



Fleet and Asset
Management



Green California Summit & Exposition

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*Green Fleets: Kicking Tires
& Crunching Numbers*

The 1992 Federal Energy Policy Act
(EPAAct)



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The Energy Policy Act (EPAct)

Passed by Congress
October 24, 1992

Administered by
The Department of Energy (DOE)



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EPAct goals:

- Improve air quality
- Enhance our nation's energy security
- Encourage the use of alternative fuels
- Reduce our dependence on imported oil



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EPAct approved alternative fuels include:

- Ethanol (E85)
- Natural gas (CNG or LNG)
- Liquefied petroleum gas (propane or LPG)
- Hydrogen
- Biodiesel
- Electric



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EPAct established requirements for purchasing AFVs for:

- The Federal government
- State governments
- Alternative fuel providers (i.e. Utility Companies)



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EPAct also directed DOE to decide if inclusion of private and local government fleets would be necessary to meet the imported oil reduction goals by 1998.



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Decision Timeline:

2004: DOE decides not to mandate private & local government fleets, but Environmental Groups sue DOE

2006: US District Court directs DOE to re-evaluate the decision

2007: DOE publishes the final rule in the Federal Register: *EPAct mandates are not necessary for private and local government fleets.*



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EPAct guidelines for state fleets'* light duty (8,500 GVW or less) AFV acquisitions beginning in:

1997 - 10%

1998 - 25%

1999 - 50%

2000 and later - 75%

*emergency responders & law enforcement are exempt



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State of California EPA Act reporting:

- The DGS completes an AFV acquisition report for all departments annually
- The California State Fleet consistently meets and exceeds EPA Act
- There are 6,436 AFVs in CA Fleet*

*2006 EIA 886 Report



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EPAct EIA 886 Report includes:

- Alternative fuel use and miles driven by:
 - Vehicle type
 - Fuel type
 - Engine configuration
 - Application or use
- AFVs retired by:
 - Average age of vehicle
 - Method of disposition



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Types of AFVs in the California State Fleet:

- Compressed Natural Gas/CNG
- Ethanol/E85
- Methanol/M85
- Propane/LPG
- Electric low speed vehicles
- **Hydrogen Fuel Cell** (on loan from a DOE Demonstration Program)



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AFVs available on 2008 State Vehicle Contract:

E-85

- GM Chevy Impala, Uplander van, Express van, Silverado pickup, Tahoe SUV
- Dodge Grand Caravan mini-cargo van
- Ford Crown Victoria (police package)

CNG

- Honda Civic NGV



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Challenges to meeting EPA Act:

- Current hybrid electric vehicles do not meet the DOE definition of an AFV because they are not primarily powered by an electric motor
- Low-speed electric vehicles are not eligible for EPA Act credits because they do not replace full function on-road vehicles



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Challenges, continued:

- Lack of California certified AFVs to bid on State vehicle procurement contract
 - 51 AFV models were available in 2001
 - by 2005 availability declined to only three models, a 94% decline in four years
 - availability has not significantly expanded in 2006, 2007, or 2008.



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Challenges, continued:

- Lack of adequate **public** fueling infrastructure in California:
 - 130 CNG fueling stations
 - 3 Ethanol public fueling stations
 - 3 Hydrogen fueling stations
 - 200 Propane fueling stations

<http://afdcmap2.nrel.gov/locator/>



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In 2001, the DOE added Biodiesel Fuel Use Credits for EPA Act:

- 450 gallons of biodiesel purchased = one biodiesel fuel use credit
- One biodiesel fuel use credit is counted as one AFV acquisition after 50% of AFV acquisitions are met
- B20 use qualifies, but only for the percent of Biodiesel contained in the mix (20%)



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Calculating Biodiesel Fuel Use Credits:

- A fleet purchases 2,250 gallons of B20 to be used toward a biodiesel fuel use credit. B20 is 20% biodiesel, which means the number of gallons is multiplied by 0.20. The result: 450 gallons of biodiesel.

$$\begin{array}{r} 2,250 \text{ gallons of B20} \\ \times .20 \\ \hline 450 \text{ gallons of biodiesel} \end{array}$$



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For more information on EPAAct:

<http://www1.eere.energy.gov/vehiclesandfuels/epact/>

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