

Expanding EV Market Access in Disadvantaged Communities

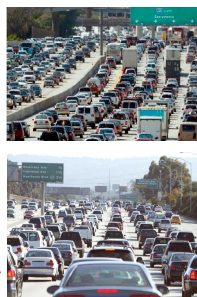

Behavior Energy & Climate Change Conference (BECC 2015)

October 19, 2015
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Introduction


- 4 of 10 Californian's are subject to increased health risks.
- Transportation is California's largest source of Green House Gas (GHG) emissions
- Negative effects disproportionately concentrated in low-income, disadvantaged communities (DAC)
- Electric Vehicle (EV) mass adoption is the long term goal
- Need mechanisms, opportunities to encourage the 99% to adopt cleaner transportation options


Center for Sustainable Energy (CSE)




Building Performance




Clean Transportation




Distributed Generation




Energy Efficiency



Energy Storage



Renewable Energy



CSE Electric Vehicle Activities



CLEAN VEHICLE REBATE PROJECT

MOR-EV **CHEAPR**

Incentives Design & Administration



Consumer & Dealer Outreach



Stakeholder Engagement



Fleet Assistance & Clean Cities



PEV, Alt-Fuel, & ZEV Planning & Implementation



2nd Life Battery Research & Vehicle-Grid Integration




Outline

1. Summary of Legislative Directives
2. The EV Market
3. Response: Equity Initiatives & Programs
4. Lessons learned




Legislative Background

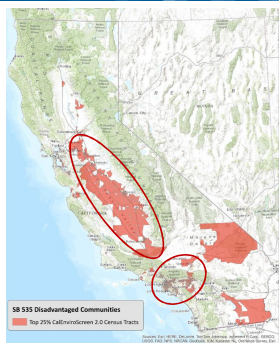
- **AB 32:** CA Global Warming Solutions Act (2006)
 - Codified a mandate to reduce California's greenhouse gas emissions to 1990 levels by 2020.
 - Established a Cap & Trade program
 - Established the Green House Gas Reduction Fund (GGRF)
 - Money to be reinvested in communities
- **SB 535:** Disadvantaged Community Investment Plan (2012)
 - Required methodology to identify DACs
 - Set target for GGRF funds to benefit DACs
 - Set ground rules for agencies working in DACs
- **SB 1275:** Charge Ahead California Initiative (2014)
 - One million EVs on the road by 2023, and ensure low-income communities have access to and direct benefits from EVs.
 - Directs ARB to establish an income criteria for electric car rebates and to create equity programs
 - EFMP Plus-Up Pilot Program




Identifying Disadvantaged Communities

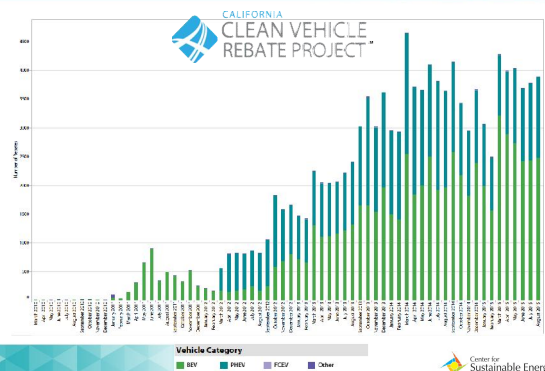
- Cal Enviro Screen Scoring Tool (CES)
 - Combined measure of exposure & pollution factors and socio demographic indicators of at risk communities
 - 20 total factors
 - Pollution & Environmental Factors:
 - Solid Waste Facilities
 - Traffic Density
 - Ozone Concentration
 - Population Characteristics
 - Poverty
 - Unemployment
- Census Tracts in Top 25% percentile of CES index classified as disadvantaged

Source: Office of Environmental Health Hazard Assessment
<http://oehha.ca.gov/ces2.html>



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Clean Vehicle Adoption through CVRP

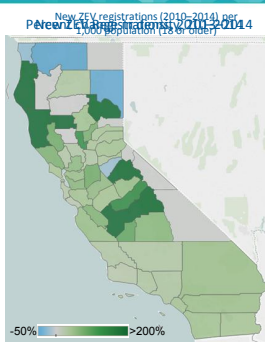


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Where are ZEVs Located? (By County)

Highest volume counties:

1. Los Angeles
2. Santa Clara
3. Orange
4. San Diego
5. Alameda



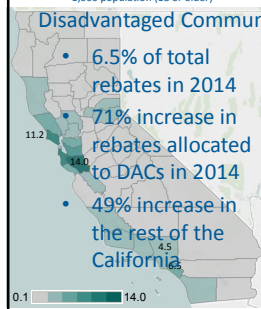
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Where are ZEVs Located? (Percent Change)

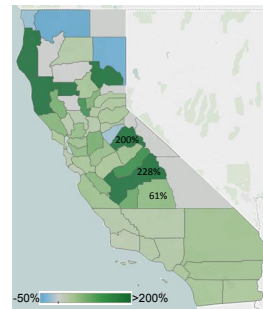
New ZEV registrations (2010-2014) per 1,000 population (18 or older)

Disadvantaged Communities

- 6.5% of total rebates in 2014
- 71% increase in rebates allocated to DACs in 2014
- 49% increase in the rest of the California



Percent change in density, 2014



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CVRP Equity Team

Goal: Increase awareness of CVRP and other complementary clean transportation programs

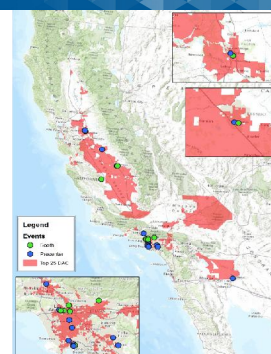
- ✓ Dedicated outreach efforts with partners in DACs:
 - Air Districts
 - Community-Based Organizations
 - ARB Pilot Project administrators
- ✓ Multi-lingual access
- ✓ Equity-focused data transparency



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CVRP Equity Team: Outreach

- 25 events in 2015
- 700+ attendees
 - Khmer Health Forum
 - LA Koreatown Festival
 - MacArthur Park Resource Fair



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EFMP-Plus Up Participants



The left photograph shows a group of approximately 15 people, including children and adults, standing behind a podium. The podium features the EFMP-Plus Up logo, which is a circular seal with the text "EFMP-Plus Up" and "U.S. DEPARTMENT OF ENERGY". The group is posed for a photo in front of a building with classical architecture.

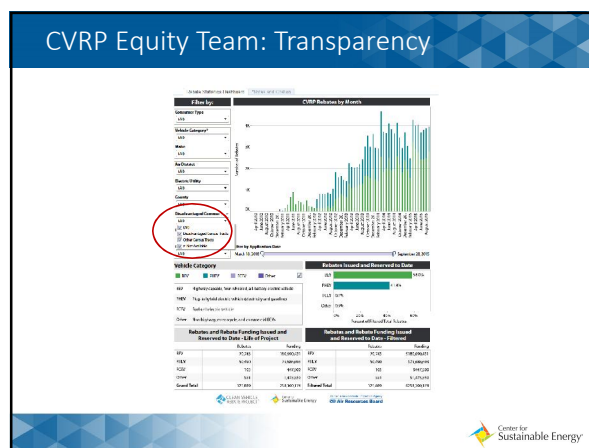
The right photograph shows a man in a pink shirt and khaki pants standing next to a dark blue car. He is gesturing with his arms outstretched towards the car. The car is parked on a street with other vehicles and buildings in the background.



3

CVRP Equity Team: Multi-lingual

CVRP Equity Team: Transparency



Lessons Learned



- CVRP alone may not be enough to incentivize adoption equally in all areas of the state
- Messaging & delivery essential
- Coordination of complementary programs is key

Thank You

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We work nationally in the clean energy industry and are always open to exploring partnership opportunities.