



Clean Cities Program Overview

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Mission

To advance the national, economic, and ***energy security*** of the U.S; to promote ***scientific and technological innovation*** in support of that mission; and to ensure the environmental cleanup of the national nuclear weapons complex.



U.S. DEPARTMENT OF
ENERGY

To advance the energy, economic, and environmental security of the United States by supporting local decisions to adopt practices that contribute to the reduction of petroleum consumption in the transportation sector.

- Sponsored by the DOE's Office of Energy Efficiency and Renewable Energy's Vehicle Technologies program
- Provides a framework for businesses and governments to work together as a coalition to enhance markets
- Coordinate activities, identify mutual interests, develop regional economic opportunities, and improve air quality
- Deployment of alternative fuels and advanced vehicle technologies (i.e.: vehicles and fueling infrastructure)

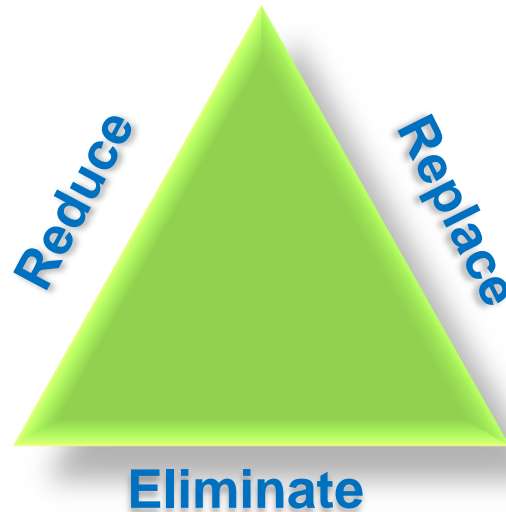
Deployment Efforts = 5 Basic Elements



- 1) Consumer Information, Outreach, and Education:**
Fuel Economy Guide, Alternative Fuel Data Center (AFDC), other web based consumer tools, targeted workforce and end-user education
- 2) Local Community & Coalition Support:**
Direct support for CC activities, public events, training for CC coalitions & key community decision makers, and deployment project coordination
- 3) Partnership Development:**
Targeted Industry, End-user, University, and Stakeholder Partnerships
- 4) Technical & Problem Solving Assistance:**
Addressing Market Barriers, Safety Issues, Technology shortfalls
- 5) Financial Assistance:**
Funding to Facilitate Infrastructure Development and Vehicle Deployment

Alternative Fuels and Vehicles

- Biodiesel (B100)
- Electricity
- Ethanol (E85)
- Hydrogen
- Natural gas
- Propane



Fuel Blends

- Biodiesel/diesel blends (B2, B5, B20)
- Ethanol/gasoline blends (E10)
- Hydrogen/natural gas blends (HCNG)

Hybrids

- Light- and Heavy-duty HEVs
- PHEVs

Fuel Economy

- Fuel efficiency
- Behavioral changes
- Vehicle maintenance initiatives
- Vehicle miles traveled (VMT)

Idle Reduction

- Heavy-duty trucks
- School buses
- Truck stop electrification

- 87 active coalitions in 45 states
- 700,000 AFVs using alternative fuels
- 6,600 AFV stations
- 6,500+ stakeholders

Clean Cities Coalitions



Coalitions are made up of local and national stakeholders:

- Over 6,500 local stakeholders
- Consumers and Critical Service Providers
 - Federal, State, Municipal Transportation, Environmental and Energy Agencies
 - Vehicle and Engine Manufacturing Partners, Vehicle Dealerships
 - Fuel Equipment Suppliers and Providers
 - Private Light-duty and Heavy-duty Fleets (e.g., trucks, refuse haulers)
 - Alternative Fuel and Clean Air Advocacy Organizations
 - School Districts, University/Campus Fleets
 - Airports, Transit Agencies
 - Taxi Companies, Shared Ride Services
 - General Public, Local Businesses



President highlights National Clean Fleets Partnerships as part of his goal of reducing America's imported oil



President calls out goal of 1 million Plug-In Electric Vehicles on the road by 2015 in State of the Union address



Vice President Biden announces \$200M for community infrastructure projects



- Capitalize on unique strengths of each technology
- Address specific regional/local technology needs
- Promote program goals and leverage assets for greatest impact

Goal = Displace
(Reduce, Replace, Eliminate)
2.5 Billion gallons
of petroleum per year
by 2020

National Clean Fleets Partnership: working with top fleets across the country to reduce petroleum consumption



Clean Cities National Parks Initiative

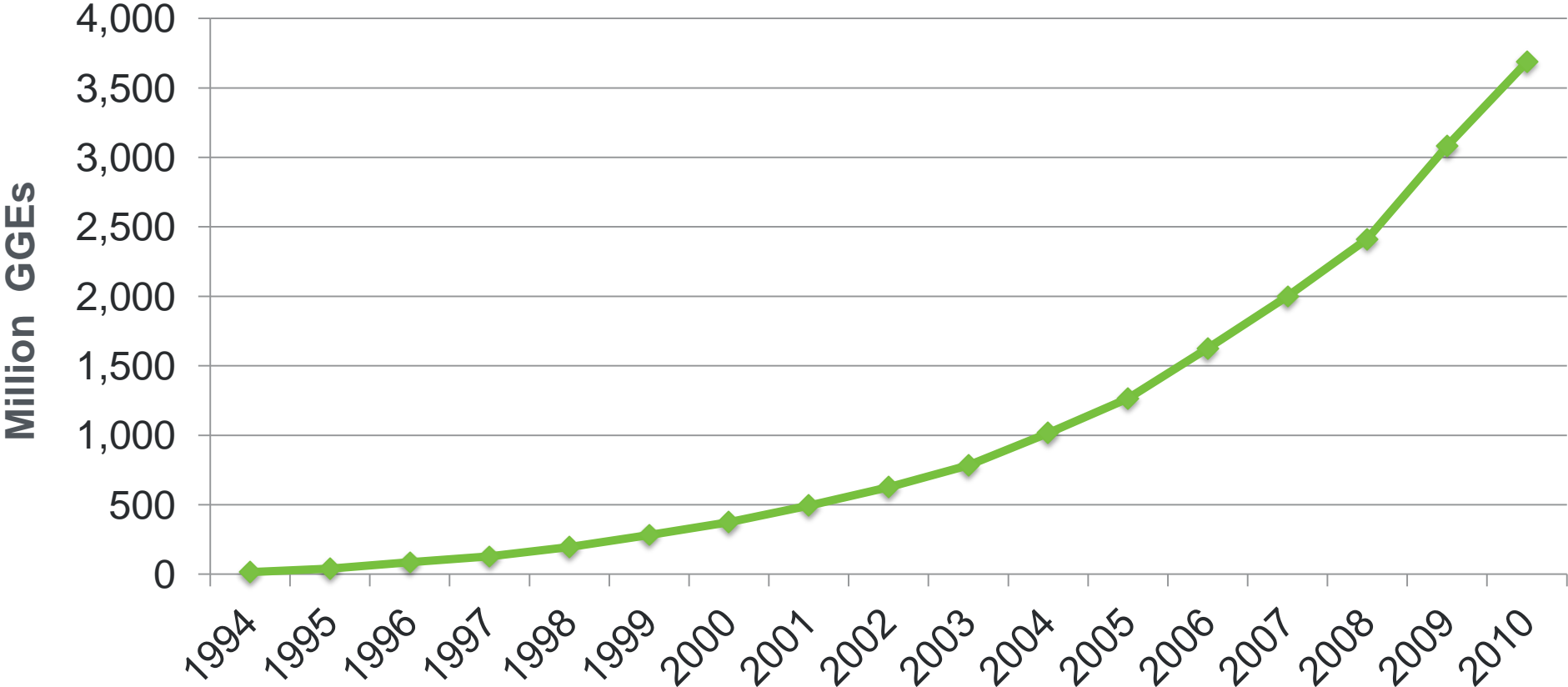
- In conjunction with the **National Park Service** (NPS)
- Complements NPS Climate Friendly Parks Program



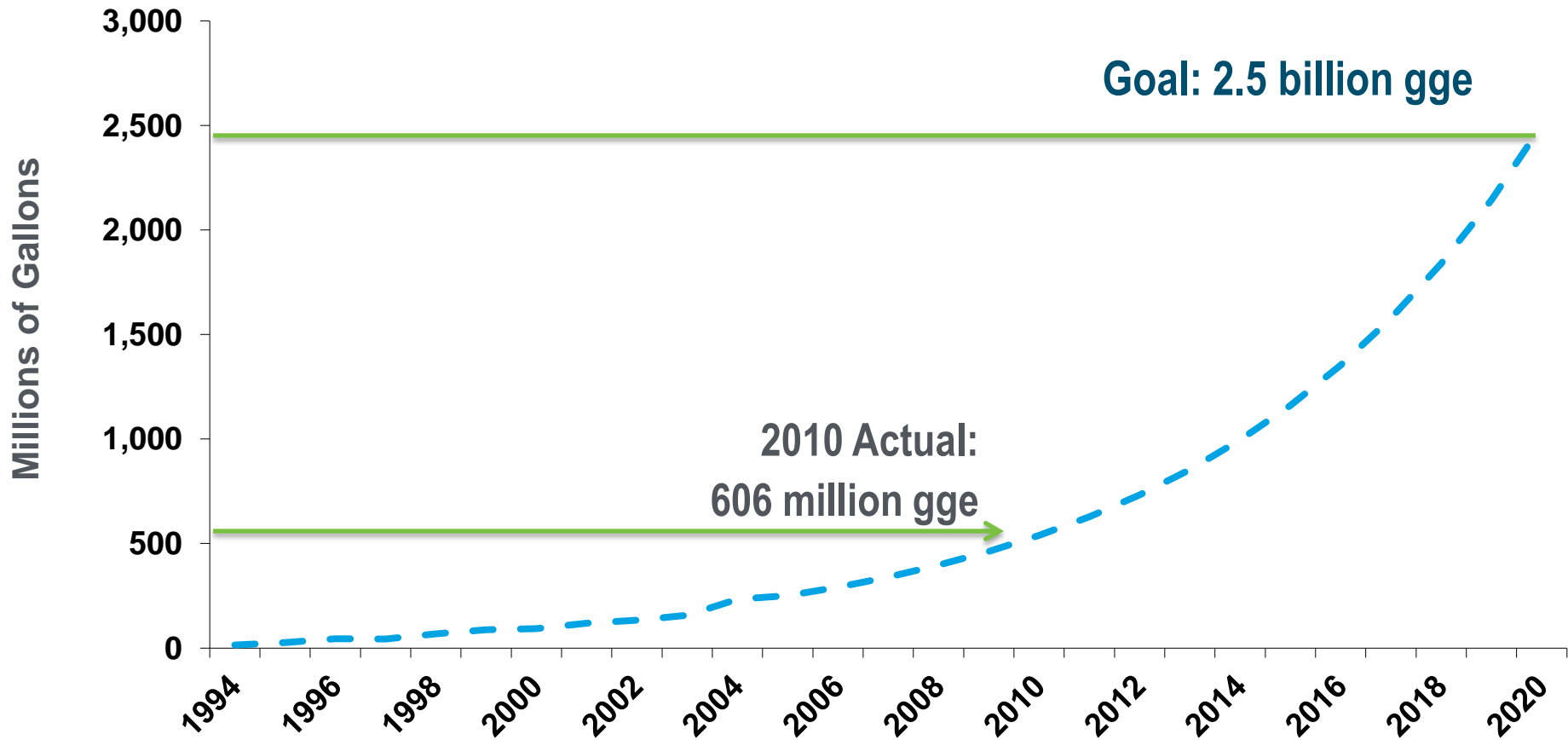
- **Great Smoky Mountains**
- **Mammoth Cave**
- **Grand Canyon**
- **Zion**
- **Grand Teton**
- **Glacier**
- **Yellowstone/Greater Yellowstone Area**



Clean Cities Cumulative Petroleum Savings

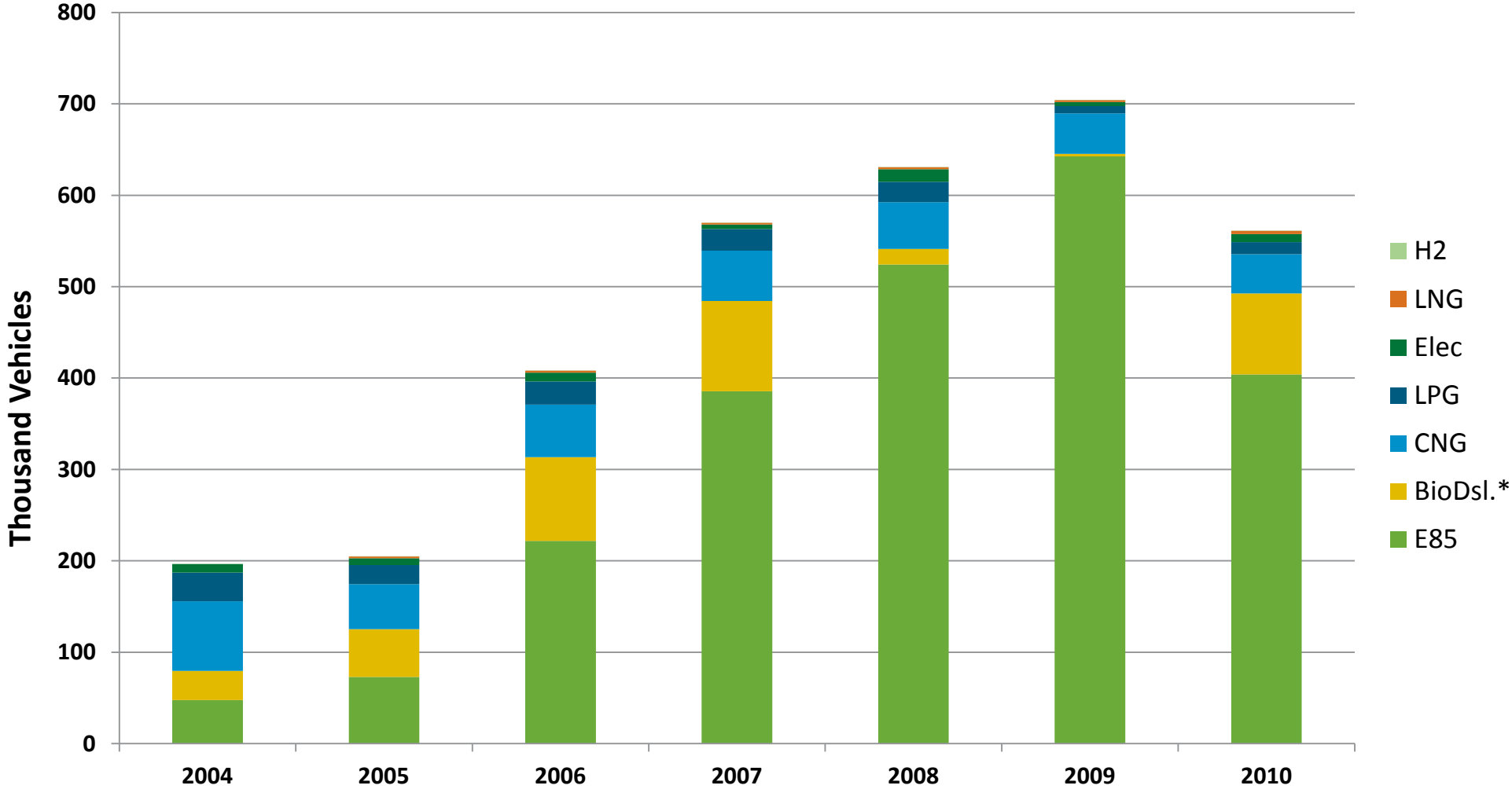


Annual Displacement Projection

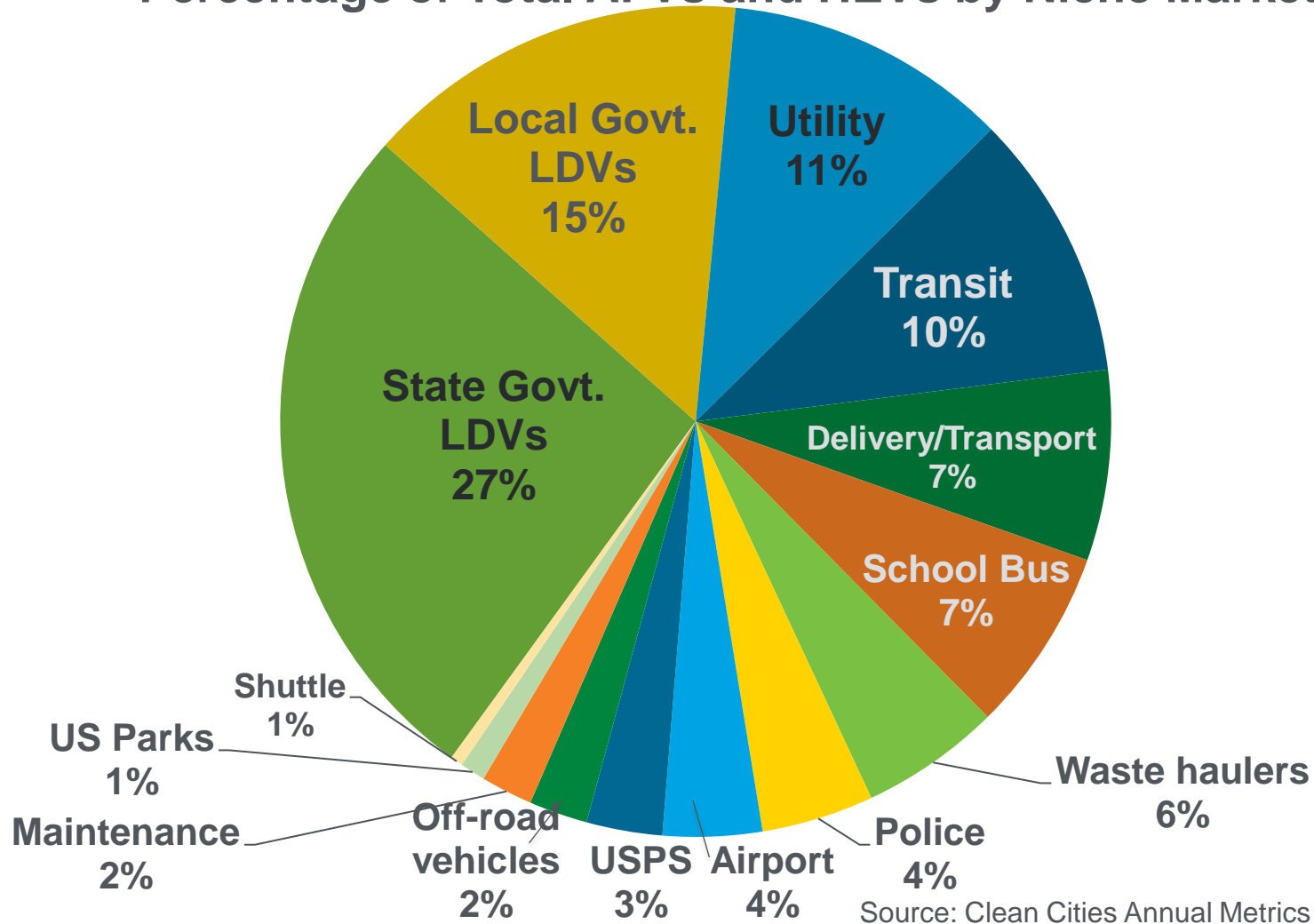


Source: Clean Cities Annual Metrics Report 2008, August 2009

Clean Cities Alternative Fuel Vehicle Inventory

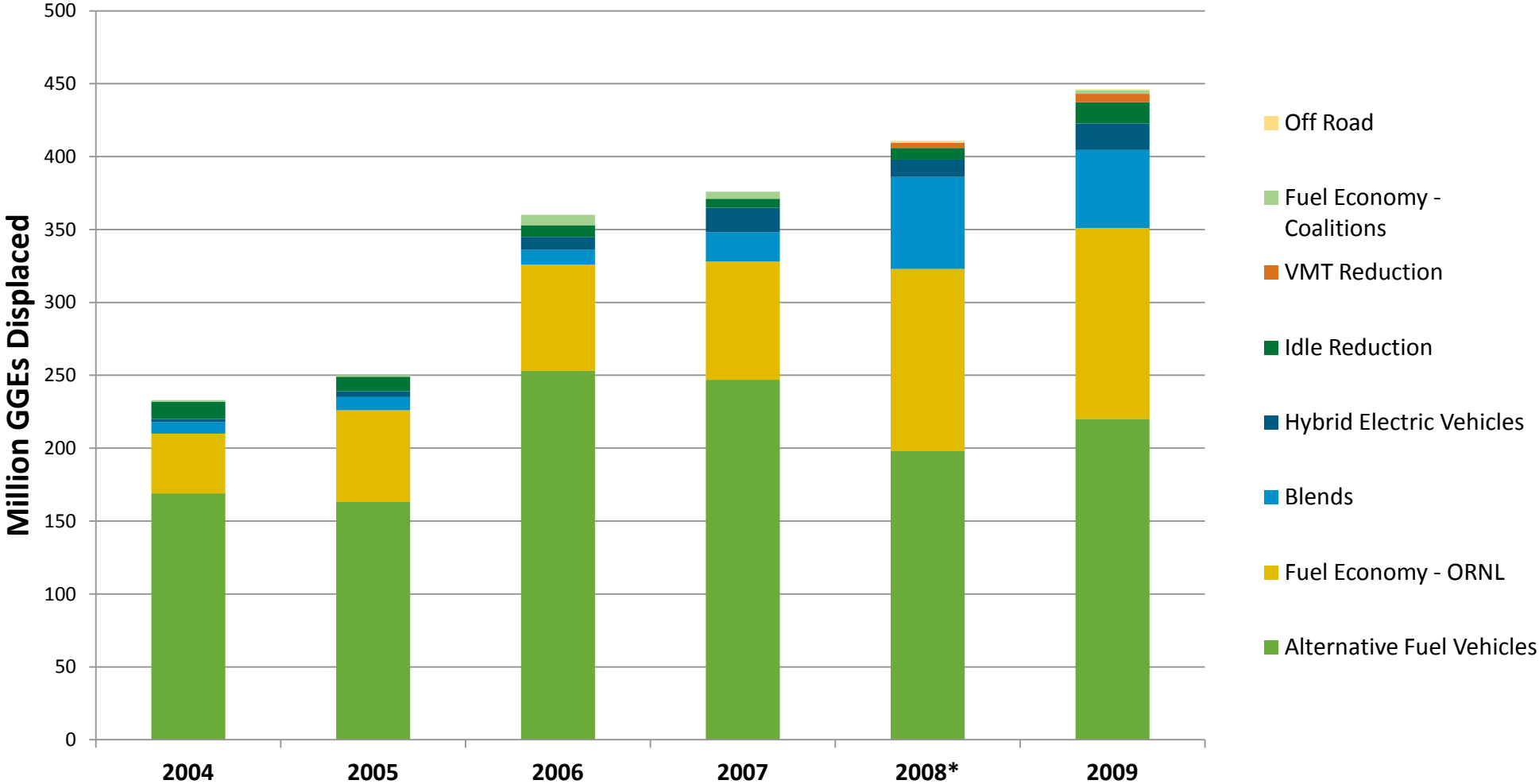


Percentage of Total AFVs and HEVs by Niche Market

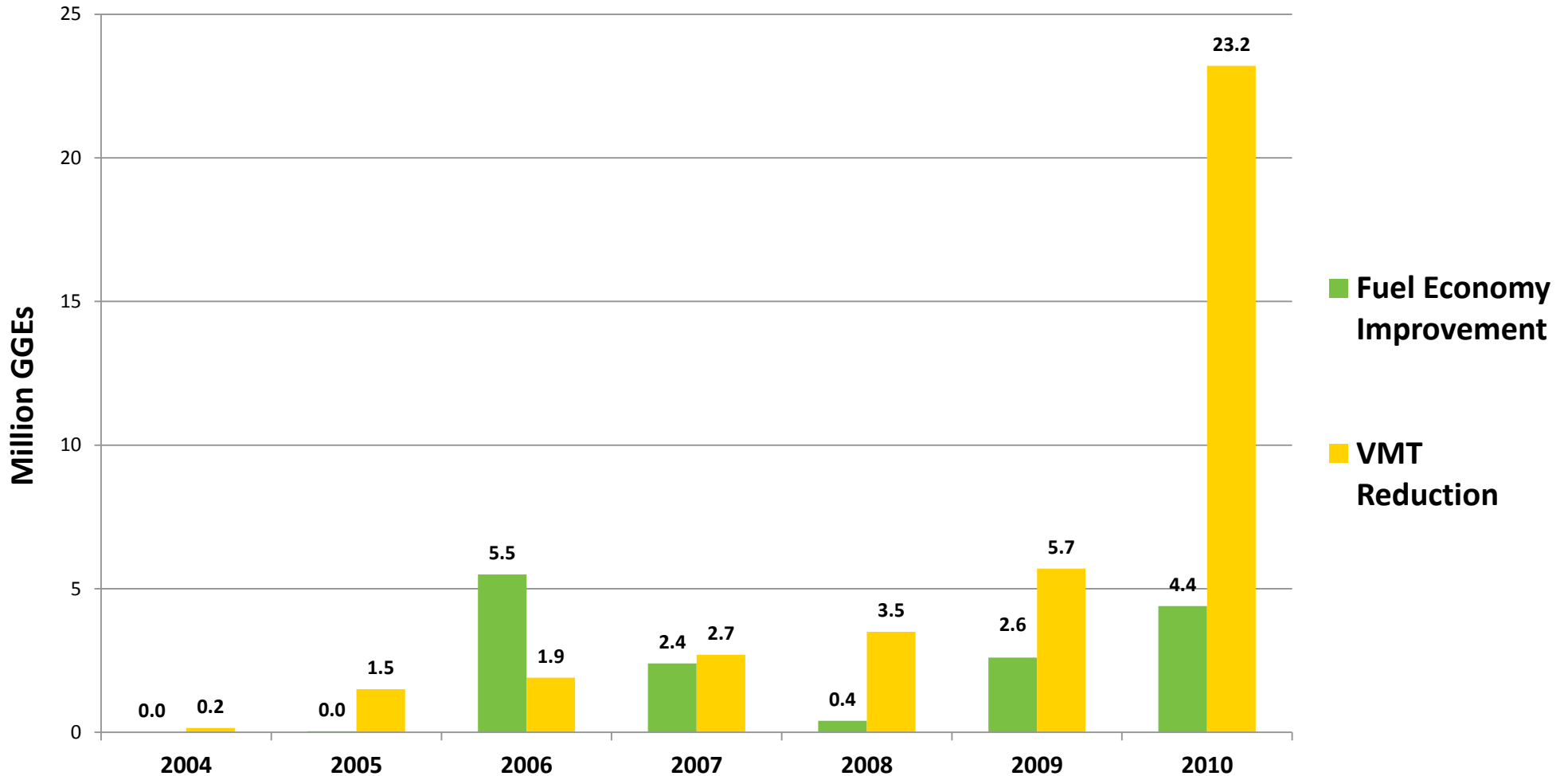


Source: Clean Cities Annual Metrics Report 2008, August 2009

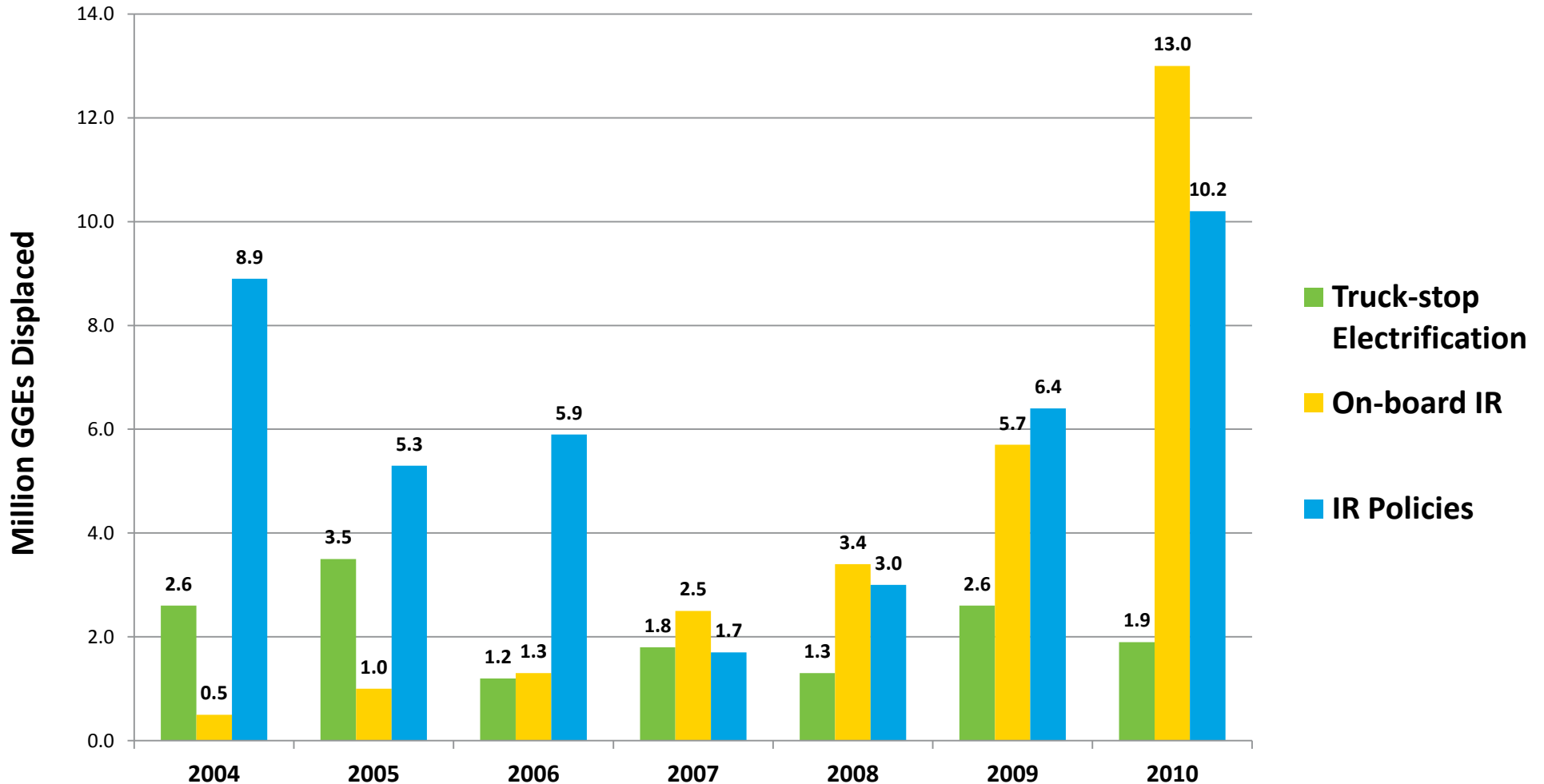
Petroleum Displacement by Technology Type



Fuel Economy and VMT Reduction



Displacement through Idle Reduction



- Over 1,500 Alternative Fuel and Electric Charging Stations built or upgraded (includes 500+ EV charging stations)
- Deploy over 8,000 Alternative Fuel & Advanced Technology Vehicles
- Approximately **40 Million gallons/yr** of Petroleum Reduction
- Hundreds of workshops, educational events, workforce training and public outreach efforts
- Local Community & Economic Development

Ann Arbor Clean Cities

- Partner: DTE Energy
- Vehicles: 170 CNG conversions
- Fueling: 2 new stations, 11 upgrades
- Funding: \$5.4 million ARRA (DOE)
- Petroleum Displacement: over 220,000 gge per year

New Jersey Clean Cities

- Partner: Central Jersey Waste
- Vehicles: 24 new CNG refuse haulers
- Fueling: 1 station upgrade
- Funding: \$1.39 million ARRA (DOE)
- Petroleum Displacement: over 350,000 gge per year (diesel)

State of Indiana

- Partner: Indiana Department of Transportation
- Vehicles: 225 light duty LPG conversions
- Fueling: 115 new stations
- Funding: \$4.8 million ARRA (DOE)
- Petroleum Displacement: approx 175,000 gge/year

Texas Railroad Commission

- Partner: Northside School District, San Antonio, TX
- Vehicles: 351 LPG school buses (59 DOE funded)
- Fueling: 4 stations (1 new DOE funded)
- Funding: \$2 million DOE & TRRC
- Petroleum Displacement: 450,000 gal propane/year

Philadelphia Clean Cities

- PA E85 Corridor – Retail E85 Fueling
- 20 stations across PA
- Funding: \$283,000 DOE, \$283,000 cost share
- Dispensed approx. 500,000 gal E85 to date (4 years)

WI Biofuels Retail Availability Improvement Network (BRAIN)

- Retail B100 & E85 Fueling
- 10 B100 stations across WI
- Funding: Approx. \$300,000 DOE
- Already dispensed more than **2 million** gal B100 (since 2009)

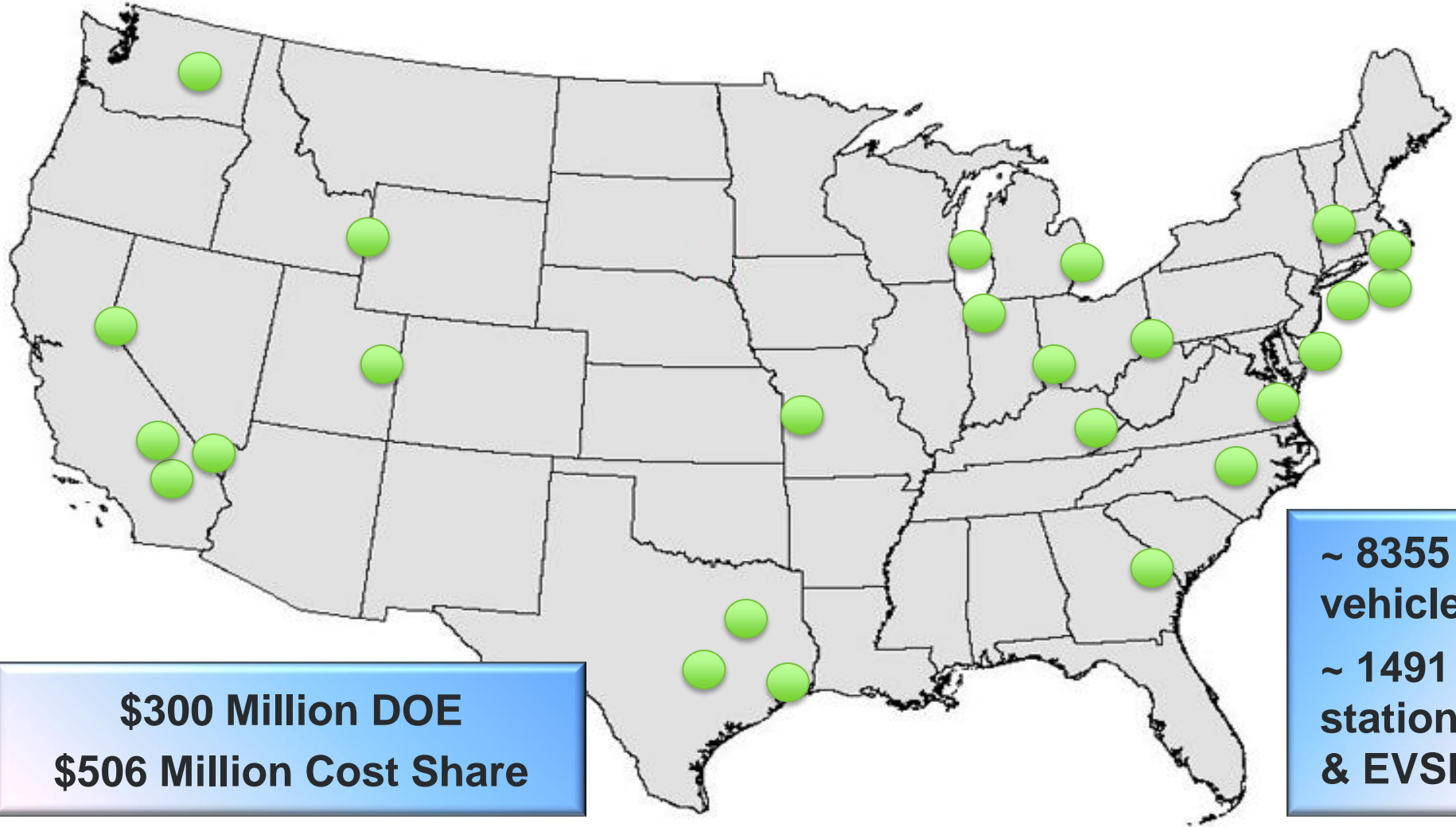
Puget Sound Air Agency

- Partner: Port of Seattle/
Seattle -Tacoma
International Airport
- Vehicles: 594 electric airport
ground support vehicles
- Funding:\$5 million ARRA
(DOE), 7.8 million cost share
- Displacement: 8.4 million
gge* over vehicle useful life

State of Maryland

- Partner: Aramark
- Vehicles: 71 heavy duty
hybrid-electric long-haul
trucks
- Funding: \$2.8 million ARRA
(DOE)
- Displacement: approx
230,000 diesel gal/year

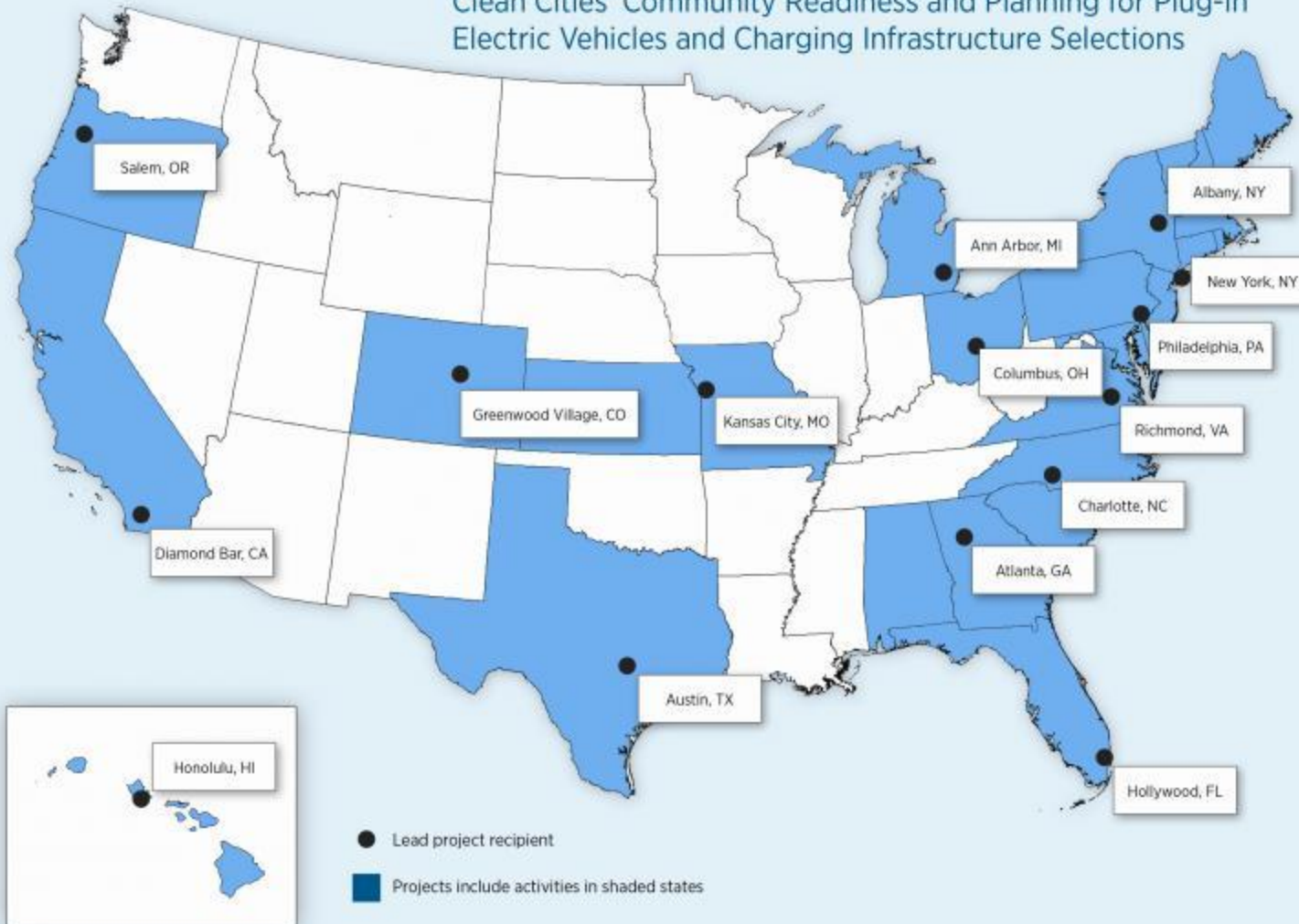
25 Clean Cities ARRA Projects Across the U.S.



**\$300 Million DOE
\$506 Million Cost Share**

**~ 8355
vehicles
~ 1491
stations
& EVSE**

Clean Cities' Community Readiness and Planning for Plug-in Electric Vehicles and Charging Infrastructure Selections



- \$8.5 million
- 16 projects across 24 states and DC
- 1 year projects to facilitate local partnerships
- Results: Publicly releasable and *replicable* Plans

Clean Cities Web site

www.eere.energy.gov/ccities

Alternative Fuels & Advanced Vehicles Data Center Web site

www.eere.energy.gov/afdc

Clean Cities Coordinator Contact Information and Coalition Web sites

<http://www.afdc.energy.gov/cleancities/progs/coordinators.php>

DOE EERE Information Center and Technical Response Service

Web Site: www.eere.energy.gov/afdc/informationcenter.html

Phone: 1-800-EERE-INF (1-877-337-3463)

Email: technicalresponse@icfi.com

Hours: 9:00 a.m. – 6:00 p.m. EST

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

Alternative Fuels & Advanced Vehicles Data Center

About the AFDC | Fuels | Vehicles | Fleets | Incentives & Laws | Data, Analysis & Trends | Information Resources | Home

Help > Methodology >

Petroleum Reduction Planning Tool

The Petroleum Reduction Planning tool helps fleets, consumers, and business owners create a strategy to reduce conventional fuel use in fleet and personal vehicles. This interactive tool allows users to evaluate and calculate petroleum reductions by choosing one or a combination of the following methods:

- Alternative Fuels
- Hybrid Electric Vehicles
- Biodiesel Blends
- Fuel Economy
- Vehicle Miles Traveled Reduction
- Truck Stop Electrification
- Idling Time Reduction
- Onboard Idle Reduction

Get Started

Guest User: No password is required. Full planning functionality is provided but scenarios cannot be saved.

Registered User: Create and save one or more scenarios, which can be accessed for editing and analysis.

Register Now: Registering allows users to create, save, and edit scenarios for further analysis.

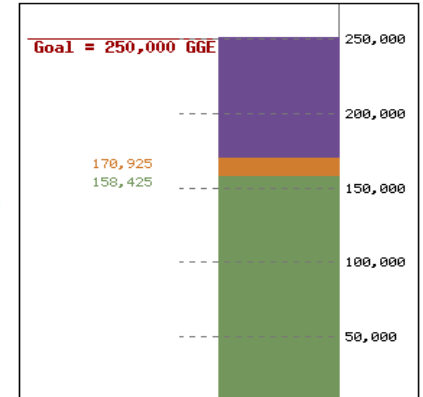
[Password Reminder](#)

Petroleum Reduction Plan

Scenario Name: Test2
 Annual Petroleum Reduction
 Goal: 250000 GGE

Based on your inputs, this is your petroleum reduction goal and associated plan. You may print the information on this page and use it to help you reach your goal. If you are a registered user, this scenario is saved in the system and you may make changes at a future time.

To alter your plan, return to [Step 2](#).



Alternative Fuels

AFV Type	AFV Fuel	Number of AFVs	Average VMT	Fuel Economy (mpg)	Fraction of Fuel Use	GGE Reduced
Large Pickup/Utility	LPG	50	10000	20	1	25000
Midsize Car	E85	100	15000	25	1	47400
HD Truck > 26k lb	CNG	25	15000	5	1	86025
TOTAL GGE						158425

Hybrid Electric Vehicles (HEVs)

Fuel Type	Number of Vehicles	Average VMT	Fuel Economy of new HEVs	Fuel Economy of Old Vehicles	GGE Reduced
Gasoline	75	15000	45	30	12500
TOTAL GGE					12500

Biodiesel Blends

Vehicle Type	Blend Type	Number of Vehicles	Average VMT	Fraction of Fuel Use	Fuel Economy	GGE Reduced
HD Truck > 26k lb	B50	50	15000	1	5	80777
TOTAL GGE						80777

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