

# Fleet Sustainability Dashboard - FleetDASH



## FleetDASH

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NREL is a national laboratory of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, operated by the Alliance for Sustainable Energy, LLC.

*Tampa Convention Center • Tampa, Florida*

# Agenda

- FleetDASH Overview
- Why FleetDASH?
- FleetDASH Tour
- Latest Updates
- FleetDASH Impact
- Related Support

# FleetDASH Overview

FleetDASH is a fleet sustainability management tool



Credit card transactions are tracked for fleet fuel purchases

Provides fleet transparency and accountability

Who is purchasing fuel? How much fuel is purchased? Where is the fuel purchased?

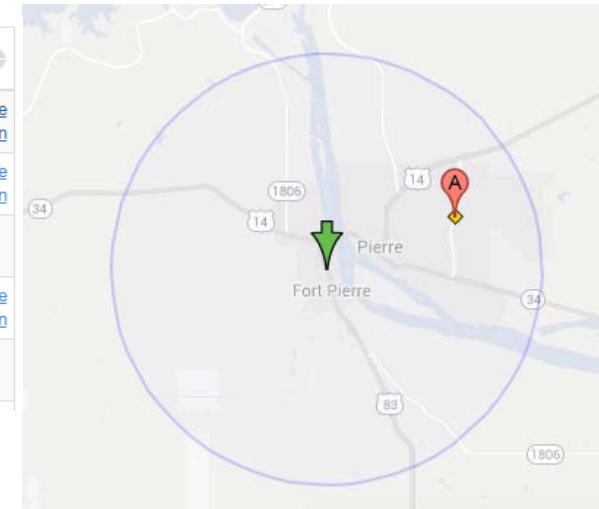
<https://Federalfleets.energy.gov/FleetDASH>

# FleetDASH Overview

Actionable Information: Transaction level detail updated monthly  
 Successes as well as **“Missed Opportunities”** are highlighted

Vehicle Fuel Type	Petroleum		Alt Fuels		Total Fuel Use GGE	Missed Opportunities	
	GGE	% of Total Fuel Use	GGE	% of Total Fuel Use		GGE	% of Total Fuel Use
FFV	368	100	0	0	368	210	57

Station Name	Address	City	State	Zip	Fuel Type Purchased	Date	GGEs Purchased	Missed Opportunity	Alternate Station
Comer Pantry 22	904 N DEADWOOD ST	Fort Pierre	SD	57532	GAS	11/17/2015	16	Yes	<a href="#">Alternate Station</a>
Shell Service Statio	621 W SIOUX AVE	Pierre	SD	57501	GAS	11/16/2015	15	Yes	<a href="#">Alternate Station</a>
Farmers Union Oil Co	507 W 1ST ST	Faith	SD	57626	GAS	11/16/2015	18	No	
Comer Pantry 22	904 N DEADWOOD ST	Fort Pierre	SD	57532	GAS	11/16/2015	14	Yes	<a href="#">Alternate Station</a>
Midland Food & Fuel	404 SD HWY 14	Midland	SD	57552	GAS	11/10/2015	14	No	



Users can drilldown in organizations to single fuel purchases.

# What are Missed Opportunities?

FFV purchases gasoline where public E85 station is within 5 miles.

## FFV Purchased

**17 Gasoline GGEs on  
6/1/11 at:**

Shell Service Station  
3430 Northgate Blvd  
Sacramento, CA 95834



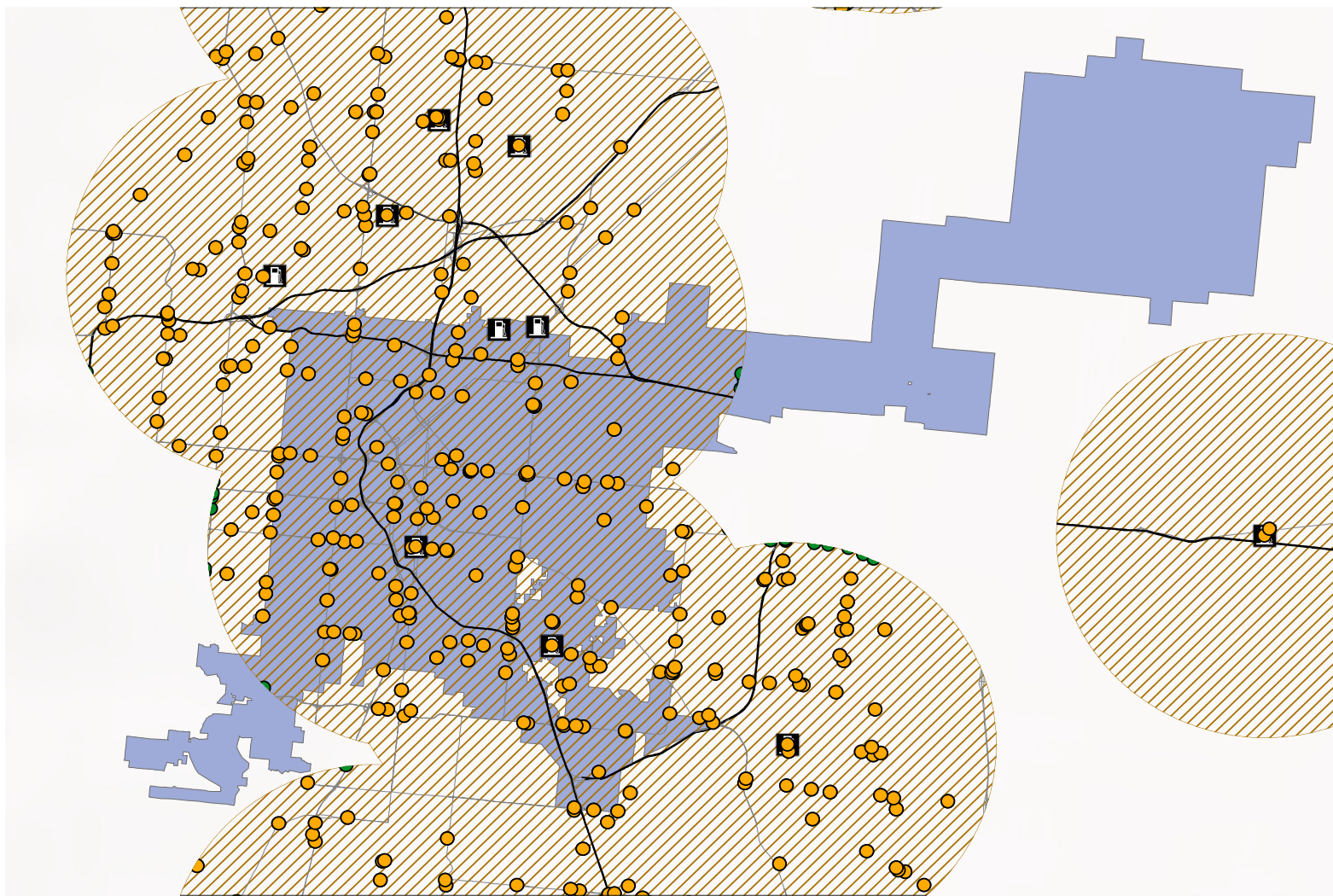
## FFV could have purchased

**17 E85 GGEs of 1 mi away:**

Truxel Road Shell  
3721 Truxel Rd  
Sacramento, CA 95834  
(station is public, accepts WEX)

<http://www.afdc.energy.gov/afdc/locator/stations/>

# Scope of Missed Opportunities



Station

# Why FleetDASH?

# Why FleetDASH?

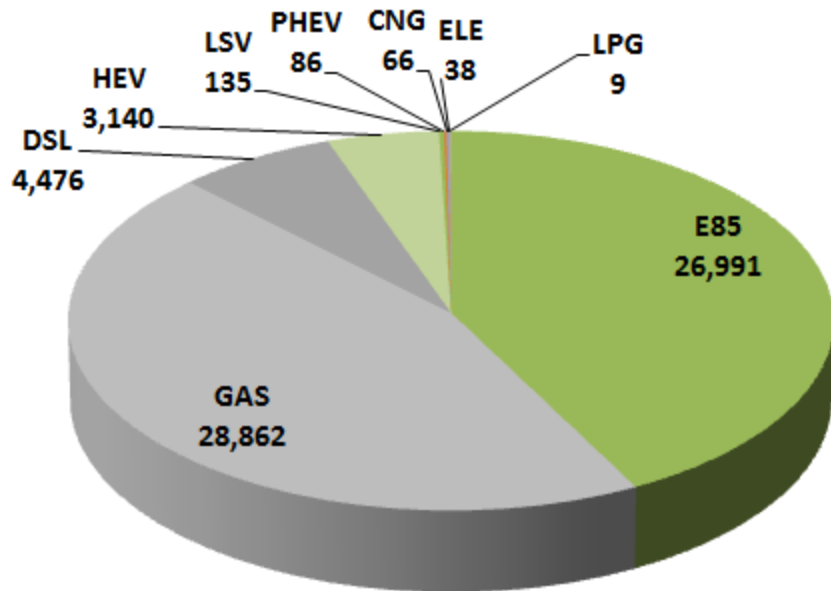
## Existing Alternative fuel consumption requirements

- Dual-fuel vehicles must operate on alternative fuel unless a vehicle receives a waiver from DOE
  - EPLA 2005, section 701
- Covered Federal fleet fueling centers must install at least one renewable fuel pump (E85, B20 or greater, or electricity from renewable sources)
  - EISA 2007, section 246

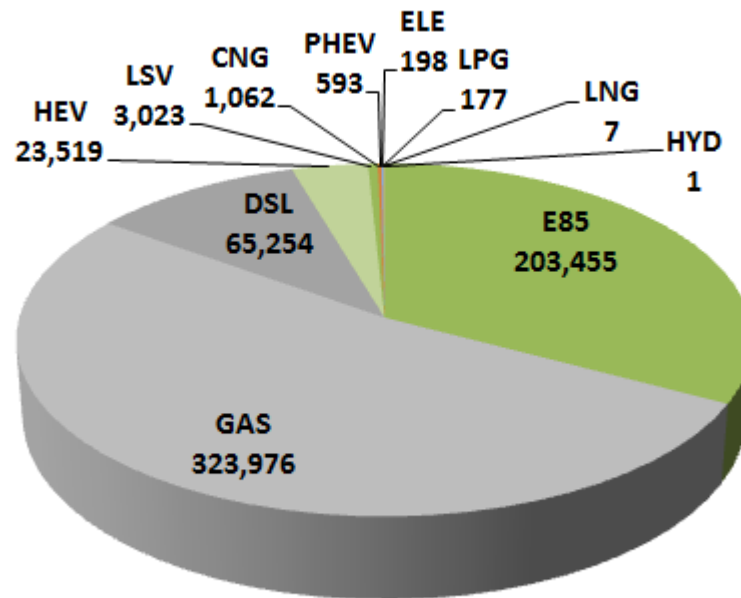


# Federal Fleet Acquisitions & Inventory

## Total FY 2016 AFV Acquisitions by covered Federal Agencies



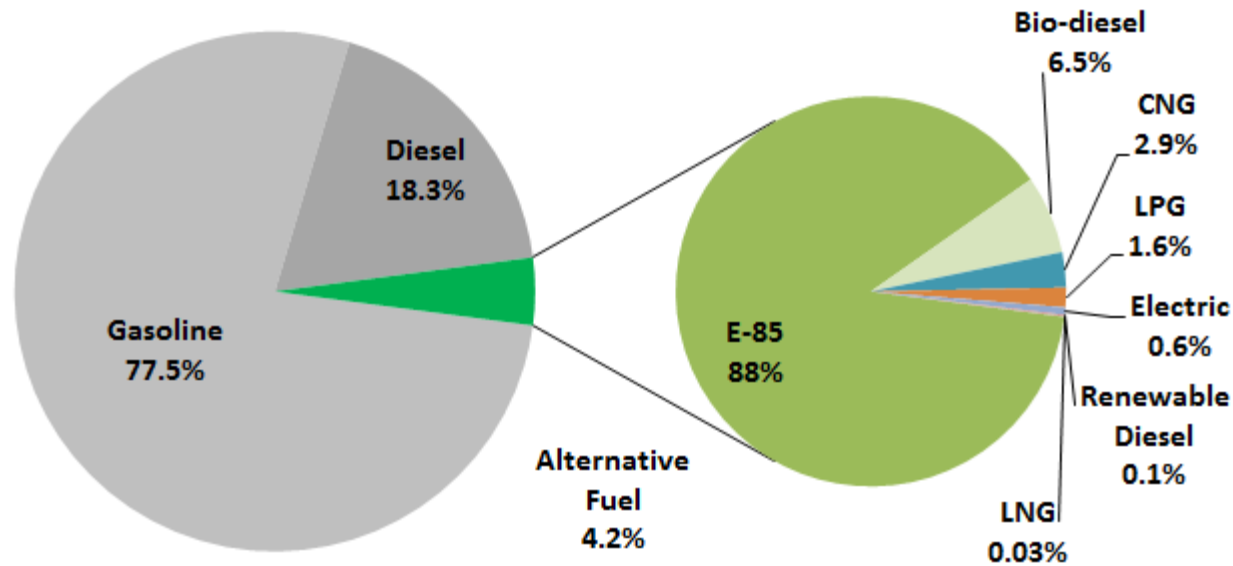
## Total FY 2016 AFV Inventory of covered Federal Agencies



37% of the Federal fleet is comprised of AFVs

# FY14 Alternative Fuel Consumption

## FY 2016 Total Fuel Use (GGE)

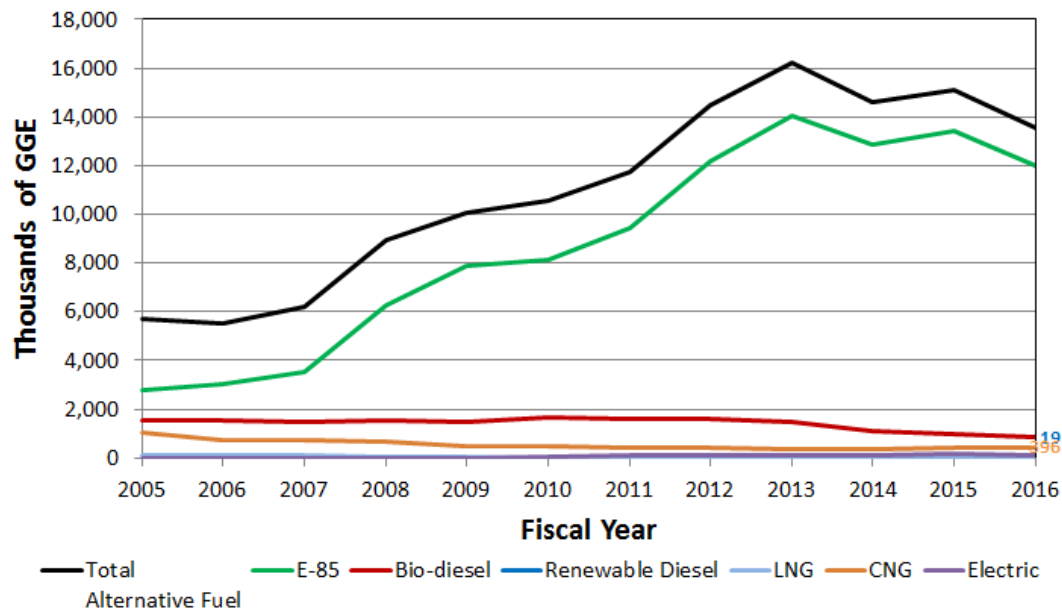


AFV's comprise **37%** of all Federal vehicles, but Alternative Fuel is **4.2%** of total Federal fuel use.

# Alternative Fuel Use Opportunity

The Federal Fleet has successfully increased alternative fuel use

**Fed Fleet Alternative Fuel Use**



Opportunity to use existing E85 in existing FFVs

- Quadruple E85 use
- 2.2 million additional E85 GGEs per month
- 10% further reduction in petroleum use
- 9% reduction in GHGs

\* FleetDASH data for FY 2016

# FleetDASH Tour

# FleetDASH Tour

Welcome to FleetDASH! Specific organizational and vehicle summaries can be found by drilling down through the Fleet Summary Table, the Vehicle Summary Table, or by clicking the Search button in the upper right corner.

Fuel Use

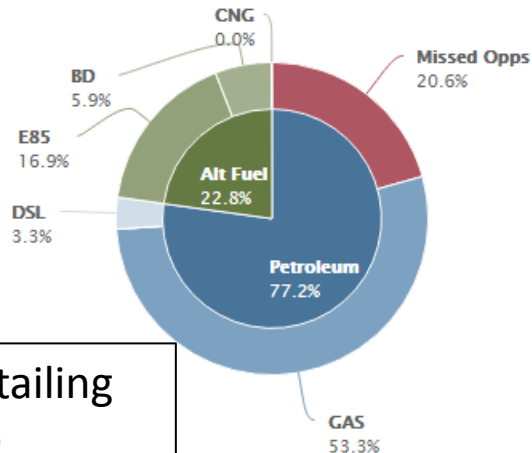
Inventory

Greenhouse Gas

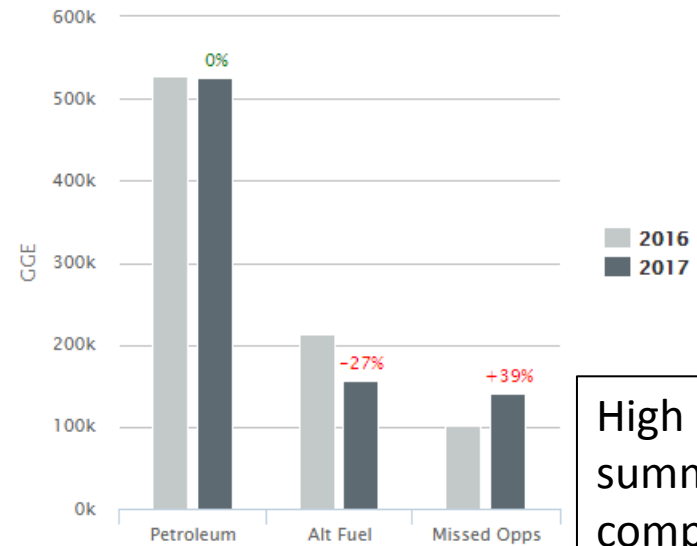
## Fuel Used by Type (FY 2017 to Date)

The Fuel Used by Type pie chart displays the portions of total fuel use that are petroleum or alternative fuels. The Comparison to Prior Fiscal Year chart shows total fuel use this fiscal year compared to the same time last fiscal year. Missed opportunities display the quantities of petroleum that could have been displaced by using alternative fuel.

### Fuel Used by Type



### Comparison to Prior Fiscal Year



\* Comparison through November

High level summary comparison to the prior year

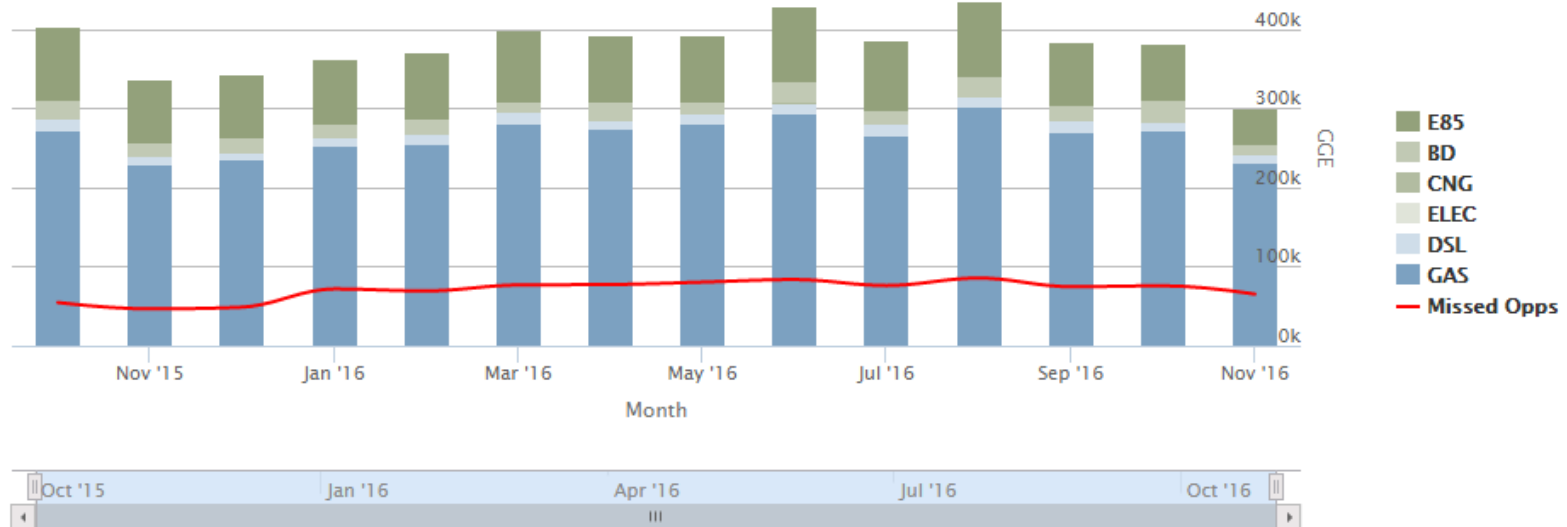
Pie Chart detailing Year-to-Date Alternative and Petroleum Fueling

# FleetDASH Tour

## Monthly Total Fuel Consumption

The monthly comparison chart displays trends in fuel consumption by each fuel type. Missed opportunities are shown as a line on the chart in comparison to the fuel use quantities. Fuel types can be included or excluded from the chart by clicking on the fuel type in the legend.

Zoom 6m 1y All



Missed Opportunities are shown as a red line in comparison to fueling pattern.

# FleetDASH Tour

## Summary Table

Fuel consumption is summarized for each fleet in the following table. The percentage of total fuel use is included for each fuel type. Clicking on a fleet will refresh the above charts with summary data and repopulate the fleet and vehicle tables for the entity selected.

Search:

Fleet	Petroleum		Alt Fuels		Total FYTD Fuel Use GGE	Missed Opportunities	
	FYTD GGE	% of Total Fuel Use	FYTD GGE	% of Total Fuel Use		FYTD GGE	% of Total Fuel Use
	52,763	87	7,789	13	60,552	30,125	50
	58,056	56	45,248	44	103,303	21,717	21
	60,284	42	82,967	58	143,251	18,086	13
	47,523	98	905	2	48,428	16,187	33
	46,264	99	320	1	46,584	14,765	32
	69,714	100	87	0	69,801	13,441	19
	52,856	98	1,017	2	53,874	12,215	23
	53,211	99	666	1	53,877	5,676	11
	43,256	100	43	0	43,299	3,226	7
	17,964	80	4,367	20	22,331	2,552	11

Fleet Names are clickable to drill-down into the organization.

Showing 1 to 10 of 15 entries

← Previous 1 2 Next →

# FleetDASH Tour

Fuel Use

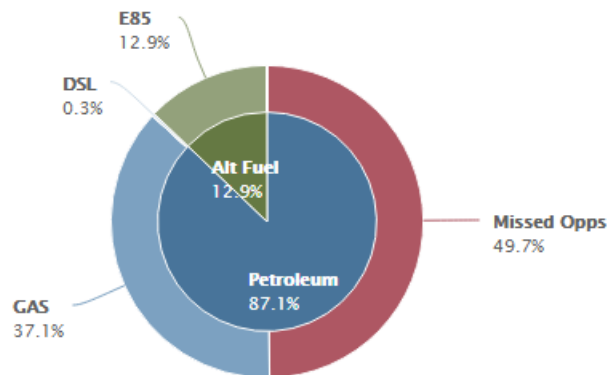
Inventory

Greenhouse Gas

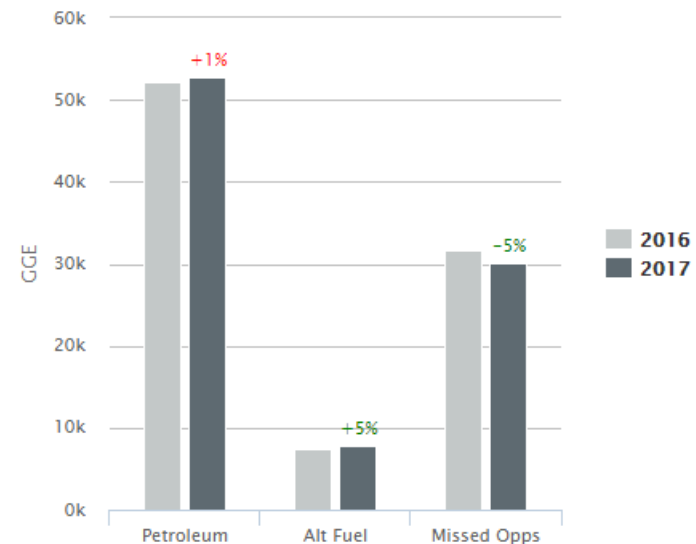
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The Fuel Used by Type pie chart displays the portions of total fuel use that are petroleum or alternative fuels. The Comparison to Prior Fiscal Year chart shows total fuel use this fiscal year compared to the same time last fiscal year. Missed opportunities display the quantities of petroleum that could have been displaced by using alternative fuel.

### Fuel Used by Type



### Comparison to Prior Fiscal Year



\* Comparison through November

FleetDASH data views refreshed with lower level organizational summary



# FleetDASH Tour

## Vehicle Summary Table



Fuel consumption is summarized for each vehicle in the following table. The percentage of total fuel use is included for each fuel type. Clicking on a vehicle will take you to a vehicle summary page which includes details and transactions for the selected vehicle.

[Download Vehicle Summary CSV](#)

Show totals for:

Tag	Vehicle Fuel Type	Petroleum		Alt Fuels		Total Fuel Use GGE	Missed Opportunities	
		GGE	% of Total Fuel Use	GGE	% of Total Fuel Use		GGE	% of Total Fuel Use
<a href="#">G43-3198S</a>	FFV	376	96	16	4	392	330	84
<a href="#">G41-3646S</a>	FFV	304	100	0	0	304	304	100
<a href="#">G41-4626P</a>	FFV	231	100	0	0	231	231	100
<a href="#">G13-3848S</a>	FFV	285	97	9	3	293	225	77
<a href="#">G41-4121S</a>	FFV	279	100	0	0	279	222	80
<a href="#">G41-4740R</a>	FFV	285	100	0	0	285	207	72
<a href="#">G13-2520S</a>				0	0	259	200	77
<a href="#">G61-1195S</a>				0	0	232	195	84
<a href="#">G10-4797P</a>				0	0	207	195	94
<a href="#">G61-1351P</a>				0	0	205	192	93

Vehicle Tag numbers are clickable to present vehicle specific data.

Showing 1 to 10 of 636 entries

# FleetDASH Tour

Vehicle G41-4626P

SEARCH

Show totals for: FYTD

Vehicle Fuel Type	Petroleum		Alt Fuels		Total Fuel Use GGE	Missed Opportunities	
	GGE	% of Total Fuel Use	GGE	% of Total Fuel Use		GGE	% of Total Fuel Use
FFV	231	100	0	0	231	231	100

Showing 1 to 1 of 1 entries

← Previous 1 Next →

## G41-4626P Vehicle Details

### Vehicle Attributes

Organization Code: [REDACTED]  
Tag: G41-4626P  
VIN: 2C4RDGBG4ER390130  
SIN: 20.11DA  
Fuel Type: FFV  
Vehicle Type: LD Minivan 4x2 (Passenger)  
Year: 2014  
Make/Model: DODGE/GRCARAVAN  
Date Assigned: 6/6/2014  
Avg. Monthly Mileage: 1905  
Garage ZIP: 64153  
Emergency Response: No  
Law Enforcement: No

### Point of Contact

Name: [REDACTED]  
Bureau: [REDACTED]  
Address 1: [REDACTED]  
Address 2: [REDACTED]  
Address 3: [REDACTED]  
City: [REDACTED]  
State: [REDACTED]  
Zip: [REDACTED]  
Phone: [REDACTED]  
Email: [REDACTED]  
Garage ZIP: [REDACTED]

Vehicle fuel summary data is presented along with available vehicle attribute information.

# FleetDASH Tour

Vehicle G41-4626P

SEARCH

Show totals for: FYTD

Vehicle Fuel Type	Petroleum		Alt Fuels		Total Fuel Use GGE	Missed Opportunities	
	GGE	% of Total Fuel Use	GGE	% of Total Fuel Use		GGE	% of Total Fuel Use
FFV	231	100	0	0	231	231	100

Showing 1 to 1 of 1 entries

← Previous 1 Next →

G41-4626P Vehicle Details

G41-4626P Refueling Transactions

Individual transactions for the selected vehicle are listed below. The type and quantity of fuel purchased is given. The "Alternate Station" link for each transaction will take you to the Alternative Fueling Station Locator on the Alternative Fuels Data Center where you can search for nearby alternative fuel. If the transaction was a missed opportunity, you will see the alternative fuel stations within 5 miles of the transaction.

[Download CSV](#)

Search:

Station Name	Address	City	State	Zip	Fuel Type Purchased	Date	GGEs Purchased	Missed Opportunity	Alternate Station
Caseys Gen. Store 16	669 W ELM ST	Lebanon	MO	65536	GAS	11/29/2016	16	Yes	<a href="#">Alternate Station</a>
Kum & Go #456	656 N. JEFFERSON	Lebanon	MO	65536	GAS	11/22/2016	17	Yes	<a href="#">Alternate</a>
Kum & Go #569	2587 N RANGE LINE RD	Webb City							
Champion Express	1840 SOUTH JEFFERSON	Lebanon							

Individual vehicle transactions are presented. Those transactions that occurred as Missed Opportunities include a link to the Alternative Fuel Station location.

# FleetDASH Tour

The Alternate Station location link takes the user to the AFDC station locator with the specific available alternative fuel station location highlighted.

## Alternative Fueling Station Locator

Find alternative fueling stations near an address or ZIP code or along a route in the United States. Enter a state to see a station count or see [stations data by state](#).

The screenshot displays the 'Alternative Fueling Station Locator' interface. On the left, there is a search bar with the text '37.6701865000001,-92' and a 'Go' button. Below the search bar, a dropdown menu shows 'Ethanol (E85)' with a downward arrow and a link for 'more search options'. The main content area lists 'Ethanol stations near 37.6701865000001,-92.665421 (669 W ELM ST Lebanon MO 65536)'. It specifies 'Excluding private stations Within 5 miles'. Two stations are listed: 'A Break Time Convenience Store #3150' at '101 E 7th St, Lebanon, MO 65536' with phone '417-532-0975' and fuel 'Ethanol (E85)', and 'B East Gate Express' at '22993 Professional Ln, Lebanon, MO 65536' with phone '417-532-8112'. On the right, a map shows the location of Lebanon, MO, with a blue circle highlighting the search area and two red location pins labeled 'A' and 'B'. The map includes labels for 'Lebanon', 'Phillipsburg', 'Evergreen', 'Sleeper', and 'Abo'. At the top right of the map area, there are links for 'Embed' and 'Submit New Station'. At the bottom right, there are zoom controls and a copyright notice 'Map data ©2017 Google Terms of Use'.



[Go to mobile version](#)  
[Download iPhone app](#)

[Download Data](#) [Developer APIs](#)

Data last updated: 01/11/2017

# FleetDASH Tour

Fuel Use

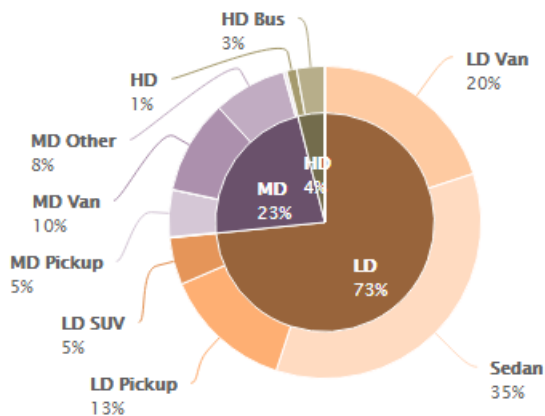
Inventory

Greenhouse Gas

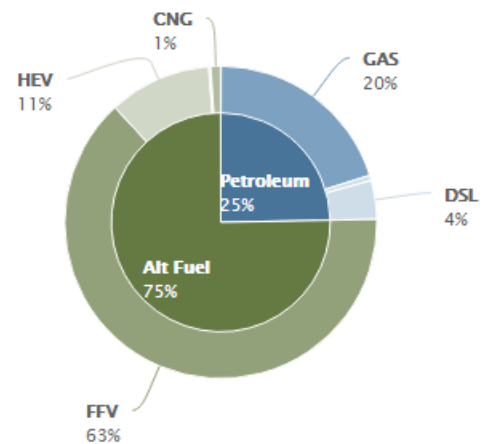
## Inventory Breakdowns

The vehicle inventory pie charts display the portions of the fleet that are comprised of the different vehicle weights and types and the different fuel types.

### Vehicle Weight and Type



### Vehicle Fuel Type



Fleet inventory breakdowns display fleet composition by vehicle type and fuel type.

# FleetDASH Tour

## Inventory for December 2016

Inventory vehicle counts are provided for each fleet in the following table. Clicking on a fleet will refresh the above charts with summary data and repopulate the table for the entity selected.

[Download CSV](#)

Search:

Node	Count	Net Change From Prior Month	LE/ER	Avg. Vehicle Age
<a href="#">MFL (Total)</a>	1,598	-12	58	2
<a href="#">MFL (Total)</a>	1,387	-25	49	2
<a href="#">MFL (Total) - Marine Corps Center</a>	663	-2	0	1
<a href="#">MFL (Total) - Marine Corps Center</a>	647	0	0	1
<a href="#">MFL (Total) - Marine Corps Center</a>	627	0	0	1
<a href="#">MFL (Total) - Marine Corps Center</a>	574	-3	0	1
<a href="#">MFL (Total) - Marine Corps Center</a>	557	-4	0	1
<a href="#">MFL (Total) - Marine Corps Center</a>	505	2	3	3
<a href="#">MFL (Total) - Marine Corps Center</a>	478	1	0	1
<a href="#">MFL (Total) - Marine Corps Center</a>	426	1	0	2
TOTALS	8,234	-44	111	2

Showing 1 to 10 of 15 entries

← Previous 1 2 Next →

Fleet inventory summaries display simple summaries and allow drill-down.

# Latest Updates

# Updated User Functionality

Stations with known fuel coding issues can now be flagged

Station Name	Address	City	State	Zip	Fuel Type Purchased	Date	GGEs Purchased	Missed Opportunity	Alternate Station
Shell Service Statio	17951 S HALSTEAD RD	Homewood	IL	60430	GAS	10/28/2016	10	Yes (FC)	<a href="#">Alternate Station</a>
Shell Service Statio	17951 S HALSTEAD RD	Homewood	IL	60430	GAS	10/24/2016	10	Yes (FC)	<a href="#">Alternate Station</a>

*FC - Fuel coding issues have been reported at this station which caused E85 purchases to appear as gasoline purchases.*

Contact [Mark.Singer@nrel.gov](mailto:Mark.Singer@nrel.gov) with known fuel coding issues



# Updated User Functionality

## Now possible to filter vehicle data by month in the Vehicle Summary Table

### Vehicle Summary Table

Fuel consumption is summarized for each vehicle in the following table. The percentage of total fuel use is included for each fuel type. Clicking on a vehicle will take you to a vehicle summary page which includes details and transactions for the selected vehicle.

[Download Vehicle Summary CSV](#)

Show totals for:

- FYTD
- October 2016
- September 2016
- August 2016
- July 2016**
- June 2016
- May 2016

Tag	Vehicle Fuel Type	Petroleum		Alt Fuels		Total Fuel Use GGE	Missed C	
		GGE	% of Total Fuel Use	GGE	% of Total Fuel Use		GGE	%

# Updated User Functionality

... and pull transaction level summaries for an organization rather than only a specific vehicle

[Vehicle Summary Table](#) ▼

Fuel consumption is summarized for each vehicle in the following table. The percentage of total fuel use is included for each fuel type. Clicking on a vehicle will take you to a vehicle summary page which includes details and transactions for the selected vehicle.

[Download Vehicle Summary CSV](#) [Download Vehicle Fuel Transactions CSV](#)

Show totals for:  ▼

Tag	Vehicle Fuel Type	Petroleum		Alt Fuels		Total Fuel Use GGE	Missed Opportunities	
		GGE	% of Total Fuel Use	GGE	% of Total Fuel Use		GGE ▼	% of Total Fuel Use

“Download Vehicle Fuel Transactions CSV” provides a file with all the transaction data for the chosen organization.

\*In order for the link to show up the user must select a month and be at the lowest level of the organization (i.e. the BOAC level).

# Updated User Functionality

## Transaction level summaries for an organization

Example:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	Org code	Org alt name	Vin	Tag	Vehicle fuel type	Station name	Address	City	State	Zip	Known coding issues	Fuel type purchased	Date	Gges purchased	Missed opportunity	Alternate :
2	BOAC 1	Organization 1	Vehicle 1	Tag 1	FFV	Shell Service Statio	2901 BRIDGEWAY BLVD	Sausalito	CA	94965	no	Unleaded Gas	6/1/2017	28.72	N	
3	BOAC 1	Organization 1	Vehicle 1	Tag 1	FFV	Shell Service Statio	2901 BRIDGEWAY BLVD	Sausalito	CA	94965	no	Unleaded Gas	6/1/2017	17.01	N	
4	BOAC 1	Organization 1	Vehicle 2	Tag 2	FFV	Chevron 0203418	50 W LAKE MENDOCINO	Ukiah	CA	95482	no	Unleaded Gas	6/1/2017	21.93	N	
5	BOAC 1	Organization 1	Vehicle 2	Tag 2	GAS	Chevron 0090103	901 W CUTTING BLVD	Richmond	CA	94804	no	Unleaded Gas	6/1/2017	13.67	N	
6	BOAC 1	Organization 1	Vehicle 2	Tag 2	GAS	Chevron 0090087	1000 HARRISON ST	San Francisco	CA	94103	no	Unleaded Gas	6/1/2017	7.67	N	

# GHG Tracking

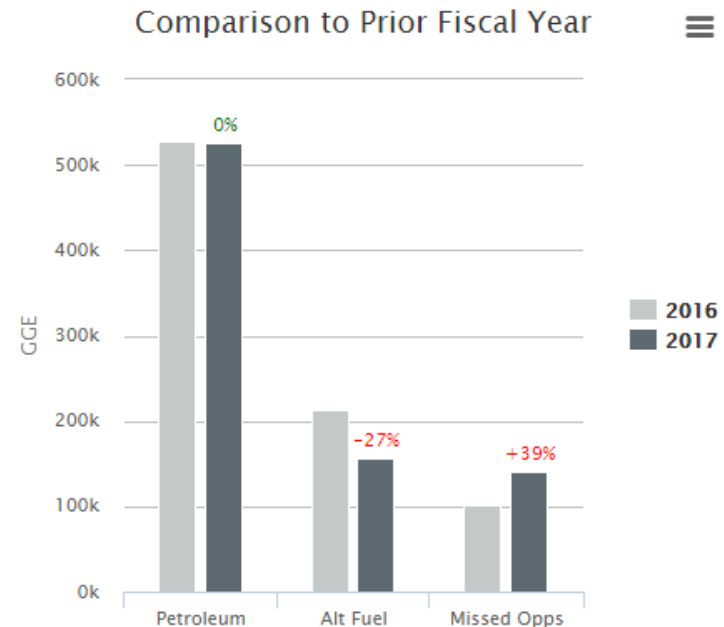
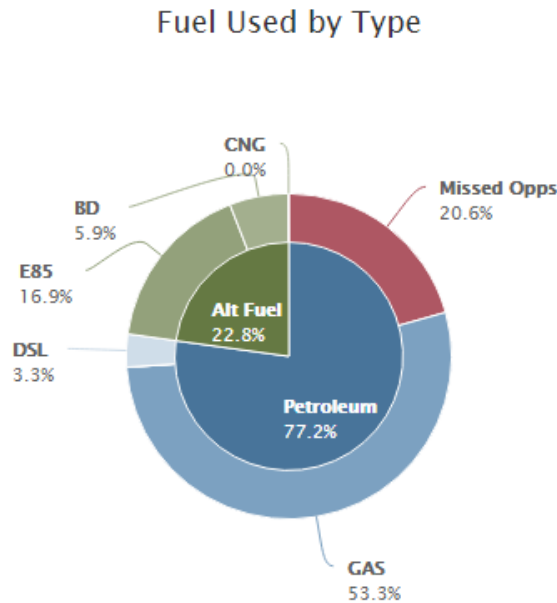
# Greenhouse Gas Metrics

Access the greenhouse gas views through Greenhouse Gas tab



## Fuel Used by Type (FY 2017 to Date)

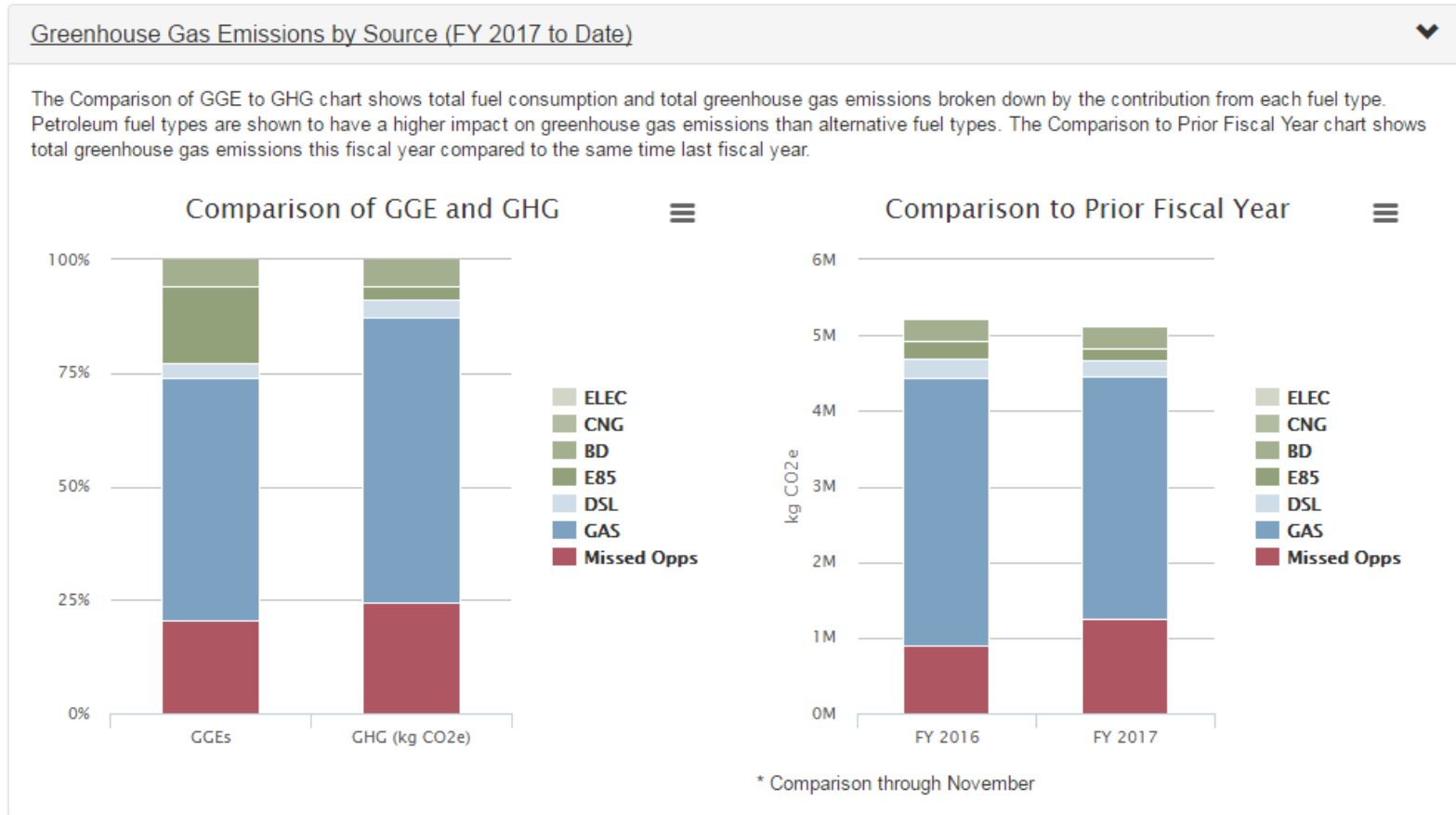
The Fuel Used by Type pie chart displays the portions of total fuel use that are petroleum or alternative fuels. The Comparison to Prior Fiscal Year chart shows total fuel use this fiscal year compared to the same time last fiscal year. Missed opportunities display the quantities of petroleum that could have been displaced by using alternative fuel.



\* Comparison through November

# Greenhouse Gas Metrics

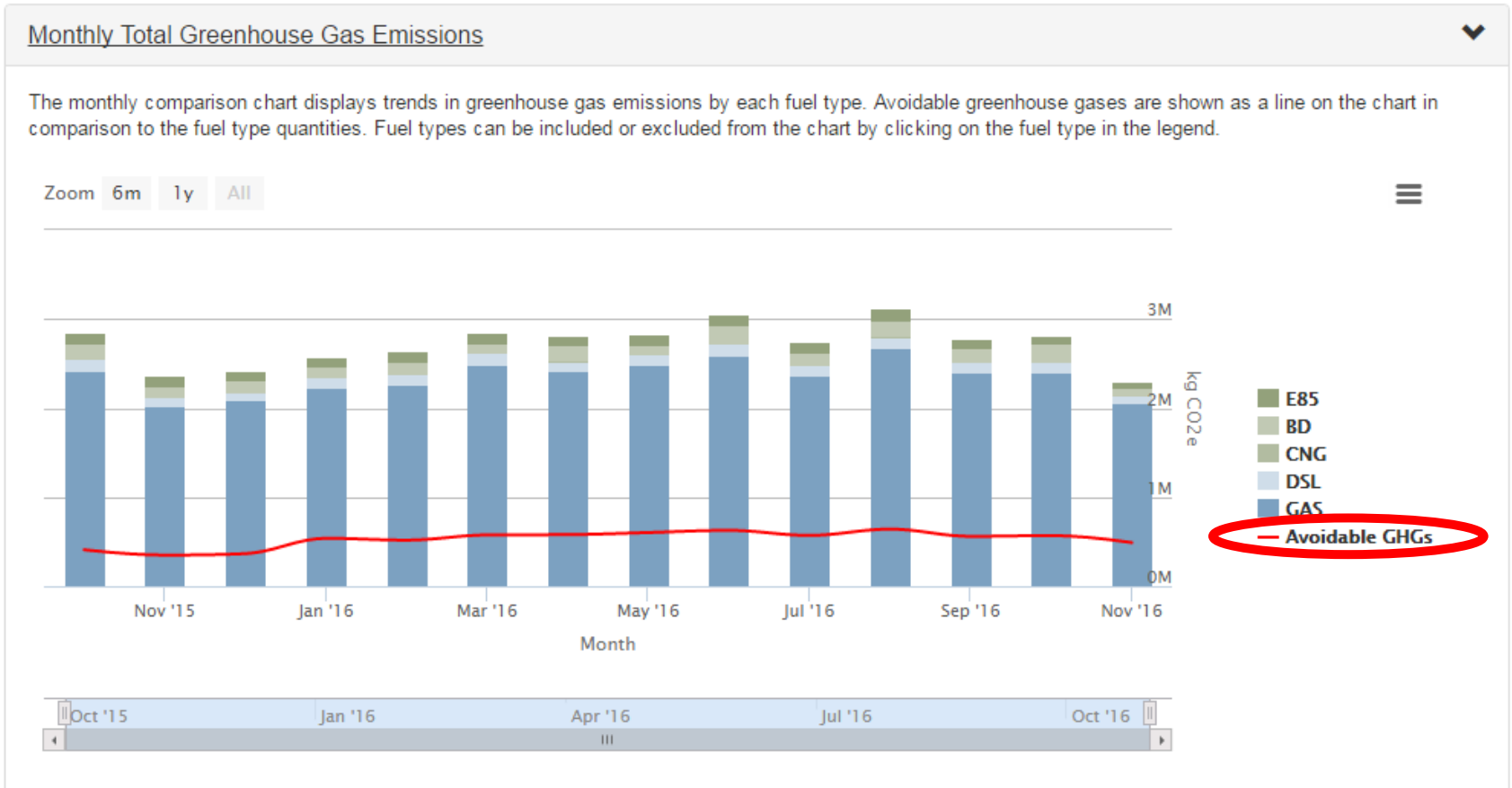
Compare the impact of various fuel types on fuel use totals vs. greenhouse gas totals



Compare current year performance to the prior year

# Greenhouse Gas Metrics

## Track monthly greenhouse gas emissions trends



Identify the portion of emissions that could be **avoided** if missed opportunities were reduced

Avoidable GHGs = represent the potential emissions savings if missed opportunities were converted to the appropriate alternative fuel purchase

# Greenhouse Gas Metrics

## Identify organizations with high and low emissions

### Summary Table

Fuel consumption and greenhouse gas emissions are summarized for each fleet in the following table. Clicking on a fleet will refresh the above charts with summary data and repopulate the fleet and vehicle tables for the entity selected.

Search:

Fleet	FYTD GGEs				GHG (kgCO2e)	Avoidable GHGs from Missed Opportunities (kgCO2e)	Number of Vehicles with Transactions	Average GGE/ Vehicle	Average kgCO2e/ Vehicle	Average kgCO2e/ GGE
	Petroleum	Alt Fuel	Total Fuel	Missed Opportunities						
<a href="#">Fleet 1</a>	10,089	569	10,658	1,987	91,649	14,947	137	78	669	8.6
<a href="#">Fleet 2</a>	17,964	4,367	22,331	2,552	165,833	19,045	327	68	507	7.4
<a href="#">Fleet 3</a>	47,523	905	48,428	16,187	422,669	121,788	417	116	1,014	8.7
<a href="#">Fleet 4</a>	58,056	45,248	103,303	21,717	619,185	163,401	1,079	96	574	6.0

Identify concentrations of emissions and opportunities to **avoid** emissions through reducing missed opportunities



# Greenhouse Gas Metrics

## Drilldown to individual vehicles

### Vehicle Summary Table



Fuel consumption and greenhouse gas emissions are summarized for each vehicle in the following table. Clicking on a vehicle will take you to a vehicle summary page which includes details and transactions for the selected vehicle.

[Download Vehicle Summary CSV](#)

Show totals for:

Tag	FYTD GGEs				GHG (kg CO2e)	Avoidable GHGs from Missed Opportunities (kgCO2e)	Average kgCO2e/GGE
	Petroleum	Alt fuel	Total Fuel	Missed Opportunities			
<a href="#">G11-0460R</a>	620	0	620	620	5,492	4,664	8.9
<a href="#">G42-1997S</a>	849	0	849	595	7,530	4,474	8.9
<a href="#">G11-0830P</a>	558	0	558	558	4,943	4,198	8.9
<a href="#">G42-2108S</a>	538	0	538	538	4,766	4,048	8.9
<a href="#">G11-0403R</a>	461	0	461	461	4,084	3,469	8.9

Compare rates of greenhouse gas emissions by vehicle and identify opportunities to **avoid** emissions

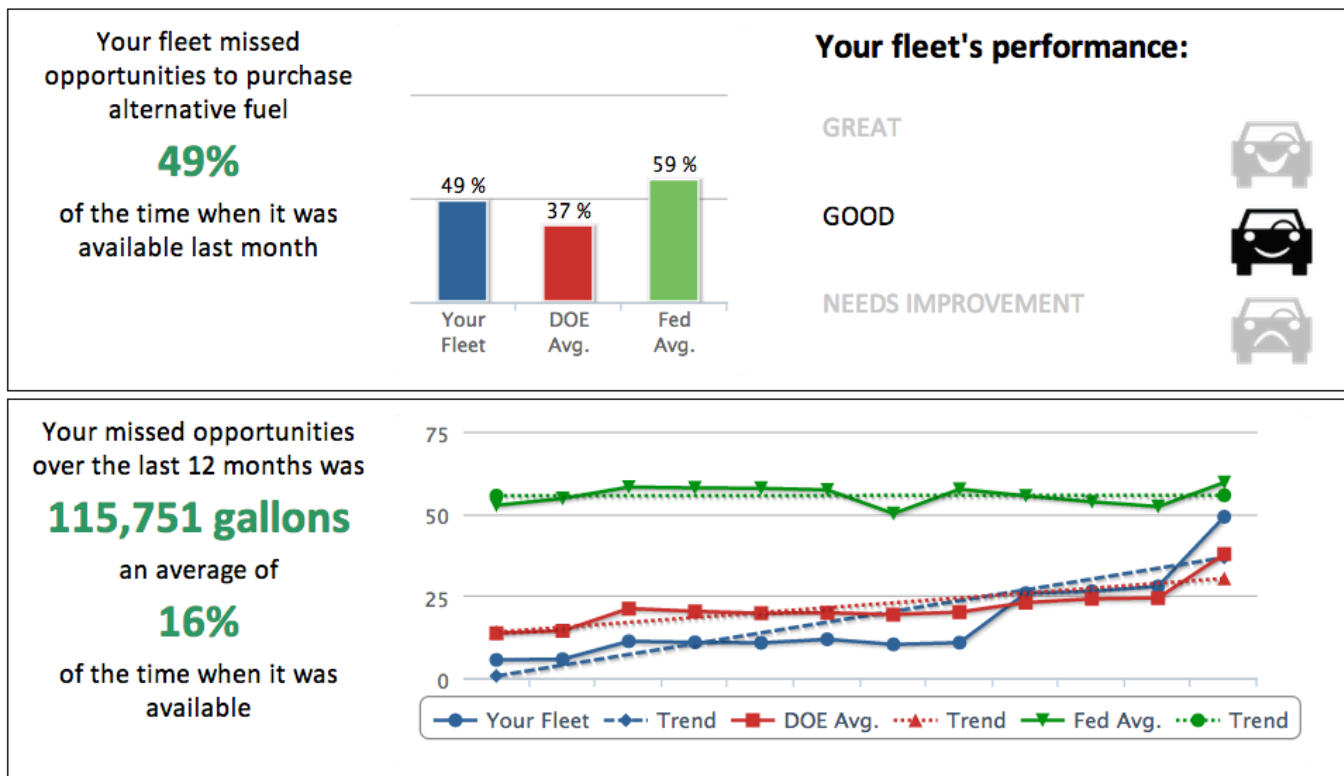
# Greenhouse Gas Metrics

## Summary:

Greenhouse gas metrics in FleetDASH allow users to:

- Understand how fuel use converts to emissions
- Identify concentrations and rates of emissions
- Identify the scale of the opportunity to reduce emissions through alternative fuel use

# FleetDASH Monthly Performance Feedback Emails



- Multiple email formats: Positive vs. Negative & Peer to peer vs. Individual
- Monitor the impact on behavior, and adapt

# FleetDASH Impact

# 29 Agencies Using FleetDASH

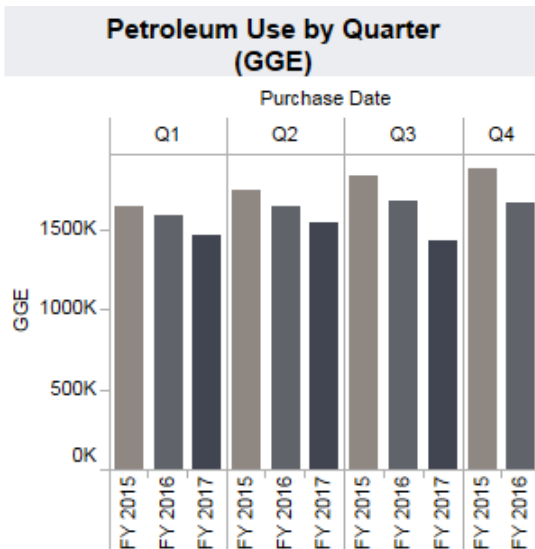
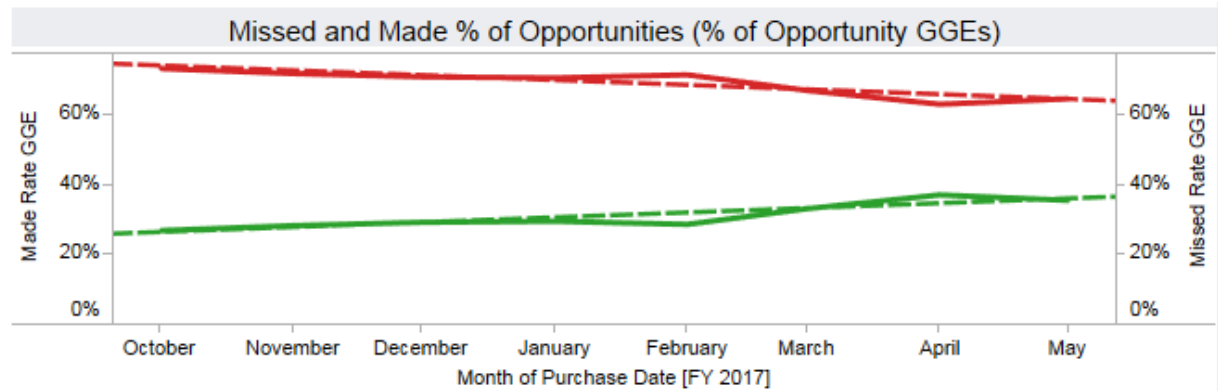


## Scale of FleetDASH

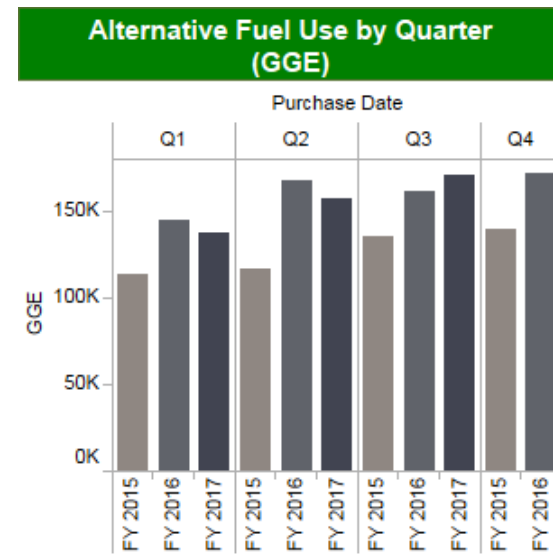
	June 2017
Agencies	29
Users	1,500
Unique Active Vehicles	~440,000
Data Sources	4 (GSA Leased*, WEX - USDA, Voyager - USPS, TVA)
% of Federal Fleet	67%
Unique Station Locations	~160,000
Transactions Processed/Month	~1,800,000

# FleetDASH Impacts

The Navy has made steady progress on increasing alternative fuel use.



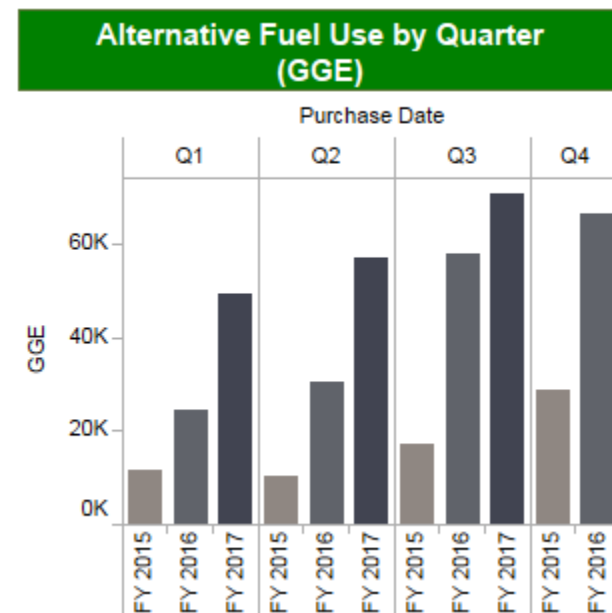
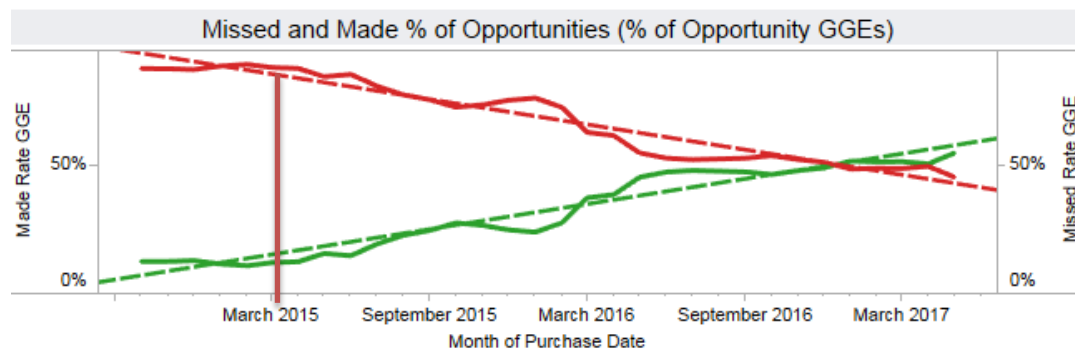
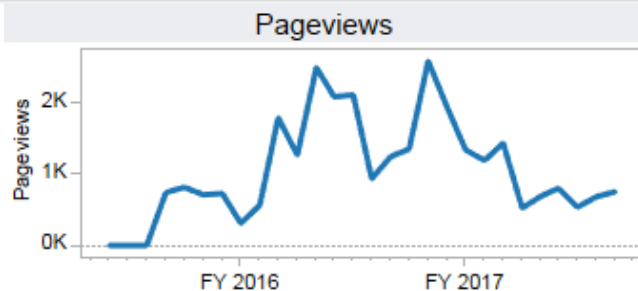
Petroleum use has been cut and lower utilization levels have been maintained



Alternative fuel use has steadily increased.

# FleetDASH Impacts

The USACE has steadily increased alternative fuel use and decreased missed opportunities since engaging with the tool in March 2015.

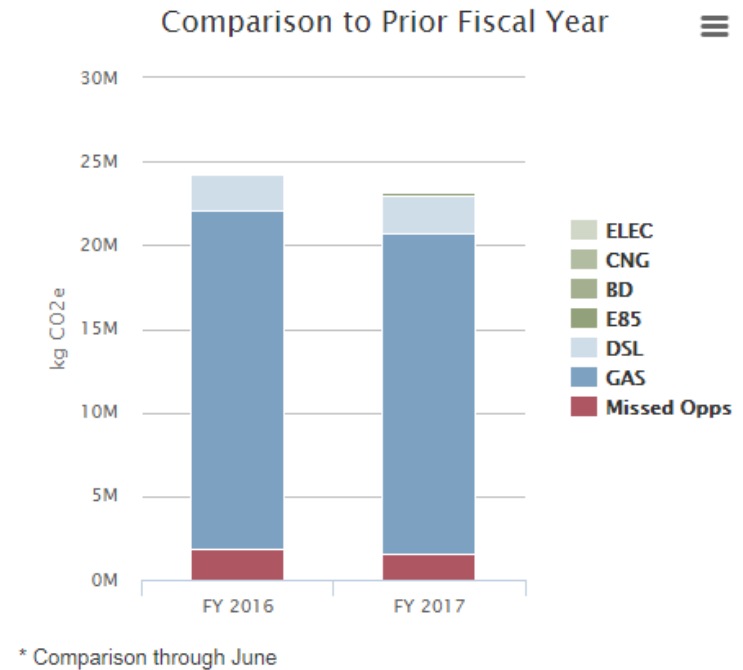
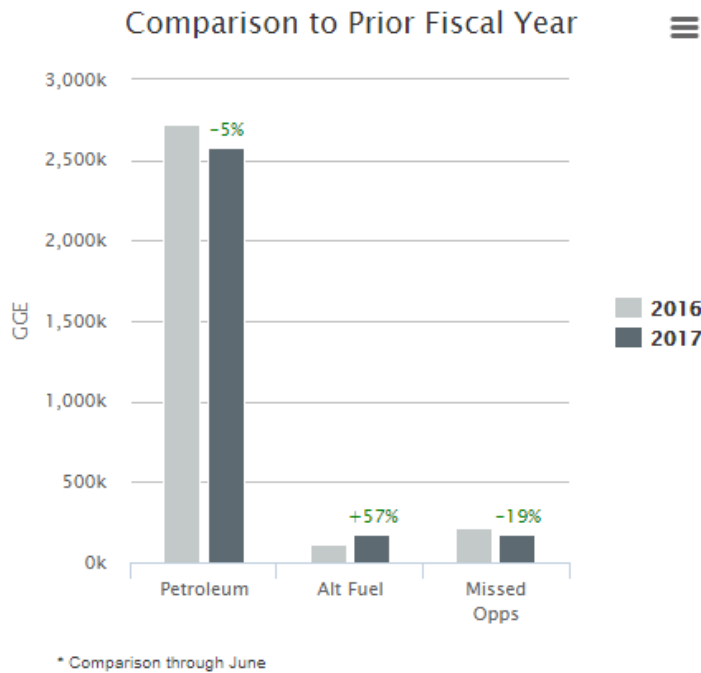


In FY 2016, the GSA leased vehicle portion of the fleet has achieved:

- 112K GGEs of additional E85 use in FY16 compared to FY15
- 165% increase in E85 use
- E85 use increased from 1.7% of total fleet fuel use to 4.5%
- 1,174 MT CO2e reduced



# USACE Success



USACE continues to  
***increase alternative fuel*** use,  
***decrease petroleum*** consumption, and  
***decrease greenhouse gas*** emissions.

# Related Support

# Support Analysis

## **USMC Support Analysis:**

DOE FEMP and USMC have partnered on AFV acquisition support.

FleetDASH data is used to create metrics to highlight opportunities for potential AFV deployment.

Metrics and data are intended to support on-the-ground knowledge of vehicle utilization and suitability for AFV deployment.

**Flex Fuel Vehicles??**

**Hybrid Electric Vehicles??**

**Plug-in Electric Vehicles??**

# Support Analysis

## USMC Support Analysis:

FFVs – high percentage of transactions near available E85

FFV Opportunity	
Enter E85 Availability %	
Minimum % of Transactions with E85 Available (User Entered)	
	75%

Tag	% of Transactions near E85	FFV Opportunities
G10-2878R	0%	
G10-6848L	94%	FFV
G10-2900R	19%	
G10-5886K	72%	
G10-2901R	0%	
G10-7563F	3%	
G32-0433B	0%	
G32-02006	100%	FFV
G32-02007	100%	FFV
G32-0165G	94%	FFV
G32-0165C	100%	FFV

# Support Analysis

## USMC Support Analysis:

HEVs – high percentage of transactions in metro areas where stop-and-start driving is more likely

HEV Opportunity
Enter CBSA %
Minimum % of Transactions within a metro area (User Entered)
100%

Tag	% of Transactions in CBSA	HEV Opportunities
G10-2186L	91%	
G10-2612R	92%	
G10-2466S	100%	HEV
G12-0124S	90%	
G12-0273S	100%	HEV
G10-2789S	67%	
G10-1977S	100%	HEV
G12-0438S	100%	HEV
G10-0084S	100%	HEV

# Support Analysis

## USMC Support Analysis:

PEVs – consistently return to the same station location and have relatively high annual mileages

EV Opportunity		
Enter values in orange boxes to define boundaries of EV		
Maximum Average Distance Between Consecutive Transactions (User Entered)	Maximum Distance Between Consecutive Transactions (User Entered)	Minimum Annual Mileage (User Entered)
1	10	10,000

Tag	Avg Dist Between Consecutive Transactions	Max Dist Between Consecutive Transactions	Annual Mileage	EV Opportunity
G32-0026F	0.0	0.0	6,516	
G32-0029F	0.0	0.0	6,096	
G32-0319K	0.0	0.0	11,760	EV
G32-0320K	0.0	0.0	13,452	EV
G32-0204P	0.0	3.6	11,148	EV
G32-0249N	0.0	0.0	3,552	
G32-0250N	9.0	148.5	11,880	

# 701 Support

FEMP and NREL are investigating the use of FleetDASH as a support tool for the EPA Act 2005 section 701 waiver and alternative fuel use tracking processes.

The driving factors are:

- Reduction in the manual effort to request waivers
- Increased accuracy in the determination of fuel availability

Final decision making will draw from agency fleet feedback to define:

- Definition of fuel availability
- Processes for those vehicles not currently in FleetDASH

# Questions??

Mark Singer

NREL

[mark.singer@nrel.gov](mailto:mark.singer@nrel.gov)

(303) 275-4264



# Back-up

# Other Fleet Tools

# Other Fleet Resources

- Section 701 Training
- Alternative Fuels Data Center
- Station Locator
- Find a Car
- Vehicle Cost Calculator
- Petroleum Reduction Planning Tool

# Changing Driver Behavior - Training

- 15-minute, on-demand training
- EPCRA 2005 § 701 requirement to use alternative fuel
- How to identify dual-fuel vehicles
- How to locate alternative fuel stations

The screenshot shows a web-based training interface. On the left is a navigation menu with the following items:

- 1. Introduction
- 2. Welcome
- 3. Training Information
- 4. Overview of EPCRA 2005
- 5. Section 701 Requirements
- 6. Dual-Fuel Vehicles
- 7. Vehicle Waivers
- 8. Dual-Fuel Vehicle Exemptions
- 9. E85 Flex-Fuel Vehicles
- 10. Find Alternative Fuel Stations
- 11. Fuel Station Locator Tool
- 12. Find Alt Fuel Along a Route
- 13. Plan a Route Tool
- 14. Identify E85 Fuel Pumps
- 15. Summary
- 16. Assessment

The main content area features a header with the U.S. Department of Energy logo and the text "Energy Efficiency & Renewable Energy". Below the header is a large image of a fuel station sign with a "fuel" logo and a list of fuel types: Ethanol, Regular, Super, Premium, Diesel, Bio-Diesel, Propane, and Natural Gas. To the right of the image, the text reads: "FEMP Sustainable Federal Fleets" and "Complying with the EPCRA 2005 Section 701 Requirement to Use Alternative Fuel in Dual-Fuel Vehicles". At the bottom of the content area, there is a blue bar with the "etraining" logo and a grey bar with the "FEMP" logo and "Federal Fleet Management Program" text. A URL "femp.energy.gov" is visible in the bottom right corner. At the very bottom of the interface is a media player control bar with a play button, a progress bar, and "PREV" and "NEXT" buttons.

[https://federalfleets.energy.gov/information\\_resources#training](https://federalfleets.energy.gov/information_resources#training)

# Alternative Fuels Data Center

U.S. DEPARTMENT OF **ENERGY** | Energy Efficiency & Renewable Energy

EERE Home | Programs & Offices | Consumer Information

## Alternative Fuels Data Center

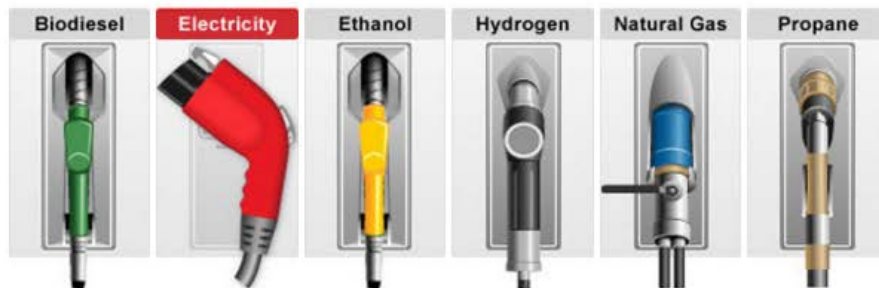
Search the AFDC  **SEARCH**

**FUELS & VEHICLES** | CONSERVE FUEL | LOCATE STATIONS | LAWS & INCENTIVES | **Maps & Data** | Case Studies | Publications | Tools | About | **Home**

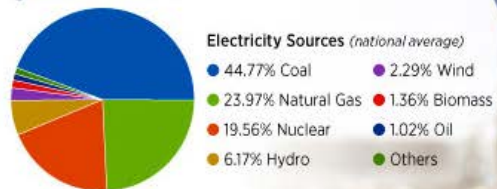
EERE » AFDC

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### Fuels & Vehicles ▶



### What's powering your EV?



Find out how the source of your electrical power impacts the well-to-wheel emissions of your electric vehicle (EV).



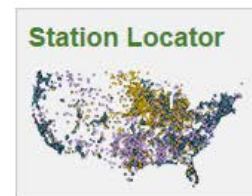
### Maps & Data ▶

- U.S. Alternative Fueling Stations by Fuel Type
- Alternative Fuel Vehicles in Use
- U.S. Hybrid Electric Vehicle Sales by Model



### Tools ▶

- Laws & Incentives
- Petroleum Reduction Planning Tool
- Vehicle Cost Calculator
- Vehicle Search



Find stations on your iPhone

### Information by State ▶

<http://www.afdc.energy.gov/>

# Station Locator

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

EERE Home | Programs & Offices | Consumer Information

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### Alternative Fueling Station Locator

Find alternative fueling stations near an address or ZIP code or along a route in the United States. Enter a state to see a station count.

[Find Stations](#) [Plan a Route](#)

[Go](#)

All Fuels [more search options](#)

**21,402**  
alternative fuel stations  
in the United States

Excluding private stations

*Location details are subject to change. We recommend calling the stations to verify location, hours of operation, and access.*

[ABOUT THE DATA](#)

Legend

- Biodiesel
- CNG
- Electric
- Ethanol
- Hydrogen
- LNG
- Propane

Map data ©2016 Google, INEGI [Terms of Use](#)

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[Download Data](#) [Developer APIs](#)

Data last updated: 07/20/2016

<http://www.afdc.energy.gov/locator/stations/>

# Find A Car

## www.fueleconomy.gov

the official U.S. government source for fuel economy information

Mobile Español Site Map Links FAQ Videos

Find a Car Save Money & Fuel Benefits My MPG **Advanced Cars & Fuels** About EPA Ratings More

### About Hybrid and Electric Cars



A quick guide to the different kinds of hybrids and electric vehicles.

#### Hybrids

- Compare Side by Side
- How Hybrids Work
- Can a Hybrid Can Save Me Money?
- New & Upcoming
- Hybrid Links

### All-Electric Vehicles

- Compare Side by Side
- About Electrics
- New & Upcoming
- Tax Incentives
- Electric Vehicle Links

### Plug-In Hybrids

- Compare Side by Side
- About Plug-in Hybrids
- How Plug-in Hybrids Save Money
- My Plug-in Hybrid Calculator
- New & Upcoming
- Tax Incentives
- Plug-in Hybrid Links

### Diesels

- Compare Side by Side
- About Diesels
- New & Upcoming
- Ultra-Low Sulfur Diesel
- Biodiesel
- Diesel Links

### Flex-Fuel Vehicles

- Flex-Fuel Vehicles
- Flex-Fuel Links

### Alternative Fuels

- Alternative Fuels
- Ethanol
- Biodiesel
- Natural Gas
- Hydrogen
- Propane

### Fuel Cell Vehicles

- Compare Side by Side
- How They Work
- Benefits and Challenges
- Videos
- Fuel Cell Links

Share

ALSO IN THIS SECTION...

Find a Car

Compare Side by Side

Power Search

Search Make

Hybrids, Diesels, and Alternative Fuel Cars

Find a SmartWay Vehicle

Best and Worst Vehicles

Fueleconomy.gov Top Ten

Today's Most Viewed Vehicles

Used Car Label Tool

RELATED TOPICS...

Track and share your MPG

View estimates from drivers like you

Small Cars

Combined MPG >=

Go



Small Cars



Sedans



Coupes



# Vehicle Cost Calculator


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## Alternative Fuels Data Center

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### Vehicle Cost Calculator

This tool uses basic information about your driving habits to calculate total cost of ownership and emissions for makes and models of most vehicles, including alternative fuel and advanced technology vehicles. Also see the cost [calculator widgets](#).

#### Choose vehicles to compare

Select up to eight vehicles to compare from the makes and models below or [create your own custom vehicle](#).

2017

Make

Model

ADD >>

[Create Custom Vehicle](#)

#### Tell us how you use your car

Because vehicle efficiencies vary depending on how you use your car, this information allows the tool to more accurately calculate fuel usage.

##### Normal Daily Use

Average daily driving distance  miles

Days per week

Weeks per year

Percent highway

##### Other Trips

Annual mileage  miles

Percent highway

**Annual Driving Distance 11926 miles**

City Distance 5301 miles

Highway Distance 6625 miles

<http://www.afdc.energy.gov/calc/>



# Petroleum Reduction Planning Tool

**Alternative Fuels Data Center** Search the AFDC  [SEARCH](#)

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## Petroleum Reduction Planning Tool

This planning tool helps your vehicle fleet reduce petroleum consumption and greenhouse gas (GHG) emissions. Create a comprehensive plan for your fleet by using several savings methods. If your fleet includes multiple vehicle types, add more vehicles to each method.

[ASSUMPTIONS](#)

### My Current Plan

[SET GOAL](#) [CLEAR PLAN](#)

[LOG IN TO SAVE/VIEW PLANS](#)  
[START NEW PLAN](#)

Savings Methods		Petroleum Reduction gal/yr	GHG Reduction tons CO <sub>2</sub> /yr	Fuel Cost Savings \$/yr	Impact on Plan percent
<a href="#">Replace Vehicles</a>	<a href="#">ADD TO PLAN</a>	0	0	\$0	0%
<a href="#">Use Alternative Fuel in Existing Vehicles</a>	<a href="#">ADD TO PLAN</a>	0	0	\$0	0%
<a href="#">Reduce Idling</a>	<a href="#">ADD TO PLAN</a>	0	0	\$0	0%
<a href="#">Reduce Mileage</a>	<a href="#">ADD TO PLAN</a>	0	0	\$0	0%
<a href="#">Drive Efficiently</a>	<a href="#">ADD TO PLAN</a>	0	0	\$0	0%
<b>Total savings from plan per year</b>		0 gallons	0 tons of CO <sub>2</sub>	\$0	100%



● Petroleum reduction goal

# Changing Driver Behavior - Training

- 15-minute, on-demand training
- EPCRA 2005 § 701 requirement to use alternative fuel
- How to identify dual-fuel vehicles
- How to locate alternative fuel stations

The screenshot displays an e-training interface. On the left is a navigation pane with an 'Outline Script' section containing 16 numbered items: 1. Introduction, 2. Welcome, 3. Training Information, 4. Overview of EPCRA 2005, 5. Section 701 Requirements, 6. Dual-Fuel Vehicles, 7. Vehicle Waivers, 8. Dual-Fuel Vehicle Exemptions, 9. E85 Flex-Fuel Vehicles, 10. Find Alternative Fuel Stations, 11. Fuel Station Locator Tool, 12. Find Alt Fuel Along a Route, 13. Plan a Route Tool, 14. Identify E85 Fuel Pumps, 15. Summary, and 16. Assessment. The main content area features a video player with a thumbnail of a fuel station sign listing Ethanol, Regular, Super, Premium, Diesel, Bio-Diesel, Propane, and Natural Gas. The video title is 'FEMP Sustainable Federal Fleets' and the subtitle is 'Complying with the EPCRA 2005 Section 701 Requirement to Use Alternative Fuel in Dual-Fuel Vehicles'. The interface includes the U.S. Department of Energy logo, 'e-training' branding, and a 'FEMP' logo. A control bar at the bottom shows a play button, a progress slider, and 'PREV' and 'NEXT' navigation buttons.