



CALIFORNIA ENERGY COMMISSION

Alternative and Renewable Fuel and Vehicle Technology Program

**FY 2010-2011 Investment Plan
Public Hearing**

DOCKET

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DATE JUL 15 2010

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California Energy Commission
Hearing Room A
July 16, 2010



Alternative and Renewable Fuel and Vehicle Technology Program

- Established by Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007), and administered by the Energy Commission
- Subsequently amended by AB 109 (Núñez, 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.”



Key Policy Objectives

Objectives	Goals and Milestones
Petroleum Reduction	Reduce petroleum fuel use to 15% below 2003 levels by 2020
GHG Reduction	Reduce GHG emissions to 1990 levels by 2020 and 80% below 1990 levels by 2050
Alternative and Renewable Fuel Use	Increase alternative and renewable fuel use to 11% of on-road and off-road fuel demand by 2012, 13% by 2017 and 26% by 2022
In-State Biofuels Production	Produce in California 20% of biofuels used in state by 2010, 40% by 2020, and 75% by 2050



Program Funding and Objectives

- Program has a sunset date of January 1, 2016
- \$75 million for FY 2008-09; \$101 million for FY 2009-10.
- \$108 million anticipated for FY 2010-11
- 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



About the Investment Plan

- The Energy Commission is required to develop and adopt the Investment Plan.
- The Investment Plan determines the priorities and opportunities for the Program.
- The Investment Plan must be updated annually.
- The Energy Commission must create and consult with an Advisory Committee as it develops its Investment Plan.



Development of the FY 2010-2011 Investment Plan

- September-October, 2009 – Fuel and technology workshops
- February 11, 2010 – First Advisory Committee meeting*
- April 30 – Second Advisory Committee meeting*
- Late May – Three public workshops
- July 16 – Third Advisory Committee meeting and public hearing*
- August 11 – Possible Business Meeting adoption of Investment Plan*

* Indicates a new or revised version of the Investment Plan



Program Update – Funding Summary

- Workforce Development - \$15,000,000
- ARRA Cost-Sharing - \$36,520,000
 - Received federal contributions of \$105,300,600
- Closed PONs with awards - \$45,247,500
 - Biomethane production (\$21,479,500)
 - Medium- and heavy-duty vehicles (\$9,968,000)
 - Fuel infrastructure (\$13,800,000)
- Division of Measurement Standards - \$4,000,000



Funding Summary, cont.

- Interagency Agreement with State Treasurer's Office
 - Master agreement for \$39,912,000
 - Closed PON: New biofuel plants (\$14,912,000)
 - Closed PON: Manufacturing (\$19,000,000)
 - Underway: Ethanol producer incentive program (up to \$6,000,000)
- Hydrogen - \$22,000,000
 - Open PON: Fueling infrastructure (\$19,000,000)
 - Future: Hydrogen transit fueling agreement (\$3,000,000)
- Future solicitations and agreements - \$12,450,000
 - Medium- and Heavy-Duty Vehicle Center of Excellence (\$7,000,000)
 - Propane School Bus Incentives (\$2,000,000)
 - Sustainability Analysis (\$2,000,000)



Investment Plan Summary

- Outlines funding allocations for FY 2010-11
- Funding allocation methodology
 - 2050 and 2020 analysis and backcasting
 - Gap analysis by fuel type
 - Non-GHG categories



Funding Allocation for Electric Drive

- Develop and demonstrate advanced on-road and non-road medium-and heavy duty technology - *\$14 million*
- Infrastructure and related activities - *\$3 million*
- Manufacturing facilities and equipment - *\$7.5 million*



Funding Allocation for Hydrogen

- Fueling infrastructure - *\$14 million*



Funding Allocation for Gasoline Substitutes

- Expansion of E-85 dispensers and retail outlets - *\$6.5 million*
- Gasoline substitutes production in existing, new and retrofit facilities - *\$10 million*



Funding Allocation for Diesel Substitutes

- Diesel substitutes production - *\$5 million*
- Bulk terminal storage and blending facilities - *\$4 million*



Funding Allocation for Natural Gas

- Light-, medium- and heavy-duty vehicles - \$13 *million*
- Upgrades to fueling stations - \$2 *million*
- Biomethane production plants and quality testing - \$7 *million*



Funding Allocation for Propane

- Light- and medium-duty vehicles - *\$3 Million*



Funding Allocation for Innovative Technologies and Advanced Fuels

- Innovative technologies and advanced fuels- \$3 *million*
- Federal cost sharing opportunities - \$5 *million*



Funding Allocation for Market and Program Development

- Sustainability studies - *\$2.5 million*
- Program marketing and public education and outreach - *\$2.5 million*
- Technical assistance and environmental / market / technology analyses - *\$6 million*



Funding Allocation Summary

- Battery Electric Drive - *\$24.5 million*
- Hydrogen Electric Drive - *\$ 14 million*
- Gasoline Substitutes - *\$16.5 million*
- Diesel Substitutes - *\$9 million*
- Natural Gas - *\$22 million*
- Propane - *\$3 million*
- Innovative Technologies and Advanced Fuels - *\$8 million*
- Market and Program Development - *\$11 million*
- **Total - \$108 million**