



2013-2014 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program

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Purpose of ARFVT Program

- Health and Safety Code 44272(a)
 - Primary purpose: “...to develop and deploy innovative technologies that transform California’s fuel and vehicle types to help attain the state’s climate change policies.”
- Complimentary state goals
 - Improve air quality
 - Increase alternative fuel use
 - Reduce petroleum dependence
 - Promote economic development

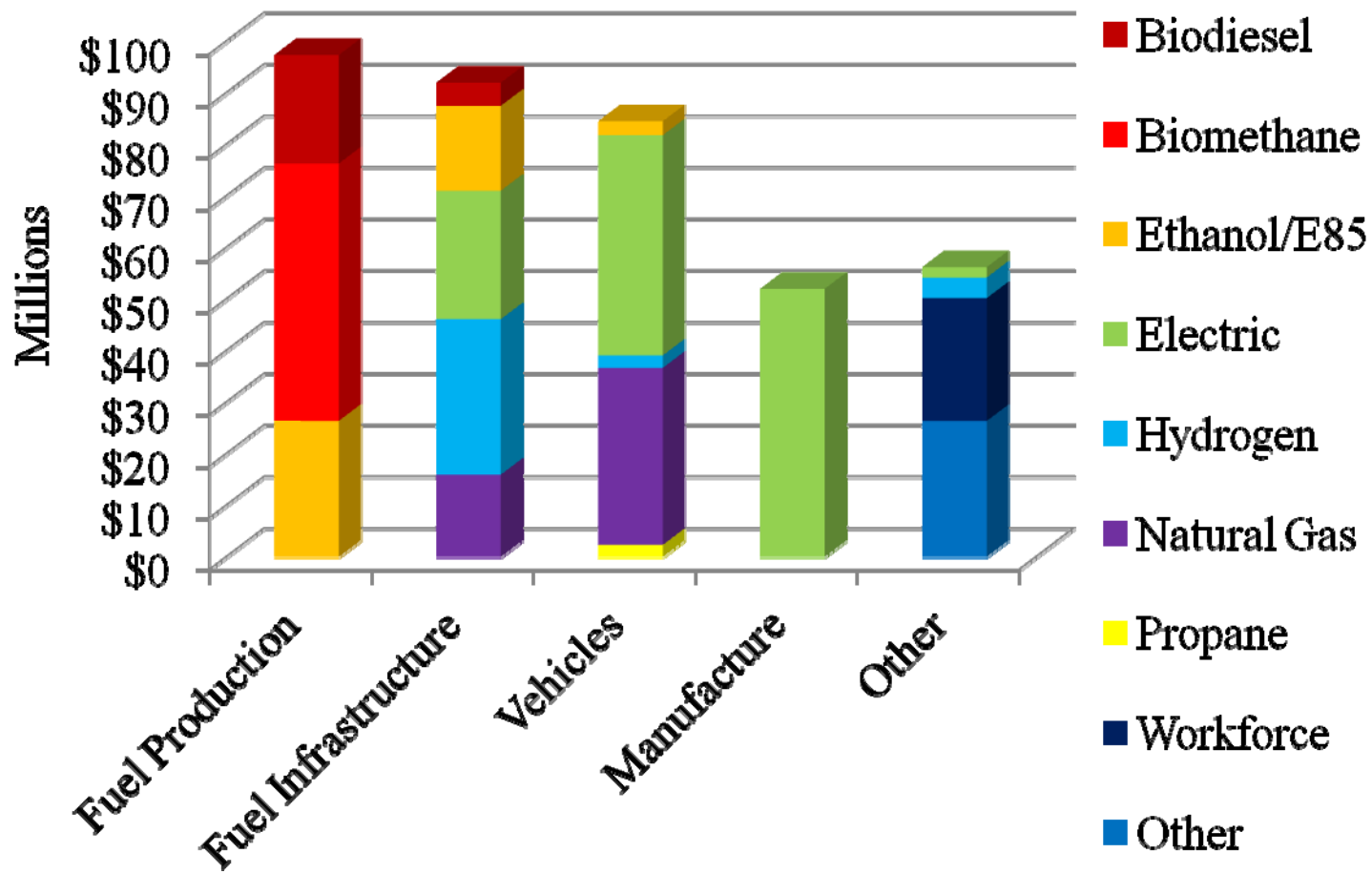


Program Status Update

- More than \$450 million allocated across 4 investment plans
- As of March, more than \$350 million awarded among 221 projects
- Current emphases:
 - Executing final awards from recent solicitations
 - Developing next series of solicitations
 - Overseeing existing projects



Agreements in Progress





Program Highlights

- Contributing to Governor Brown's ZEV Action Plan
 - 7,152 charge points (inc. 77 fast chargers)
 - 10 regional PEV readiness plans
 - 18 hydrogen fueling stations, plus fueling standards
 - Support for ARB's vehicle incentives
- Transforming the Medium- and Heavy-Duty Vehicle Sector
 - 15 ZEV and plug-in truck demonstrations
 - 9 natural gas and hybrid truck demonstrations
 - 1,000+ natural gas truck deployments



Program Highlights, cont.

- Expanding Sustainable Biofuel Production
 - 34 projects to investigate, demonstrate, and install fuel production technologies
 - 20 utilize waste-based feedstocks
 - Lifecycle GHG emissions up to 80%-90% lower than gasoline and diesel
- Estimation of Potential Benefits
 - 2011 Benefits Report:
 - 380 million - 1,206 million gallons petroleum fuel displaced
 - 2.7 million - 9.7 million metric tons GHG emissions reduced
 - 2013 Benefits Report: under development for Fall



Program Highlights, cont.

- Private Funding
 - More than \$450 million leveraged from outside investments
- Broad Interest
 - Nearly \$1.5 billion requested by 384 unfunded projects
- Economic Development
 - More than 5,750 individuals provided with job training
 - As of last Benefits Report, 1,912 short-term jobs and 3,482 long-term jobs created through funded projects



Program Highlights, cont.

	Manufacturing	Construction	Engineering	Operation and Maintenance	Other	Total
Short-Term	416	610	241	55	590	1,912
Long-Term	638	1,306	384	410	744	3,482
Total	1,054	1,916	625	465	1,334	5,394

Based on initial \$197 million of awards among 86 projects.

Source: 2011 Benefits Report



Investment Plan Development

- September 19: Background Advisory Committee meeting
- November 20: Staff Draft issued
- December 4: First Advisory Committee meeting
- January 10: Revised Staff Draft issued
- February 28: Second Advisory Committee meeting
- April 24: Lead Commissioner Report issued



Public Input and Comment

- 85 items provided via public docket
- Ongoing meetings with stakeholders
- Two Advisory Committee meetings on drafts
 - 20 members from different organizations
 - Public comment from roughly 30 other groups/individuals



Advisory Committee

Alberto Ayala – California Air Resources Board

Shannon Baker-Branstetter – Consumers Union

Robert Bienenfeld – California Fuel Cell Partnership
(courtesy of American Honda Motor Co.)

Tim Carmichael – California Natural Gas Vehicle
Coalition

Will Coleman – OnRamp Capital

Peter Cooper – California Employment Training Panel

Tyson Eckerle – Energy Independence Now

Lesley Garland – Western Propane Gas Association

Joe Gershen – California Biodiesel Alliance (courtesy
of Crimson Renewable Energy)

Bonnie Holmes-Gen – American Lung Association

Steve Kaffka – University of California, Davis -
California Biomass Collaborative

Ralph Knight – Napa Valley Unified School District

Howard Levenson – California Department of
Resources Recycling and Recovery

Anne McMonigle – California Labor Federation

Jack Michael – Recreational Boaters of California

Simon Mui – Natural Resources Defense Council

Joe Norbeck – University of California, Riverside

Kurt Schuparra – California Labor and Workforce
Development Agency

John Shears – Center for Energy Efficiency and
Renewable Technologies

Jananne Sharpless – Member at Large

Chris Shimoda – California Trucking Association

Eileen Tutt – California Electric Transportation
Coalition



Alternative Fuel Production

- Emphasize fuels and technologies that...
 - ...use existing infrastructure and vehicle stock
 - ...use waste-based and other sustainable feedstocks
 - ...promote next-generation fuel conversion technologies
 - ...encourage in-state production
- \$23 million total allocation
 - Similar to previous years' combined funding levels
- Short- and long-term value
 - Biofuels currently provide more than 75% of net LCFS credits
 - Lowest-carbon drop-in fuels still needed in 2050 Vision



Alternative Fuel Infrastructure

- Electric Vehicle Charging Infrastructure (\$7 million)
 - Coordinating in fulfillment of ZEV Action Plan
 - Prioritizing workplace, fleet, and multi-unit dwelling chargers
 - Complement (without supplanting) stations funded under NRG Energy Inc's settlement
- Hydrogen Fueling Infrastructure (\$20 million)
 - CaFCP estimates 68 stations needed by 2015-2017
 - Roughly 24 stations existing or under agreement so far
 - Continue to emphasize optimal station locations
- Natural Gas Fueling Infrastructure (\$1.5 million)
 - Supports deployment of additional natural gas vehicles
 - Private sector is expanding networks, but funding is needed for other agencies (e.g. school districts)



Alternative Fuel Vehicles

- Natural Gas Vehicles (\$12 million)
 - Immediate petroleum and GHG emission reduction benefits
 - Encourages suppliers to expand vehicle options and production
 - Expand potential fleets for renewable natural gas
- Light-Duty Plug-in Electric Vehicles (\$5 million)
 - Clean Vehicle Rebate Project administered by ARB
 - Incentive demands for CVRP likely to outstrip supply
- Medium- and Heavy-Duty Demonstration (\$15 million)
 - Consideration of a variety of fuels and technologies reflects the varying applications within this sector
 - ZEV technology critical to clean air goals



Other Categories

- Emerging Opportunities (\$4 million)
 - Will prioritize projects that offer significant federal cost sharing
- Manufacturing (\$5 million)
 - Opportunity for unifying economic development with cleaner transportation options
 - Funding can encourage companies to expand or relocate in-state
- Workforce Training and Development (\$2 million)
 - Continue agreements with existing partners, and investigate new options for expanding workforce training



Market and Program Development

- Regional Alternative Fuel Readiness and Planning (\$3.5 million)
 - Building on and implementing initial regional plans
 - Unites several tasks within the ZEV Action Plan
- Centers for Alternative Fuels and Advanced Vehicles (\$2 million)
 - Collaborative hubs to promote innovation, seek venture capital and federal cost-sharing funds, demonstrate new technologies, and provide workforce training



CALIFORNIA ENERGY COMMISSION

Project/Activity

**Proposed Funding
FY 2013-2014
(Millions)**

Alternative Fuel Production	Biofuel Production and Supply	\$23
Alternative Fuel Infrastructure	Electric Charging Infrastructure	\$7
	Hydrogen Fueling Infrastructure	\$20
	Natural Gas Fueling Infrastructure	\$1.5
Alternative Fuel and Advanced Technology Vehicles	Natural Gas Vehicle Incentives	\$12
	Light-Duty PEV Incentives	\$5
	Medium- and Heavy-Duty Advanced Vehicle Technology Demonstration	\$15
Emerging Opportunities	Emerging Opportunities	\$4
Manufacturing	Manufacturing Facilities, Equipment and Working Capital	\$5
Workforce Development and Training	Workforce Development and Training Agreements	\$2
Market and Program Development	Regional Alternative Fuel Readiness and Planning	\$3.5
	Centers for Alternative Fuels and Advanced Vehicles	\$2
Total Available		\$100



Future Steps

- Funding implementation
 - Complete currently scheduled solicitations and grant agreements
 - Backfill existing solicitations using FY 2013-2014 funding, where appropriate
 - Issue new solicitations, where appropriate
- Next Investment Plan Update (FY 2014-2015)
 - Begin development in Fall



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