer life cycle expectancy. SFM proposes further exploration into all these alternatives by increasing ranges and options of vehicle bid specifications. Update May 2008: The survey is complete and is being utilized as an ongoing process to evolve the vehicle selector process to "Right Size" vehicles based on changing program needs.

10) SFM is currently instituting an anti-idling policy to all state fleet vehicle users to reduce unnecessary fuel consumption. Update May 2008: Policy rules have been written, process of formal introduction to "Policy" in process. The GPS-telematics technologies are essential to the success of this process:

No person who operates a State of Colorado Owned Vehicle that is managed by State Fleet Management, in the State of Colorado, and that is designed to operate on public roads, shall allow to idle in excess of three (3) consecutive minutes in any 60 minute period for gasoline-powered vehicles; five (5) consecutive minutes in any 60 minute period for diesel-powered vehicles, with the following exceptions:

1. The vehicle is forced to remain motionless on a public road because of traffic conditions over which the operator has no control;

2. The vehicle is being used as an emergency vehicle in an emergency situation;

3. Required by a federal, state, or local law or official, but only to the extent necessary to comply with such requirement;

4. The vehicle's engine is providing auxiliary power for activities other than heating or air conditioning, such as loading, refrigeration, well drilling, or farming;

5. Running the vehicle's engine is necessary for maintenance, servicing, repair, or diagnostic purposes;

6. Running the vehicle's engine during adverse weather conditions is necessary to ensure the safe operation of the vehicle; or

7. The ambient air temperature is below 20 degrees Fahrenheit for gasoline-powered vehicles; below 32 degrees Fahrenheit for diesel-powered vehicles, and idling of the vehicle is necessary to ensure the safety or health of the passengers or driver.

11) SFM is currently supporting a soon to be released campaign that will be a contest-challenge among state agencies to reduce vehicle usage by 10 miles per week. The details and award information pertaining to this contest will be released in coming weeks. New incentives will be introduced during 2008. These are anticipated to involve reduction of variable rates when consistent usage of E85 and biodiesel can be documented. Update May 2008: Usage patterns can also be established with the proposed installation of telematics. Used in conjunction with the web based Fleet Commander reservation system, SFM can determine adjustments needed to optimize the greening contributions and cost efficiency of the motor pool operations and vehicle type adjustments needed.

12) SFM purchased two Honda GX compressed natural gas vehicles. These vehicles are deemed the cleanest combustion vehicles in the world today. We added extended range fuel tanks and have made preliminary arrangements to use commercial CNG fueling sites in the Rifle area. This will enable the vehicles to run to the western slope and back without worries of not being able to fuel. The price equivalent of 1 gallon of CNG is approximately $1.90. CNG is often referred to as a renewable fuel, and is also an option to directly displace petroleum fuels. Update May, 2008: Both units were transferred to CDPHE during Jan. 2008 due to need to increase utilization within an agency that is not as limited to distance restrictions, and increase benefits of emissions reductions. Update May 2008: Final StEPP report is due July 15th 2008. The CNG fuel location at Rifle did not materialize.

13) Contest at the downtown motor pool that rewards $25.00 per month to each individual that turns in receipts of purchasing the greatest volumes of E85 per month when using the motor pool FFV's. Update May 2008: New E85 fuel site will help to increase E85 volumes, and enable a much larger base of users. The new OPW isite fuel management program will enable web access so the fuel can be monitored remotely in real time.

14) Configure and improve the CARS database to enable a more accurate fuel type capture rate. Update May 2008: CARS GSG module is currently in testing and expected to be in use by June 2008. With the introduction of the Appeon program, this will be a priority #1 to webify this activity so we can increase the viewing capacity of Department specific progress of GSG activities, most critical activity is to measure the volume of E85 purchased by each agency where the FFV vehicles are assigned, and furthermore, will be used for site assessments.

15) Eliminate the options of V10 gas engines and any other power sources that are deemed inefficient by SFM in all vehicles including 1 ton rated and other oversized vehicles. Update May 2008: Refine the vehicle selector process / criteria by including on the annual IFB. Replace with the diesel options, or downsize to the FFV V8 option. Some of these vehicles will be selected to achieve improved fuel economy by replacing with other new emerging technologies such as oversized hybrids, Eco-Boost, etc. In addition to a more efficient "green" designed vehicle, SFM is actively pursuing additional green vehicle options such as tinted glass (as allowed by law) to reduce the demand when air conditioning is needed, cruse control, issuing dash visors to reduce sunlight heat when the vehicle is parked, having Rain-X type treatments applied to reduce defrost requirements as well as improving winter month visibility, on board navigation to avoid unnecessary miles from mapping errors, low resistance tires when weather permits, dash monitored RF tire psi gauges, light or white exteriors and interiors with cloth seats, and on heavy duty diesels, recovery and collection on the air dryer purge exhaust, urea

injection, and oil miser type oil system, etc.

16) Configure a car-pooling feature to the Agile Fleet Commander functionality (Similar to Ride Arrangers) that will enable the identification and flag those that have the same reservations to the same locations at the same time. If reinforced from the executive level, this will reduce duplicated travel, VMT, and help to reduce petroleum consumption in the State Motor Pool. Update May, 2008: This has been completed and now need to focus on getting people to use the tool.

17) May, 2008, the Trip Optimizer is currently in use. Update May 2008: SFM is planning a new VMT reduction log that users can input all their activities that are intended to reduce VMT such as Video and Teleconferencing, Transit usage, Telecommuting, RTD passes, Flex scheduling, etc. This program of data collection will also be used to validate exemption to the minimum utilization levels during the underutilization reporting annually. VMT reduction log website is now complete and ready for usage.

18) New: May, 2008: MVAC meets regularly and has an ongoing emphasis on GSG department activities, this information is also being used to feature department articles in state publications pertaining to GSG success activities at an agency level. SFM has published 7 articles in state and outside publications during the last six months. (Stateline, First Choice, Rocky Mountain News, Fleet Executive, Utility and Telecom Fleet, Fleet Equipment, Automotive Fleet).

19) NEW: SFM is participating in presenting information about the GSG program to fleet industry experts at the NAFA, RMFMA, GFX, CMC, NCSFA, Clean Cities, DOE, EPA, etc.

20) NEW: Adjustments to the GSG baseline report, based on incorporation of voluntary participation is a critical element that is necessary to achieve the overall GSG goals. Effort of enrolling those activities from volunteer participants that are currently GSG exempted baseline vehicles will help to establish an offset to inventory growth of inventory increases of +2% each year and related increases of VMT (estimated five million miles FY09) and consequently gallons of fuel consumption.

21) NEW: The SFM oil sampling analysis program serves to establish higher maintenance standards, thus reducing engine deterioration, and consequently reducing tailpipe emissions and fuel consumption throughout the lifecycle of the vehicle.

22) NEW: Establish bulk purchasing-pricing at a state-wide level to stabilize the ethanol and biodiesel pricing structure and reduce cost of PPG state wide. These price agreements are intended as being piggy backed on by all government agencies for the intended purpose of increasing volumes of usage and availability at our partnered fuel sites in the state.

23) NEW: Continue to develop the SFM website as a one stop resource and marketing tool for all information pertaining to GSG activities.

24) NEW: Continue to assist and train other state departments regarding the adoption of GSG activities. (CDOT biodiesel, and perform site visits, DHS E85 perform site visits, etc.)

25) NEW: Begin the requirement of Fleet Coordinator training at SFM as an orientation to all state fleet activities including a heavy emphasis on GSG implementation requirements and resources.

26) NEW: Continue the Tire Pressure Promotion and Campaign. Provide tire gauges to fleet coordinators and define expectations.

27) NEW: Explore the auto shut off devices that are available to reduce vehicle idle time.

28) NEW: Explore the opportunities for adding winter block heater plug-in outlets to reduce diesel cold weather start and warm-up time to reduce vehicle emissions and fuel consumption. (TSE) Engine preheaters are an additional project plan with the RAQC.

29) NEW: Need to continue heavy emphasis of collaboration and training of all aforementioned activities to all budget analyst, OSPB, JBC, and law-makers that help to approve annual GSG budgetary requirements. Pursue continued spending authority to stabilize projected planning of all funding needed for GSG activities

30) NEW: Continue to update all in-vehicle pamphlets that map the E85 and biodiesel fuel sites. Pamphlets are currently in print to include another series of updates on 05-23-2008.

31) Ongoing: Continue to enroll Wright Express access to anyone wanting to monitor the local fuel cost and area PPG, and enable all other OPEC resources as tools to manage the best pricing and alternative fuel availability.

32) NEW: Utilize the GEM's driver logs to capture data as an added benefit of GSG decision-making processes.

33) NEW: Continue to seek funding for the addition of one FTE to optimize functions pursuant to the position description established by GEO and Fleet Energy Manager / Coordinator PDQ.

34) NEW: Design and implement Green Fleet strategies within the GEM state shops program beginning on July 1st 2008. (Product usage and R&D programs).

35) NEW: Prepare performance specifications for the FY10 vehicle bids that include all electric vehicles and oversized hybrid electric vehicle (CalStart / WestStart).

36) NEW: The interagency governmental (IGA) fuel site MOU is written and currently in use, same as the garage guidelines and the RFQ we use with non-state vendors.

37) Ongoing: Post webcast announcements pertaining to green fleet activities such as the ones given by :

http://afvi.org/webinars.html.

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