



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

California Fleets and Workplace Alternative Fuels Project

2014 DOE Vehicle Technologies Office
Review Presentation

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Overview

Timeline

- Project start date: February 1, 2013
- Project end date: January 31, 2015
- Percent Complete: 50%

Budget

Total Project Funding

- DOE Funding - \$1 million
- Air District match - \$100,000

Funding Received

- FY13 - \$7,897
- FY 14 - \$213,846
- Percent of Funds Spent to Date: 22.2%

Barriers

- Consumer reluctance to purchase new technologies
- Consumers and local government lack of technical experience with new fuels and vehicle technologies

Partners

- South Coast AQMD, CCSE
- Calstart, CaPEVC, CaFCP
- All 13 CA Clean Cities Coalitions (CCC)
- Advanced Transportation Technology and Energy (ATTE)/training facilitators in each of the 13 CCC regions



Relevance

Objectives

- Eliminate barriers to the deployment of alternative fuel vehicles and infrastructure at California workplaces and in California fleets
- Link California Air Resources Board (ARB) Advanced Clean Car and Clean Fuels Outlet regulations and the California Energy Commission (CEC) Alternative and Renewable Fuel and Vehicle Technology Investment Plan with California's employers and fleets

Project Supports VTP Deployment Goals

- Support DOE's strategic goal of protecting the U.S. national and economic security by reducing imports and promoting a diverse supply of reliable, affordable, and environmentally sound energy.
 - By 2020, to achieve a petroleum reduction of over 2.5 billion gallons per year through voluntary adoption of alternative fuel vehicles and infrastructure.
- Ease market introduction of alternative fuels and new electric drive vehicle technologies through voluntary efforts in partnership with local communities
- Provide technical and educational assistance to support local communities and partnerships that promote better understanding of the benefits of these new technologies



Milestones

Task	Date
Year 1	
PEV Statewide Forums	June 2013
Statewide CEO Level Workshops	September 2013 & May 2014
Training Assessment and Report	December 2013
Go/No-Go Decision Point	January 2014
PEV Website	March 2014
Year 2	
PEV Total Cost of Ownership Calculator	March 2014
Hydrogen Website	March 2014
Best Practices for Hydrogen (Cities/Counties & Fleets)	April 2014
Best Practices for Natural Gas (Cities/Counties & Fleets)	April 2014
Best Practices Workshops	May 2014
Training	June 2014 - January 2015
One-on-One Assistance to Fleets 2015	June 2014 through January



Approach: Safety and Training Initiatives

Training Assessment

- Assess existing alternative fuels training offered in California
- Assess need for additional training

Assessment Report

- Conduct analysis and prepare draft on initial findings
- Deliver draft assessment to DOE
- Complete in-depth follow-up for fleets and first responders
- Develop recommendations with industry partners
- Prepare and deliver final assessment
- Engage with ATTEs and industry partners to distribute Report
- Incorporate findings in Best Practices

Additional Training

- Prepare training courses based on identified needs and deliver training course materials and strategies to DOE
- Conduct trainings and provide DOE with report on training



Approach: Barrier Reduction Initiatives

Statewide CEO Level Workshop

- Prepare RFP for workshop consultant and select consultant
- Establish logistics for workshops and invite attendees
- Conduct workshops and deliver report to DOE

PEV Statewide Forums

- Identify “early adopter” employers to work with and conduct 2-3 forums statewide
- Define list of top 6 policies and incentives needed for employees to adopt EVs
- Deliver draft report to DOE on forums and best incentives, receive input, and prepare final report to DOE

PEV Total Cost of Ownership

- Gather input for data and input into PEV calculator
- Receive input on test calculator, develop final calculator, and deliver to DOE

Best Practices Hydrogen and Natural Gas - Fleets

- Review existing “practices”
- Receive input from stakeholder
- Compile “Best Practices” toolkit

Best Practices Workshops – Fleets and local governments

- Develop logistics for workshops
- Invite attendees and provide agenda and logistics
- Conduct workshops/outreach to individual fleets and deliver reports to DOE



Approach: Policy Initiatives & Market Development/Outreach Initiatives

- **Policy Initiatives**

 - **Best Practices Hydrogen and Natural Gas - Cities/Counties**

 - Review existing “practices”
 - Compile “Best Practices” toolkit and deliver draft to DOE
 - Receive input from stakeholder
 - Prepare final draft of “Best Practices” toolkit and deliver to DOE

- **Market Development/Outreach Initiatives**

 - **PEV and Hydrogen Websites**

 - Develop mock-up of website and provide to DOE
 - Post final website and monitor site
 - Provide DOE with final website design

 - **Deliver Workshops to Fleets and local governments on best practices**

 - Develop logistics for workshops
 - Invite attendees and provide agenda and logistics
 - Conduct workshops and deliver report to DOE

 - **One-on-One Assistance to Fleets**

 - Conduct one-on-one assistance to fleets and report to DOE



Accomplishments: Safety & Training Initiative

Training Assessment Report

- Report meets Safety & Training Initiative project objective
- Report details availability of safety and technical training on alternative fuel vehicles for emergency personnel and transportation fleet staff
- First responder survey - 52% of respondents not offering training – lack of funding and time main barriers
- Fleet managers indicated training is not a barrier (however, training preferred with new vehicles and vehicles coming off warranty)
- Report provides recommendations for fleets, fleet training organizations and Clean Cities Coalitions





Accomplishments: Barrier Reduction - CEO Level Workshop

- Workshop held to meet barrier reduction initiative
- Workshop branded as Drive the Dream - led by PEV Collaborative
- Held in San Francisco and attended by Governor Jerry Brown and 40 Fortune 500 Executives
- Corporations committed to 2,033 chargers and 1,509 PEVs by September 2014.





Accomplishments: Barrier Reduction - CALSTART

- **Outreach Initiative:**

- Developed and launched the PEV Workplace Charging website in late September 2013, at www.evworkplace.org
- Website focuses on employer, company and fleet solutions to PEV adoption and charging.

- **Barrier Reduction:**

- Developed draft PEV Calculator for employers interested in installing workplace charging
- Estimates installation and operations cost

- **Barrier Reduction:**

- Conducted two meetings with employers (May 28 & June 25, 2013) interested in developing best policies and incentives for workplace charging.



Accomplishments: Barrier Reduction - SCAQMD

Barrier Reduction: California Fuel Cell Partnership prepared a draft of the Hydrogen Best Practices Guidelines on permitting and installation of hydrogen infrastructure.

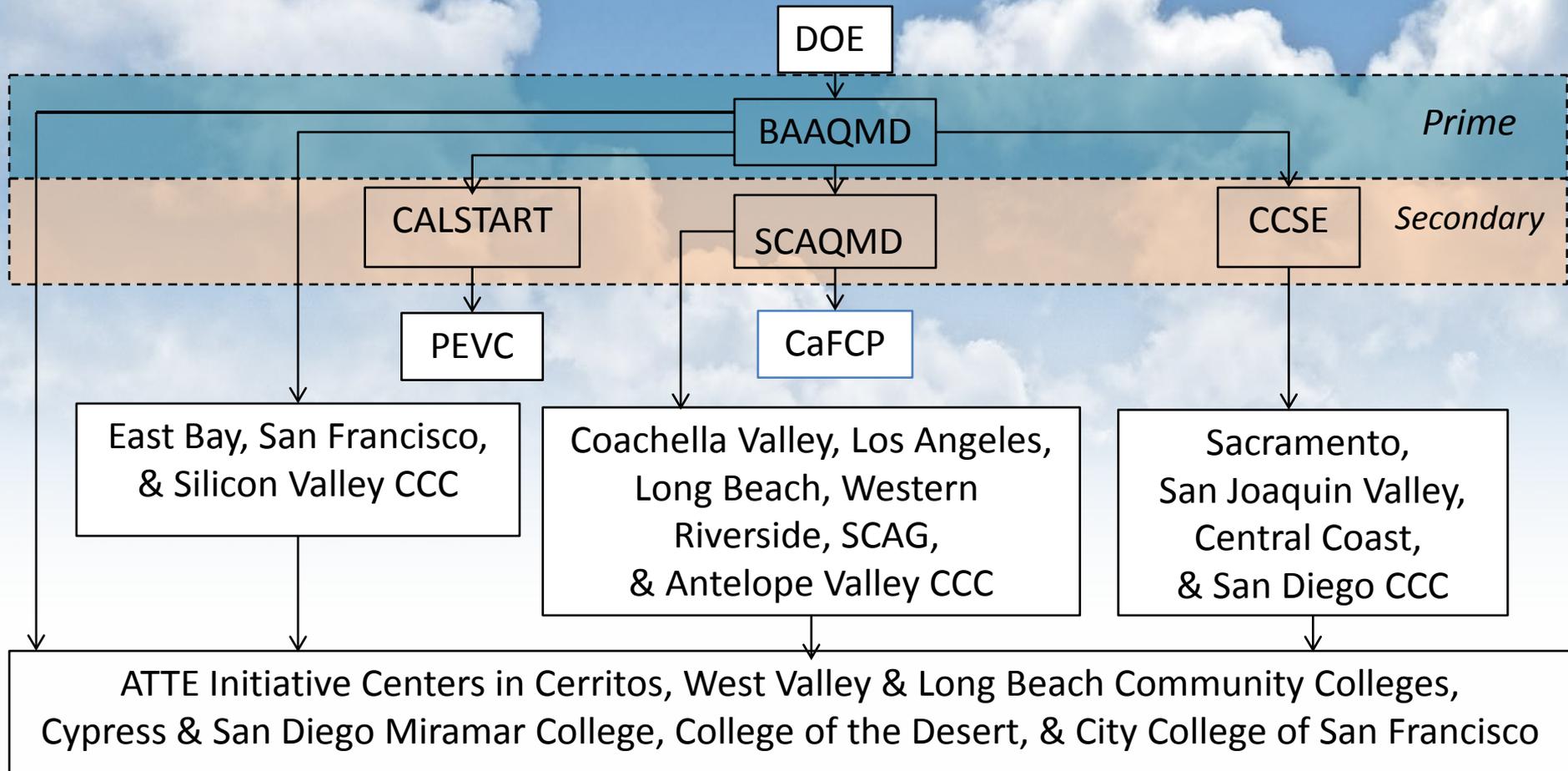
Barrier Reduction: SCAQMD subcontractors prepared a draft of the CNG/LNG Best Practices Guidelines

Barrier Reduction:

- Hosting ACT/Expo in Long Beach CA (May 5-8, 2014) to present the Best Practices Guidelines for Hydrogen, CNG/LNG, and PEVs
- PEVs Best Practices are not part of the DOE contract but have been developed separately by the BAAQMD under a separate contract



Collaboration and Coordination with Other Institutions



BAAQMD- Bay Area Air Quality Management District, SCAQMD – South Coast Air Quality Management District, PEVC – Plug-in Electric Vehicle Collaborative, CaFCP – CA Fuel Cell Partnership, CCSE – CA Center for Sustainable Energy, ATTE - Advanced Transportation Technology & Energy



Alternative Fuel Market Expansion Potential

Remaining Project Activities

- Finalize Hydrogen and CNG/LNG Best Practices
- Present Best Practices at ACT/Expo in May 2014 to local governments, fleet managers, and employers
- Following the release of the Best Practices, CCCs will receive a training workshop on the Best Practices and will in turn provide workshops to the local governments and fleets in their respective regions
- ATTEs, or other designated trainers, will use the information in the Best Practices Guidelines to train technicians and first responders in their respective regions
- One-on-one assistance for fleets from the CCCs will be ongoing upon release of the Best Practices and will continue through the end of the project and beyond



Summary

1. Safety and Training Initiatives:

- a. Training assessment and report completed December 2013
- b. Contracting with ATTEs to provide training to be completed in May 2014

2. Barrier Reduction Initiatives:

- a. Statewide CEO workshop held September 2013 – 2nd scheduled for May 2014
- b. Two PEV statewide forums held in May and June 2013
- c. PEV Total Cost of Ownership calculator is in final draft form
- d. Fleet Best Practices for Hydrogen, Natural Gas and PEV drafted - workshops in June 2014

3. Policy Initiatives: Local government Best Practices for Hydrogen, PEV & CNG/LNG drafted

4. Market Development/Outreach Initiatives:

- a. PEV website launched September 2013
- b. Hydrogen website under construction
- c. One-on-one assistance to fleets to commence June 2014