U.S. Department of Veterans Affairs
Fleet Management Plan

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Introduction

The Presidential Memorandum, dated May 24, 2011, entitled "Federal Fleet Performance," requires Executive Branch agencies to maximize the acquisition of alternative fuel vehicles and use alternative fuels in the vehicles; limit executive fleet vehicle size to that which is required for the agency mission; and to optimize fleet size and composition. The Department of Veterans Affairs (VA) is committed to achieving these goals for its vehicle fleet, and has been actively engaged in these activities for several years. VA has been challenged in meeting these goals due to the growth in programs designed to fully serve all Veterans, no matter where they live and regardless of their ability to visit a VA facility for service.

VA is comprised of three Administrations and a number of staff offices/organizations. The three Administrations are the Veterans Health Administration (VHA), the Veterans Benefits Administration (VBA), and the National Cemetery Administration (NCA). Together, these three Administrations manage 99 percent of the vehicles in the Department. The remainder of the fleet is managed by the Office of the Inspector General and several small offices with a few vehicles each. VHA has the overwhelming majority of the vehicles, being responsible for 90 percent of the Department's vehicles. VA vehicles are located at over 295 facilities throughout the United States.

VHA in particular has seen tremendous growth in both mission and numbers of vehicles. To counteract the effects of this growth, VHA has been closely monitoring utilization rates for the past five years. Underutilization has not posed a large issue with other VA entities since they have relatively small, stable fleets.

It is important to note that the Optimum Fleet Attainment Plan template provided by GSA does not take into account unplanned growth in fleet requirements. All future projections about progress toward goals are based on the presumption that our future vehicle needs are known, which is not the case for VA. The Veteran population we serve has been expanding rapidly, along with the types of services needed.

In keeping with other mandates, VA has acquired a large number of alternative fuel vehicles (AFVs) over the years. The current VA fleet is approximately 50% AFVs. As is the case with most agencies, alternative fuel is not necessarily available in close proximity to the vehicles. In order to make alternative fuel

available for its AFVs (primarily E85), VA is investing in alternative fuel infrastructure where its vehicles are located - on its medical center campuses. In FY 2011 alone, VA awarded contracts to install E85 fuel stations at 33 medical centers around the country.

VA Administration-specific missions also require a variety of types of vehicles. The vehicle needs of these missions are not consistent within areas or programs. As a result, in late 2010, VA tasked each Administration to develop fleet management plans for achieving the myriad of fleet-related goals at the regional level. These plans gave each region the ability to develop and implement strategies that are unique to their specific geography and mission. By the end of 2011, 30 individual plans for meeting fleet goals had been finalized or nearly finalized, enabling each region to have a tailored approach to meeting fleet mandates.

VA is also expanding the use of telematics to collect utilization data automatically. Results so far indicate that these systems provide valuable feedback to coach drivers and monitor vehicle usage. Installation of these systems will be expanded further in the coming years.

During the process of conducting the Vehicle Allocation Methodology (VAM), VA noted that the total number of vehicles in the VAM did not correspond with the total number of vehicles reported in the Federal Automotive Statistical Tool (FAST). VA attributes this problem to the lack of a single comprehensive vehicle management information system throughout the department.   In the past, VA has used a combination of home-grown and GSA-developed tool for managing fleet information. The discrepancy in the number of agency vehicles points out the urgency of adopting a single agency-wide system for managing vehicle information. To that end, VA has already developed and strategy and prepared a timeline for acquisition of such a system.

VA Fleet Management Plan

Achieving optimal fleet inventory

VA evaluates fleet utilization continually, and reports underutilized vehicles monthly. Underutilized vehicles are either reassigned or disposed of as appropriate. Minimum utilization standards are shown below:

Vehicle Type	Mileage Criteria	Time Criteria	
Sedans, station wagons, and passenger carrying vans, general purpose use	12,000 miles per year, per vehicle	15 days per month, per vehicle	15 days per month, per vehicle
Light trucks (4x2) and general purpose vehicles, one ton and under	10,000 miles per year, per vehicle	15 days per month, per vehicle	15 days per month, per vehicle
Sport Utility Vehicles (4x4 and 4x2) and all other all-wheel drive vehicles	7,500 miles per year, per vehicle	15 days per month, per vehicle	15 days per month, per vehicle
Medium trucks and general purpose vehicles, 1½ tons through 2½ tons (12,500 to 23,999 GVWR)	7,500 miles per year, per vehicle	15 days per month, per vehicle	15 days per month, per vehicle
Heavy trucks and general purpose vehicles, 3 tons and over (24,000 GVWR and over)	7,500 miles per year, per vehicle	15 days per month, per vehicle	15 days per month, per vehicle
Tractor/Trailer	10,000 miles per year, per vehicle	15 days per month, per vehicle	15 days per month, per vehicle

Using the above mentioned criteria, less than 1.7% of VA vehicles were identified as underutilized. In contrast, VA's fleet grew by more than 1,700 vehicles in the same time period. The fleet growth far outstrips the number of underutilized vehicles, signaling that minor "tweaking" is needed. In order to meet our missions, we fully expect the fleet growth to continue, presumably at a slower rate of growth in the near future. We will shift vehicles among programs and locations, acquire the necessary vehicles to meet the mission growth, and eliminate low-utilized vehicles that are not appropriate for other uses. Short-term leases and rentals will continue to be encouraged for infrequent vehicle needs.

While VA has its own forward-looking Vehicle Acquisition Methodology (VAM), for this effort we used the backward-looking approach that GSA prescribed. The forward-looking approach is critical for VA to be able to meet its growing mission. VA analyzes vehicle acquisitions <u>before</u> they occur to minimize the number of vehicles acquired, and eliminate unnecessary vehicle acquisitions before they

occur. As a result, VA has a very small number of underutilized vehicles that will be quickly absorbed by growing mission requirements.

New vehicle acquisitions undergo a two-tiered approval process. First, the requestor and local fleet manager complete VA's VAM tool request form. Based on the input provided, the tool will recommend a type of vehicle (always defaulting to the smallest vehicle type that will fulfill the mission), a fuel type (based on location and fuel availability), and will assign the vehicle request a score based on the predicted utilization as well as the current utilization for that vehicle type at that location. The regional fleet manager then reviews the vehicle request before submitting for final approval to the administration fleet manager. VA has set up this rigorous process to ensure that vehicle acquisitions are well-controlled and underutilization is prevented before it occurs.

In addition to the acquisition process described above, VA policy prohibits acquiring vehicles deemed to be of excessive size for the mission. This policy applies to all levels of the organization. As a result, our fleet composition is changing. Over the past several years smaller, more fuel-efficient sedans, SUVs, 4x4s, and trucks have replaced the older generation of larger sedans and trucks. This trend is expected to continue.

The use of motor pools and vehicle sharing are other means to help VA minimize fleet size. Most medical centers have motor pools that allow the medical center staff to share vehicles instead of assigning every vehicle to a specific staff members or offices. In some areas where there are collocated facilities, such as a medical center and a VBA regional office, the motor pool is shared across the collocated facilities.

VA is also investigating vehicle sharing with other agencies. For example, the VA is investigating the idea of vehicle sharing between the Captain James A. Lovell Federal Health Care Center and their neighboring US Navy base. VA is also investigating novel solutions to help lower fleet size, such as car sharing programs (e.g., ZipCar) in metropolitan areas.

<u>Acquisition of 100% AFVs for the light-duty fleet by December 31, 2015</u>

VA is enforcing, from a centralized control point, the mandate that all vehicles acquisitions must be low-GHG whenever available, and encourages the acquisition of AFVs whenever possible. VA will continue to acquire primarily AFVs when new or replacement vehicles are acquired. VA is currently limited in its ability to fuel these vehicles, but expects to install additional fueling stations. In addition, areas that are not good candidates for E85 stations will be encouraged to consider acquiring hybrids, compressed natural gas, or electric vehicles, as appropriate. VA has already begun to tailor the vehicle acquisitions to the expected fuel availability.

VA's policy to expand its AFV acquisitions is reflected in the VAM reporting tool submission. Although VA already meets and surpasses the 75% AFV acquisition requirement, VA projects to expand its AFV acquisitions by approximately 10% annually. This target will be revised to meet the growing availability of alternative fuel stations.

VA is also attempting to relocate AFVs in close proximity to fueling stations with available fuels "as soon as practicable." Challenges to this include the fact that vehicles are in constant use and are occasionally outfitted for specific uses. Newly acquired AFVs are being located where the fuel is or will be available as they are added to the fleet.

Vehicle acquisition sources

VA strives to acquire vehicles from the most cost effective sources, but occasionally must pay a little more for timely delivery of vehicles needed to provide services to our Veterans and their families. VA occasionally utilizes commercial leases for short term, quick delivery vehicles that GSA is not able to provide. Many of our commercially leased vehicles are specialty vehicles that are not available through GSA.

Our fleet managers carefully consider each option available and evaluate the cost implications before requesting approval for non-standard procurement options. Commercial leases may cost more in the short term, but generally give VA the flexibility to cancel or modify leases as the mission changes, which saves taxpayer dollars in the long run.

Although VA carefully considers each vehicle procurement, this agency is unique in that it is not able to control all new vehicles it receives. VA receives a number of donated vehicles each year, and rarely has any say as to what vehicles are donated. We would like these vehicles to be the appropriate alternative fuel vehicle for the area, but that is seldom the case. We make every effort to locate donated vehicles to the most appropriate area (either for fuel or utilization considerations), but we are often restricted by the donor to the area or program that the vehicle must support. The Presidential Memorandum specifically stated "vehicles leased or purchased" by agencies, and it should be noted that donated vehicles are not covered by this requirement.

VA has also positioned itself as a leader in new technology and occasionally acquires vehicles that are not yet cost effective as part of a pilot program to prepare for new technology. VA is currently demonstrating this strategy with plug-in electric vehicles. While electric vehicles have yet to be determined to be the most cost effective option available, VA is leading the other agencies into the world of electric vehicles. VA is receiving 26 of the 116 plug-in electric vehicles in the GSA Electric Vehicle Pilot Program. However, VA has not limited itself to GSA's pilot programs, and is testing electric vehicles in other areas on its own.

Executive Fleet Vehicles

VA has a small executive vehicle fleet for use by our executives. Eleven vehicles qualify as executive vehicles, five of which are assigned to the highest ranking agency officials, with the remaining six executive vehicles assigned to an executive motor pool for the use of all other agency executives. VA reviewed the current executive fleet in response to the Presidential Memorandum – Federal Fleet Performance, and determined that there are few opportunities to reduce the size of the vehicles. However, VA will continue to identify and review possible opportunities to replace executive fleet vehicles with alternative fuel and/or low-GHG vehicles.

Regional Fleet Plans

NCA, VBA, and VHA developed regional fleet plans that provide a strategy for how each region will contribute to the VA fossil fuel reduction goals using a common template (included as **Appendix 2**). Each region provided an overview of their planned vehicle inventories and the fuel consumption required to achieve the region's targets. They then summarized the actions they plan to take to achieve these targets and the associated results/benefits expected. The actions are organized around three driving principles of greenhouse gas and petroleum reduction: reducing vehicle miles traveled (VMT), increasing fleet fuel efficiency, and using alternative fuels. The region chose the actions in each principle area based on an evaluation of its site-specific characteristics, mission, including availability of alternative fuel, fleet size, and fleet vehicle composition.

The three principles and related actions (from Department of Energy's Federal Energy Management Program) from which each region made selections are shown below.

Principle I. Reduce Vehicle Miles Traveled

- **Consolidating trips.**
  - Consolidate routes to eliminate duplication of trips and car pooling.
- **Eliminating trips.**
  - Use video and Web conferencing tools for meetings. Implement a transportation on demand (TOD) system – changing a fixed route, fixed schedule shuttle to a demand-responsive system.
- **Using agency shuttles.**
  - Provide a shuttle service for high-use routes to consolidate trips.
- **Improving scheduling and routing**.
  - Optimize travel distance for delivery of services by using global positioning system (GPS) technology to improve routing and efficiency of fleet vehicles.

Principle II. Increase Fleet Fuel Efficiency

- **Acquiring higher fuel economy vehicles.**
  - Replace vehicles with smaller or more fuel-efficient ones, consistent with a continued ability to accomplish the fleet's mission.
  - Use the VAM to ensure that fleet vehicles are right-sized to the region's mission.

- o Select higher fuel economy vehicles in fleet replacement plans.
- o Increase the fuel efficiency of the least efficient vehicles.
- **Acquiring hybrid electric vehicles (HEVs)**. Acquire vehicles, such as those with hybrid electric drive trains, which have higher fuel economy than the vehicles they replace, and locate them in areas lacking access to alternative fuel.
- **Driving more efficiently**. Drive sensibly, observe the speed limit, remove excess weight, and use cruise control.
  - o Drive at speeds that conserve fuel.
  - o Use cruise control, when appropriate, on the highway to maintain a constant speed.
  - o Drive safely and responsibly.
  - o Remove excess weight such as unnecessary items in the trunk.
- **Avoiding excessive idling**.
  - o Turn off your engine when you are parked or stopped (except in traffic) for more than 1 minute
  - o Avoid using a remote vehicle starter, which encourages unnecessary idling
  - o Avoid drive-throughs; park and walk inside instead.

Principle III. Increase Use of Alternative Fuel

- **Increase the use of E85**
  - o Optimize use of new infrastructure.
  - o Expand vehicles capable of using alternative fuel based on existing or planned infrastructure.
  - o Run dual-fueled vehicles on alternative fuel.
- **Increase the use of electric vehicles.**
  - o Identify optimal electric vehicle strategies based on fleet location characteristics.
  - o Evaluate availability of EVs to replace conventional-fueled vehicles.
  - o Evaluate life-cycle costs for acquisition of EVs.
  - o Replace gasoline vehicles with battery electric or plug-in hybrid electric vehicles (when available) that meet functional and mission needs.
  - o Install electric vehicle charging infrastructure required to support electric vehicles.
- **Install alternative fuel infrastructure in areas**.
  - o Install infrastructure in areas with highest AFV concentrations.

DEFINITIONS/ACRONYMS

Definitions

Alternative fuel – Alternative fuels include but are not limited to: E85 (a blend of 85% ethanol and 15% gasoline), neat (100%) biodiesel (B100), compressed natural gas, liquefied natural gas, liquefied petroleum gas or propane, and electricity.

Covered petroleum consumption – petroleum from fleet vehicles, except those vehicles considered exempt (i.e., emergency, law enforcement, and military tactical vehicles).

Acronyms

AFV	Alternatively fueled vehicle
B20	Fuel mixture of 20 percent biodiesel and 80 percent diesel
CNG	Compressed natural gas
CY	Calendar year
E85	Fuel mixture of 85 percent ethanol and 15 percent gasoline
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EV	Electric vehicle
FAST	Federal Automotive Statistical Tool
FEMP	Federal Energy Management Program
FY	Fiscal Year
GGE	Gallons of gasoline equivalent

GHG	Greenhouse Gas
GPS	Global positioning system
GSA	U.S. General Services Administration
GVWR	Gross vehicle weight rating
HD	Heavy duty
HEV	Hybrid electric vehicle
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
LSV	low-speed vehicles
LSEV	low-speed electric vehicles
MD	Medium duty
MSN	Memorial Service Network
MTCO$_2$e	Metric Tons of Carbon Dioxide Equivalent
NCA	National Cemetery Administration
OAEM	Office of Asset Enterprise Management
SUV	Sport Utility Vehicle
TOD	Transportation on demand
VA	U.S. Department of Veterans Affairs
VAM	Vehicle allocation methodology
VBA	Veterans Benefits Administration
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network
VMT	Vehicle miles traveled

U.S. Department of Veterans Affairs
Regional Fleet Plan Template

Region: [region name]

Prepared by: Fleet Manager [John Doe]

Date: [date approved by region]

[*Instructions:* The items highlighted yellow should be filled in with your regional specific information and then un-highlighted. The items highlighted blue are instructions and should be deleted from your final Plan submission.]

This is a sample template. Data contained herein is not necessarily representative of any particular region.

Fleet Status Overview

Executive Order 13514 requires each agency to reduce fossil fuel use by using low greenhouse gas (GHG) emitting vehicles, optimizing the number of vehicles in the agency fleet, and reducing the consumption of petroleum fuel by a minimum of 2 percent annually through the end of fiscal year (FY) 2020 relative to FY 2005 baseline. The U.S. Department of Veterans Affairs (VA) is committed to achieving these fleet goals. This [region name] Regional Fleet Plan provides a strategy for how this region will contribute to the VA fossil fuel reduction goals. The following tables and charts provide an overview of the region's planned vehicle inventories and fuel consumption required to achieve the region's targets. Actions to achieve these targets are presented in the next section.

Inventory

[Provide a short 2-3 sentence explanation of the changes in the vehicle inventory]

[*Instructions:* Tables 1 and 2 are prepopulated based on your region's vehicle acquisition and disposal projections reported in FAST. The inventory is based on calendar year (CY). Please review the inventory for accuracy to ensure it still accurate in light of the actions chosen in the sections below.]

**Table 1. Vehicle Inventory by Vehicle Type**

	CY 2010	CY 2011	CY 2012	CY 2013	CY 2014
Minivan 4x2 (Passenger)	7	11	12	12	8
Pickup MD	1	2	2	2	0
Sedan	112	188	166	160	144
SUV 4x2	3	4	5	5	4
SUV 4x4	45	111	85	79	70
Van 4x2 (Cargo)	3	8	8	8	3
Van MD (Passenger)	3	36	23	20	16

Table 2. Vehicle Inventory by Fuel Type

	CY 2010	CY 2011	CY 2012	CY 2013	CY 2014
Diesel	0	0	0	0	0
Electricity	0	0	0	0	0
Gasoline	71	164	127	118	108
E85	97	186	163	157	129
Hybrid (gasoline)	6	10	11	11	8

[*Instructions:* To populate Figures 1, 2, and 3 with the appropriate data please follow these instructions. 1.) Click inside the chart 2.) Click the "Design" tab in the tool bar ribbon 3.) Click "Edit Data" in the Data section of the Design tab. Excel should then open and have a table with the same fields as the associated table in this Plan. 4.) Enter the data in Excel as it is in the table. 5.) Close Excel and the Figure should be updated with your data.]

Figure 1. Vehicle Inventory by Fuel Type
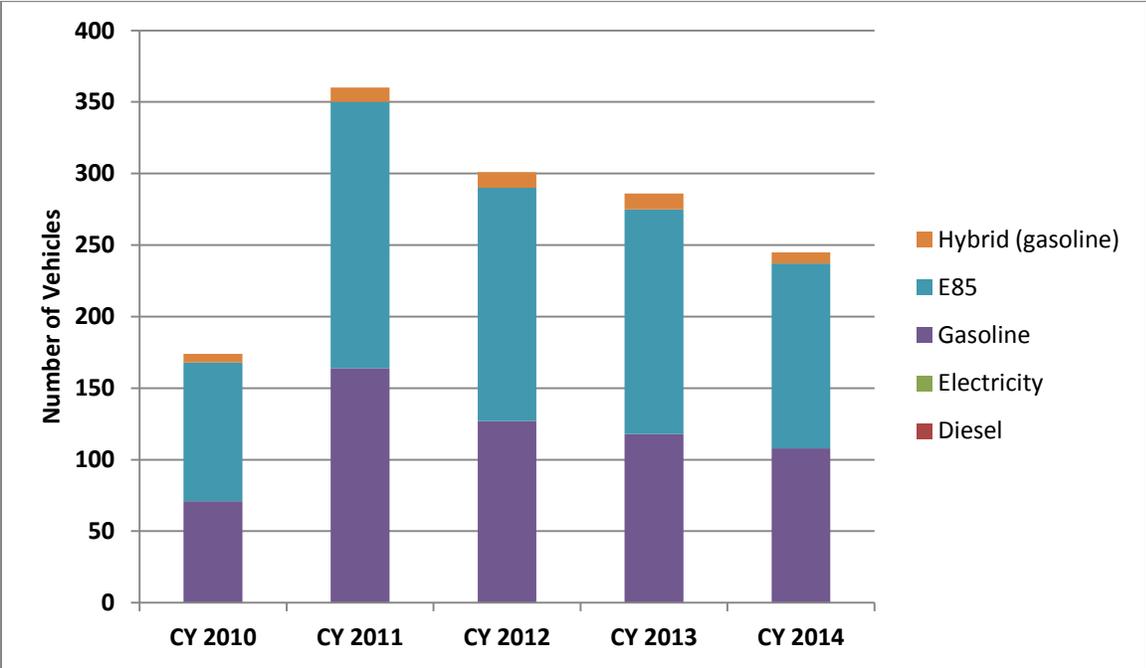
Fuel Use

[*Instructions:* In Tables 3 and 4, please fill in your region's projected fuel consumption.

- This projection should be based on your vehicle inventory and utilization, as well as the actions chosen in the section below.
- The fuel consumption should be for covered vehicles only (non-covered vehicles are emergency and law enforcement vehicles).
- The annual fuel consumption goals are provided based on your region and VA achieving EO 13514 goals. Contact OAEM fleet administrator for more information.
- To calculate Gallons of Gasoline Equivalents (GGEs), use tab "D. GGE Conversions" in the GHG Calculator provided. Enter fuel consumption in natural units in column B, and column E will automatically populate GGEs for that fuel type.]

The fuel use projections below extend to FY 2015, though VA fuel goals extend to FY 2020 in accordance with Federal mandates.

[Provide a short 2-3 sentence explanation of the changes in the fuel consumption and reasons your region projects to meet/not meet the targets]

Table 3. Covered Petroleum Fuel Consumption in GGE

	FY 2005 Baseline	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Target	56,371	49,606	48,479	47,351	46,224	45,096
Projected						

Diesel
Gasoline
Total

[*Instructions:* Update Figure 2 to match Table 3, see instructions above.]

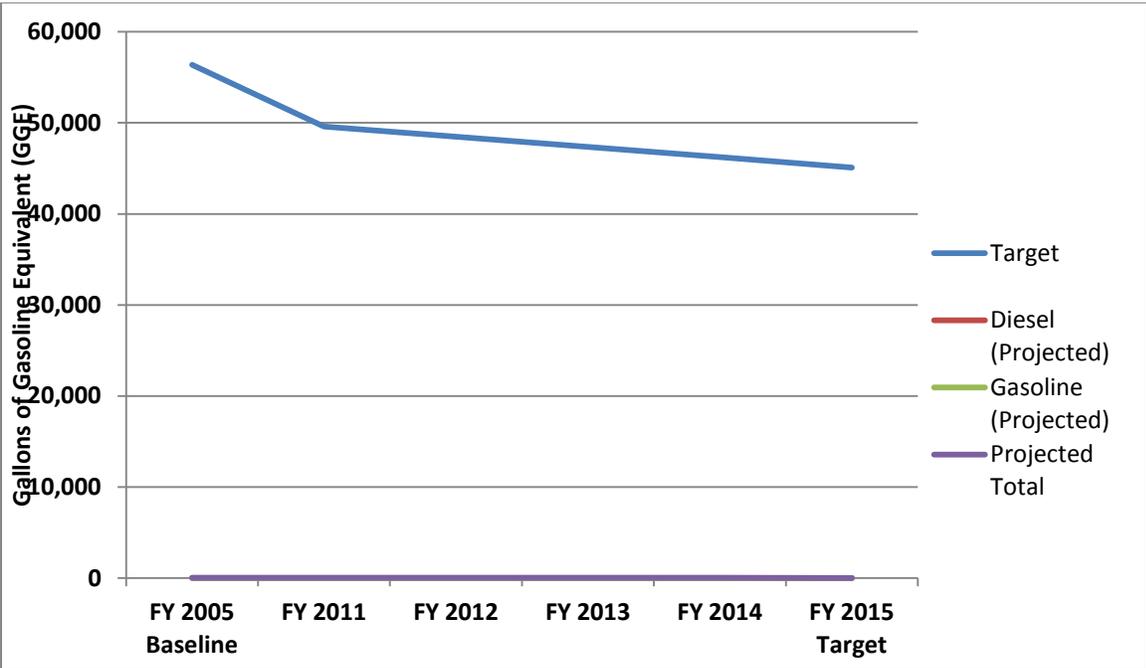**Figure 2. Covered Petroleum Fuel Consumption in GGE**

Table 4. Alternative Fuel Consumption in GGE

	FY 2005 Baseline	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Target	1,051	25,347	27,881	30,669	33,736	37,110
Projected						

E85
B20
Electricity
(others if
necessary)
Total

[*Instructions:* Update Figure 3 to match Table 4, see instructions above.]

Figure 3. Alternative Fuel Consumption in GGE
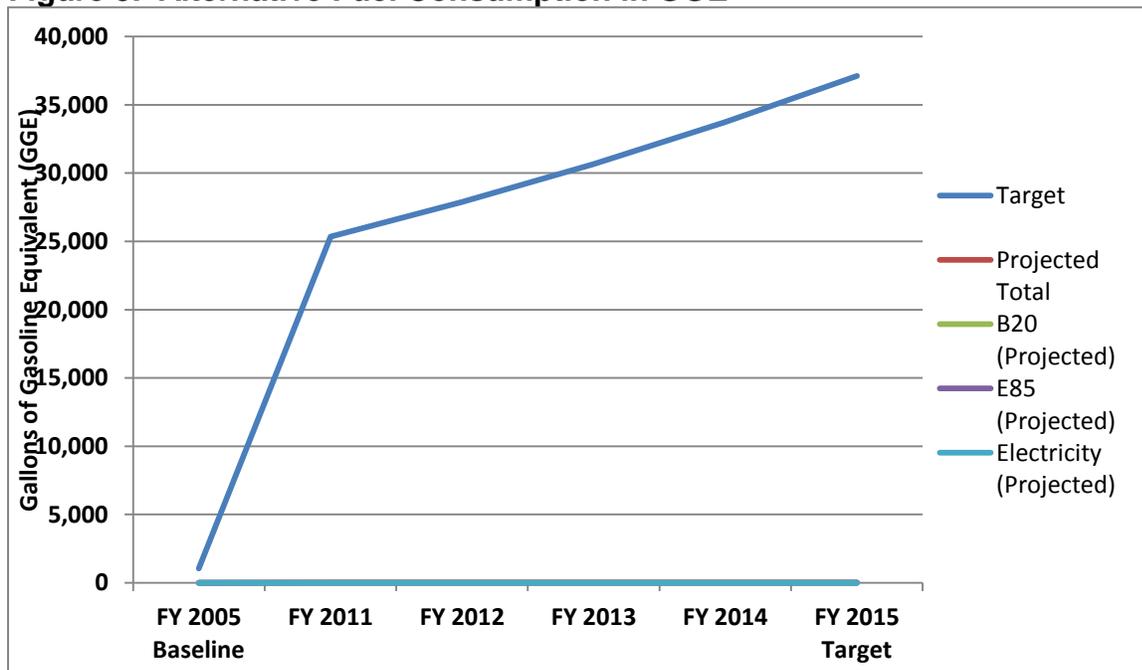
Fossil Fuel Reduction Action Plan

The improvements shown above will be obtained through a combination of efforts. The actions noted below provide greater detail on steps that will be taken and the associated results/benefits expected. The actions are organized around three driving principles of greenhouse gas and petroleum reduction[1]: reducing vehicle miles traveled (VMT), increasing fleet fuel efficiency, and using alternative fuels. The region chose the actions in each principle area based on an evaluation of its site-specific characteristics, mission, including availability of alternative fuel, fleet size, and fleet vehicle composition.

Principle I. Reduce Vehicle Miles Traveled

Reducing VMT directly reduces the region's consumption of fuel. The strategies to reduce VMT can be applied to all fleet vehicles, regardless of vehicle size or fuel type. The region selected the following actions to reduce its VMT:

[*Instructions:* The bullets below are suggested actions. Please delete the items your region will not pursue, and add any necessary actions not listed]

- **Consolidating trips.**
  - Consolidate routes to eliminate duplication of trips and car pooling.
- **Eliminating trips.**
  - Use video and Web conferencing tools for meetings. Implement a transportation on demand (TOD) system – changing a fixed route, fixed schedule shuttle to a demand-responsive system.
- **Using mass transportation.**
  - Use mass transportation alternatives to eliminate fleet vehicle transportation needs.
- **Using agency shuttles.**
  - Provide a shuttle service for high-use routes to consolidate trips.
- **Improving scheduling and routing**.
  - Optimize travel distance for delivery of services by using global positioning system (GPS) technology to improve routing and efficiency of fleet vehicles.
- **Using alternative modes of transportation.**
  - Using alternative modes of transportation such as bicycles and low-speed vehicles as appropriate.

Planned Actions Details

[Provide a brief narrative explaining more details about your region's plans to implement the selected actions

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[1] The three driving principles are discussed in greater detail in the Fleet Management Guidebook and Fleet Management Handbook published by DOE-FEMP

Example:

- Establish partnership with ZipCar in DC region to eliminate 6 cars
- Issue guidance requiring the use of transit if traveling from facilities connected by transit with travel time less than 30 minutes
- Coordinate with GSA for access to shuttle from X to Y
- Acquire 1 LSEV at X campus for testing and evaluation]

Expected Results/Benefits

[Provide a brief narrative of the expected results of the selected actions. Include quantitative benefits expected if possible.]

[*Instructions:* In Table 5, please include expected results from reducing VMT. Show calculations in Appendix A as appropriate.

- To calculate Gallons of Gasoline Equivalents (GGEs), use tab "D. GGE Conversions" in the GHG Calculator provided. Enter fuel consumption in natural units in column B, and column E will automatically populate GGEs for that fuel type.
- To calculate GHG emissions, please use the GHG Calculator-Fleet spreadsheet provided. Please list the total GHG emissions for the change in VMT and GGE. For VMT emissions, enter the change in VMT in tab "C. Vehicle Miles Traveled" in the appropriate category. Choose the closest alternative if the exact vehicle is not listed. For GGE, enter the change in GGE in tab B. in the appropriate category.]

Table 5. Summary of Expected Results from Reducing VMT

	Expected Annual Change
VMT (miles)	
Petroleum Fuel Use (GGE)	
Alternative Fuel Use (GGE)	
GHG Emissions (MTCO$_2$e)	

Principle II. Increase Fleet Fuel Efficiency

Increasing fleet fuel efficiency can help the region reduce its petroleum consumption and GHGs. These strategies can be implemented throughout the fleet in all vehicle sizes and fuel types. Selected actions to improve fleet fuel efficiency include:

[*Instructions:* The bullets below are suggested actions. Please delete the items your region will not pursue, and add any necessary actions not listed]

- **Acquiring higher fuel economy vehicles.**
    - Replace vehicles with smaller or more fuel-efficient ones, consistent with a continued ability to accomplish the fleet's mission.
    - Use the VAM to ensure that fleet vehicles are right-sized to the region's mission.
    - Select higher fuel economy vehicles in fleet replacement plans.
    - Increase the fuel efficiency of the least efficient vehicles.
- **Acquiring hybrid electric vehicles (HEVs)**. Acquire vehicles, such as those with hybrid electric drive trains, which have higher fuel economy than the vehicles they replace, and locate them in areas lacking access to alternative fuel.
- **Maintaining vehicles to improve fuel economy.** Improve maintenance by implementing best practices.
    - Follow manufacturer's recommended maintenance including filter changes.
    - Keep tires properly inflated to the recommended tire pressure.
    - Use the recommended grade of motor oil for your vehicle to increase fuel economy.
- **Driving more efficiently**. Drive sensibly, observe the speed limit, remove excess weight, and use cruise control.
    - Drive at speeds that conserve fuel.
    - Use cruise control, when appropriate, on the highway to maintain a constant speed.
    - Drive safely and responsibly.
    - Remove excess weight such as unnecessary items in the trunk.
- **Avoiding excessive idling**.
    - Turn off your engine when you are parked or stopped (except in traffic) for more than 1 minute
    - Avoid using a remote vehicle starter, which encourages unnecessary idling
    - Avoid drive-throughs; walk inside instead.

Planned Actions Details

[Provide a brief narrative explaining more details about your region's plans to implement the selected actions

Example:

- Issue guidance and provide training to drivers on efficient driving techniques. Install dashboard stickers.
- Install 5 efficient driving monitor systems and monitor vehicle performance
- Establish driver reward program to reward efficient driving
- Downsize 20 SUVs and large sedans to compact cars
- Install idling monitoring on 10 vehicles to quantify idling fuel consumption]

Expected Results/Benefits

[Provide a brief narrative of the expected results of the selected actions. Include quantitative benefits expected if possible.]

[*Instructions:* In Table 6, please include expected results from increasing fuel fleet efficiency. Show calculations in Appendix A as appropriate.

- To calculate Gallons of Gasoline Equivalents (GGEs), use tab "D. GGE Conversions" in the GHG Calculator provided. Enter fuel consumption in natural units in column B, and column E will automatically populate GGEs for that fuel type.
- To calculate GHG emissions, please use the GHG Calculator-Fleet spreadsheet provided. For GGE, enter the change in GGE in tab B. in the appropriate category. For electricity use in electric vehicles, enter the facility zipcode and kWh used in the vehicle in tab "A. EV Electricity."]

Table 6. Summary of Expected Results from Increasing Fuel Fleet Efficiency

	Expected Annual Change
Petroleum Fuel Use (GGE)	
Alternative Fuel Use (GGE)	
GHG Emissions (MTCO$_2$e)	

Principle III. Increase Use of Alternative Fuel

Increasing alternative fuel use can help the region displace its petroleum consumption and reduce GHGs. Alternative fuels include but are not limited to: E85 (a blend of 85% ethanol and 15% gasoline), neat (100%) biodiesel (B100), compressed natural gas (CNG), liquefied natural gas (LNG), liquefied petroleum gas (LPG) or propane, and electricity. The region's location determines the type of alternative fuel vehicle types and infrastructure pursued. Selected actions to increase the use of alternative fuel include:

[*Instructions:* The bullets below are suggested actions. Please delete the items your region will not pursue, and add any necessary actions not listed]

- **Increase the use of E85, CNG, LNG, and LPG.**
  - Optimize use of existing infrastructure.
  - Optimize use of existing retail station(s).
  - Obtain access to nearby fleet fueling stations.
  - Optimize use of new infrastructure.
  - Expand vehicles capable of using alternative fuel based on existing or planned infrastructure.
  - Convert conventional fuel tank to E85.
  - Promote development of local alternative fuel infrastructure.
  - Run dual-fueled vehicles on alternative fuel.
- **Increase the use of neat Biodiesel and Biodiesel Blends.**
  - Optimize use of existing infrastructure.
  - Optimize use of existing retail station(s).
  - Obtain access to nearby fleet fueling stations.
  - Optimize use of new infrastructure.
  - Expand vehicles capable of using biodiesel fuel based on existing or planned infrastructure.
  - Convert conventional fuel tank to biodiesel.
  - Promote development of local biodiesel fuel infrastructure.
- **Increase the use of electric vehicles.**
  - Identify conventional fueled vehicles that are not candidates to be replaced with AFVs or use biodiesel.
  - Identify optimal electric vehicle strategies based on fleet location characteristics.
  - Evaluate availability of EVs to replace conventional-fueled vehicles.
  - Evaluate life-cycle costs for acquisition of EVs.
  - Replace conventional vehicles that operate solely within campus with low-speed electric vehicles.
  - Replace gasoline vehicles with battery electric or plug-in hybrid electric vehicles (when available) that meet functional and mission needs.
  - Install electric vehicle charging infrastructure required to support electric vehicles.

- o   Meter, monitor, and report electricity used in electric vehicles separately.
- **Install alternative fuel infrastructure in areas**.
  - o   Install infrastructure in areas with highest AFV concentrations.
- **Communicating and coordinating with nearby fleets.**
  - o   Communicating and coordinating with nearby fleets (both regulated and private sector) to aggregate demand for alternative fuel.

Planned Actions Details

[Provide a brief narrative explaining more details about your region's plans to implement the selected actions

Example:

- Coordinate with NREL to load fleet profile into Fleet Atlas and evaluate AF use potential
- Install B5 tank and use on 2 diesel trucks
- Install separate electric meter and EV charging station
- Acquire 1 LSEV at X campus for testing and evaluation
- Coordinate with other federal agency to gain access to their AF station
- Relocate 30 E85 vehicles to locations with access to AF]

Expected Results/Benefits

[Provide a brief narrative of the expected results of the selected actions. Include quantitative benefits expected if possible.]

[*Instructions:* In Table 7, please include expected results from increasing alternative fuel use. Show calculations in Appendix A as appropriate.

- To calculate Gallons of Gasoline Equivalents (GGEs), use tab "D. GGE Conversions" in the GHG Calculator provided. Enter fuel consumption in natural units in column B, and column E will automatically populate GGEs for that fuel type.
- To calculate GHG emissions, please use the GHG Calculator-Fleet spreadsheet provided. For GGE, enter the change in GGE in tab B. in the appropriate category. For electricity use in electric vehicles, enter the facility zipcode and kWh used in the vehicle in tab "A. EV Electricity."]

Table 7. Summary of Expected Results from Increasing Alternative Fuel Use

	Expected Annual Change
Petroleum Fuel Use (GGE)	
Alternative Fuel Use (GGE)	
GHG Emissions (MTCO$_2$e)	