

Alternative Fuel Readiness



Patricia Kwon

Clean Fuels Retreat January 2015

Alternative Fuel Vehicles

Chevy Volt



Ford Focus Electric



Nissan Leaf

Mitsubishi iMiEV



Toyota RAV4-EV

Honda Fit EV



Tesla Model S



CNG Waste Truck

Chevy Spark EV



Fuel Cell Vehicles



PEV Readiness Planning

- DOE PEV readiness grant completed in 2013
\$1M statewide for six regions
 - Six regional plans
 - PEV Readiness Toolkit
 - Six regional workshops
- CEC PEV readiness grants \$200,000 for ten regions for sub-regional studies



PEV Readiness Plan Elements

- Created templates for local governments on permitting, inspection, building codes, and zoning
- Developed toolkit and workshop content to conduct PEV outreach
- Established criteria for site selection and pricing of public charging
- Identified challenge areas in PEV readiness

Southern California
Plug-in Electric Vehicle
Readiness Plan



Key Insights

- MUD and workplace charging offer greatest charging opportunities due to potential economies of scale
- Public charging often poorly sited to take advantage of low cost, high demand locations
- Planning reforms may be challenged by ability of local government staff to implement changes



CAPEVC Resources

- MUD charging resources
 - Guidelines and pamphlet
 - Residents guide
 - Property managers guide
- Workplace charging resources
 - Why employers should install charging
 - How employers can install charging
 - How employees can encourage charging
 - Best practices and case studies



Alt Fuel Planning & Analyses

- DOE alt fuels grant 2013-2015
- Alt fuels best practices guidelines
- Regional workshops
- CA PEVC, CaFCP working groups
- For fleet managers, employers



2013

ZEV Action Plan

A roadmap toward 1.5 million zero-emission vehicles
on California roadways by 2025



Governor's Interagency Working Group on
Zero-emission Vehicles

Governor Edmund G. Brown Jr.
February 2013





9 open
stations

19 in
process

27 funded

California Fuel Cell Partnership
www.caftp.org/stationmap



Hydrogen Ready Communities

- Identify FCV infrastructure needs in the community
- Ensure local policies and general plan updates for battery vehicles extend to FCEVs
- Extend existing EV readiness plans and partnerships to include FCEVs and hydrogen
- Examine zoning codes to see if conditional use permit required
- Consider h2 stations as option for density bonuses



Planning and Permitting

- Review local zoning codes
- Understand technology certifications
- Understand h2 codes and standards
- Understand CEQA and CalARP applicability
- Know standard vehicle signage



CNG/LNG Best Practices

- Determine fuel and infrastructure needs
- Ownership and financing models
- Resources available to project return on investment
- Resources for station design
- Applicable codes and permitting



Other Issues

- Using most current codes & standards
- Many local jurisdictions don't update their requirements
- Make permit conditional on required O&M
- Need accurate and reliable approved dispenser
- Redundancy for failure detection, fault notification





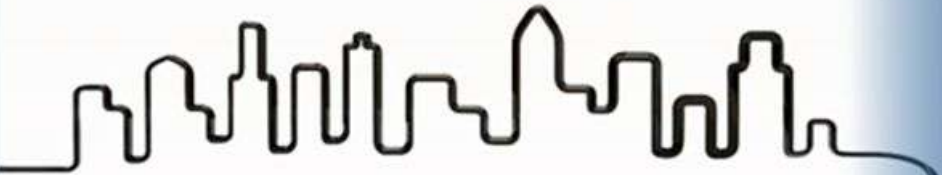
ACT 2014
ALTERNATIVE CLEAN TRANSPORTATION
COLLOCATED WITH **NEW GLOBAL 2014**

Alternative Fuel Toolkit Workshop

PRESENTED BY



South Coast
AQMD



**A Toolkit for
Community Plug-In Electric Vehicle Readiness**

