



Department of Defense Vehicles and Alternative Fuel Use, Strategies, and Goals

Program Overview

Alternative Fuel Industry Forum

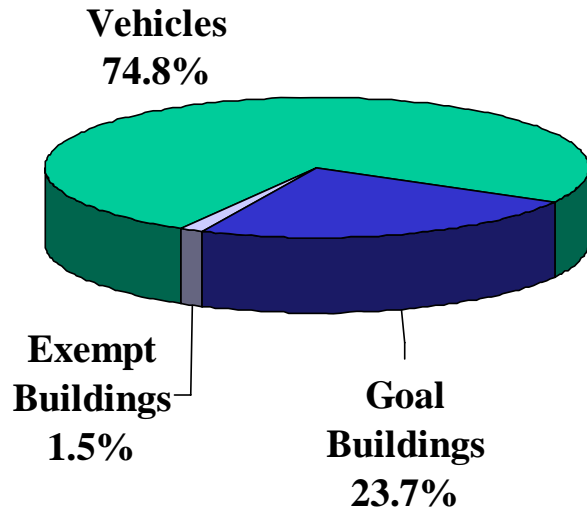
June 12, 2008



FY07 DoD Energy Use

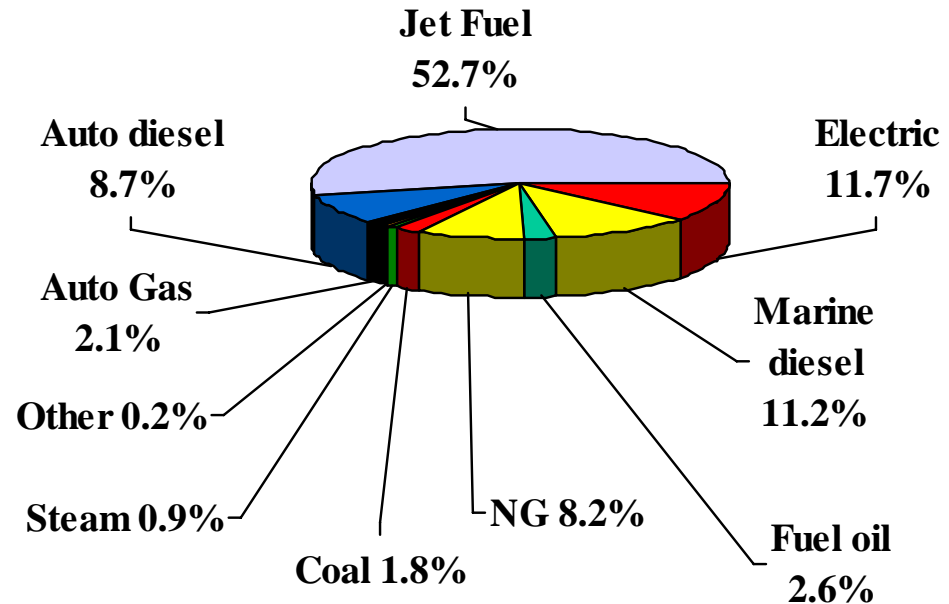
Total Site-delivered Energy (BTU)

Application



Nation's single largest energy user
(Used 0.8% of total U.S. & 78.6% of Federal energy in FY 2006)

Commodity



\$13.2B

864 Trillion BTU



Energy Policy Act of 1992

- Federal vehicle fleet energy management goals
 - Defined alternative fuels (AF) and alternative fuel vehicles (AFV)
 - New definitions is NDAA 2008, now includes:
 - Fuel cell (IRC 30B(b)(3))
 - Advanced lean burn technology (IRC 30B(c)(3))
 - Qualified hybrid (IRC 30B(d)(3))
 - Any other demonstrated (by GSA to DoE) to reduce petroleum consumption
 - Procure AFVs - 75% by FY 1999 and thereafter (in MSA)
 - **Arrange for commercial refueling of AFVs to the maximum extent practicable (Need help here!)**



Energy Policy Act of 2005

- Federal Vehicle Provision (701)
 - Operate dual fuel vehicles on alternative fuels unless Secretary of DoE waiver pursued
 - Waiver available based on fuel availability
 - Not within 5 miles or 15 minutes of normal route (Location)
 - Waiver available based on fuel being unreasonably expensive
 - DoE draft guidance says “no more expensive than gasoline”
(This standard is still being developed)
 - Does not apply to GSA wet lease (majority of DoD inventory)
- **66% of DoD AFV waived for FY 2008.**



Executive Order 13423

- Federal Vehicle Provision
 - Consumption baseline set to FY 2005
 - Reduce total consumption of petroleum products by 2% annually through FY 2015 (requires 6% for FY 2008)
 - Increase total consumption of non-petroleum fuel by 10% per year (this is cumulative, i.e. 10% in FY 2007, 21% in 2008, 33.1% in FY 2009)
 - Use Plug-in hybrids (PHEV) when commercially available at a life cycle cost comparable to non-PHEV
- Revokes EO 13149
 - Reduce petroleum consumption - 20% by FY 2005
 - Use alternative fuels – to meet “a majority” of alternative fuel vehicle fuel requirements (retains EPA Act 2005 alt fuel requirement)
 - Increase miles per gallon (mpg) fleet fuel efficiency – 3% by 2005



EISA 2007

- Prohibits procurement of alternative fuel or synthetic fuel that has “life cycle greenhouse gas emissions” greater than conventional fuels (526)
 - Primary concern in synthetic fuel (i.e. CTL and GTL)
 - Could affect E85, oil shale, tar sands, etc
- Prohibits acquisition of any vehicle that is not “a low greenhouse gas emitting vehicle” (141)
- ‘Beginning in FY 2010 each agency shall reduce petroleum consumption and increase alternative fuel consumption so as to by Oct 1, 2015, and each year thereafter, achieve at least a 20% reduction in annual petroleum consumption and a 10% increase in annual alternative fuel consumption from the 2005 baseline’ (142)
- Each agency shall develop a plan and implement measures to comply with the requirements above (142)
- **Not later than Jan 1, 2010, install at least 1 renewable fuel pump at each Federal fleet fueling center in the U.S. and report on such. DoD has an exemption for fueling centers with a fuel turnover rate of less than 100,000 gallons per year (246)**



OMB Scorecard requirements

- Use of alternative fuel as a % of total consumption
 - Minimum 10% for green, 5% for yellow
- Inclusion of EO 13423 goals in appropriate position descriptions and performance evaluations.
- Agencies are responsible for a 6% petroleum reduction in 2008.
- 10% annual reduction in the quantity of AFV waivers (2008 start), 5% for yellow.



Fleet data (FY 2007)

- Department owned or leased domestically – 49,734
- GSA owned or leased – 120,263
- Total domestic – 169,997
- Foreign – 22,971
- Total fleet – 192,968
- Total GSA miles – 1.216 billion – 10,113 miles/yr avg
- Total fleet miles – 1.564 billion – 8,104 miles/yr avg
- Number of AFV (E85 flex fuel) – 42,826



Fuel data (FY 2007 in GGE)

Fuel type	Consumption (GGE)	Cost
Diesel	18,296,773 + 1,527,780 (waived)*	\$39,026,489 + \$4,600,751 (waived)
Bio-diesel	5,145,315	\$10,534,262
Gasoline	70,553,470 + 4,602,745 (waived)	\$178,123,578 + \$11,794,741 (waived)
E-85	1,122,457	\$3,605,260
CNG	483,880	\$710,758
LPG	3,924	\$9,616

* Law enforcement and emergency vehicles are waived from the requirement to use alternative fuels.



DESC Alt Fuel Study 2007

- **DoD will ensure that AFVs purchase biofuel when fueling at biofuel stations.**
 - Potential annual increase of 134,851 GGE of E85 and 30,893 GGE of B20.
- **DoD will divert fueling of AFVs from conventional stations to nearby biofuel stations within 5 miles or 15 minutes driving time.**
 - Potential annual increase of 3,208,547 GGE of E85 and 978,983 GGE of B20.
- These two actions alone will ensure continued compliance with the requirements of Section 701 of the Energy Policy Act of 2005 and Executive Order 13423, resulting in a maximum potential annual increase in biofuel use of 63 percent from FY06 levels. Implemented through Dec 27, 2007 memo.
- **DoD will consider locating new E85 FFV acquisitions near commercial E85 stations.**
 - Involves concentrating E85 FFVs near existing commercial E85 stations through the normal acquisition replacement cycles.
 - Estimated maximum potential annual increase in E85 use of 2,407,587 GGE.



DESC Alt Fuel Study 2007 (cont)

- **DoD will explore installation of new infrastructure or conversion of existing infrastructure at large use DoD exchanges.**
 - The report identified 79 DoD exchanges for potential conversion or installation of E85 infrastructure and 11 DoD exchanges for potential conversion or installation of B20 infrastructure.
 - Estimates maximum potential annual increase use of 9,229,330 GGE of E85 and 1,097,233 GGE of B20.
 - Detailed site evaluations would be necessary.
- **DoD will investigate installation of new infrastructure or conversion of existing infrastructure at large-use DoD installation fueling sites.**
 - The report identified 107 DoD installation fueling sites for potential conversion or installation of E85 infrastructure and 61 DoD installation fueling sites for potential conversion or installation of B20 infrastructure.
 - Estimated maximum potential annual increase use of 4,611,362 GGE of E85 and 4,258,244 GGE of B20.
 - Specific and detailed site evaluations are necessary



Assessment

- Non-tactical vehicle program
 - Opportunities for significant improvement
 - Joint base vehicle corridors
 - Aggressive petroleum substitution/reduction policy
 - Partnerships with industry and state governments
 - Use of alternative fuel where commercially available
 - Success will be reliant upon:
 - Integrated alternative fuel and vehicle procurement strategy
 - Investment in alternative fuels, alternative fuel vehicles, and supporting infrastructure



Final thoughts



GovEnergy
www.govenergy.gov

- Attend GovEnergy 2008 August 3-6 in Phoenix, AZ
 - Over 100 training sessions
 - Lots of vendors/contractors
 - Network with other energy professionals
 - **Fleet/Transportation track this year**
- OSD Transportation data:
<https://www.denix.osd.mil/portal/page/portal/denix/environment/AFV>
- ODUSD Energy website:
<http://www.acq.osd.mil/ie/irm/Energy/energy.shtml>
- Questions
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