



CALIFORNIA ENERGY COMMISSION

# The Alternative and Renewable Fuel and Vehicle Technology Program

**Peter Ward**

Electric Drive Workshop  
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# The Alternative and Renewable Fuel and Vehicle Technology Program

- Assembly Bill 118 (Nunez, Chapter 750, Statutes of 2007) created the Alternative and Renewable Fuel and Vehicle Technology Program administered by the Energy Commission.
- Subsequently amended by AB 109 (Nunez, Chapter 313, Statutes of 2008).
- “The emphasis of this program is to develop and deploy innovative technologies that transform California’s fuels and vehicle types to help attain the state’s climate change policies.”



## California Alternative Fuels Plan

- Full-fuel-cycle analysis of all fuels, specific recommendations.
- Goals: 9% in 2012, 11% in 2017, 26% in 2022.
- Displacement of 4 billion gge in 2020 (20%).
- Electricity can make a large contribution to this goal, with corresponding large reductions in GHG and air pollution.

California Energy Commission



California Air Resources Board





## Key Policy Objectives

<b>Objectives</b>	<b>Goals and Milestones</b>
GHG Reduction	Reduce GHG emissions to 1990 levels by 2020 and 80% below 1990 levels by 2050
Petroleum Reduction	Reduce petroleum fuel use to 15 below 2003 levels by 2020
Alternative Fuel Use	Increase alternative fuel use to 20% of on-road fuel demand by 2020 and 30% by 2030
In-State Biofuels Use	Increase biofuel use to 1 billion gge by 2010, 106 billion gge by 2020, and 2 billion gge by 2050
In-State Biofuels Production	Produce in California 20% of biofuels used in state by 2010, 40% by 2020, and 75% by 2050.



## Funding and Objectives

- Up to \$100 Million per year for 7 ½ Years (\$75 Million for FY08-09; \$101 million for FY09-10)
- Develop, produce, manufacture, and deploy alternative and renewable fuels, advanced vehicles, vehicle efficiency improvements for on-road and non-road applications.
- Emphasize workforce training and job creation
- Foster education, promotion and technology centers
- Prepare environmental, market and technology assessments



## Previous Funding Allocation

Fuel Technology Category	Fuel Production	Fuel Storage and Blending	Fueling Stations	Vehicle Incentives , Non-Road, and RD&D	Manufacturing Plants	TOTAL
<b>Electric Drive</b>			\$12 Million	\$25 Million	\$9 Million	\$46 Million
<b>Hydrogen</b>			\$40 Million			\$40 Million
<b>Ethanol</b>	\$7 Million		\$5 Million			\$ 12 Million
<b>Renewable Diesel and biodiesel</b>	\$2 Million	\$ 4 Million				\$ 6 Million
<b>Natural Gas</b>	\$10 Million		\$ 8 Million	\$25 Million		\$43 Million
<b>Propane</b>				\$ 2 Million		\$ 2 Million
<b>Total</b>	\$ 19 Million	\$ 4 Million	\$ 65 Million	\$ 52 Million	\$ 9 Million	\$ 149 Million
<b>TOTAL with \$27 Million for Market and Program Development</b>						\$176 Million



## Previous Electric Drive Funding Allocation Summary

- Plug-in hybrid electric passenger vehicle retrofits (\$3.5 million)
- Medium- and heavy-duty hybrid vehicle RD&D (\$10 million)
- Non-road projects for ports and truck stop electrification (\$11.5 million)
- Electric charging (\$12 million)
- Manufacturing facilities and equipment (\$9 million)



## Recovery Act Funding Commitments

<b>Funding Category</b>	<b>Investment Plan Allocation</b>	<b>Requested Match Funds</b>	<b>Match Funds for Recovery Act Awards</b>
Charging Stations	\$12 Million	\$72 Million	\$9 Million
Vehicle Deployment and RD&D	\$10 Million	\$98 Million	\$9 Million
Manufacturing Facilities and Equipment	\$9 Million	\$68 Million	\$0



## Next Steps

- Ongoing evaluation of proposals for federal economic stimulus funding.
- Preparing a California-based solicitation in accordance with the current Investment Plan.
- Update of the Investment Plan for FY 10-11.



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## Contact Information

Peter Ward

Program Manager

Fuels and Transportation Division

California Energy Commission

916-654-4639

[pward@energy.state.ca.us](mailto:pward@energy.state.ca.us)