



SACEV GENERAL MEETING



July 8, 2015

- 6:00 Introduction
- 6:10 News
 - Market update; Airport and Sac County Update; Utility Update
- 6:20 Change in CA EV purchase incentives (Grace Garcia)
- 6:25 Truckee Donner EV Support Planning (Steven Poncet)
- 6:45 CEC on Integrated Energy Policy (Leslie Baroody)
- 7:10 Close - Mixer with speakers and members

Thanks to our host,
Nissan Motors



Thanks to Eugen
Dunlap for Recording



Thanks to Gold Star
Mortgage for refreshments





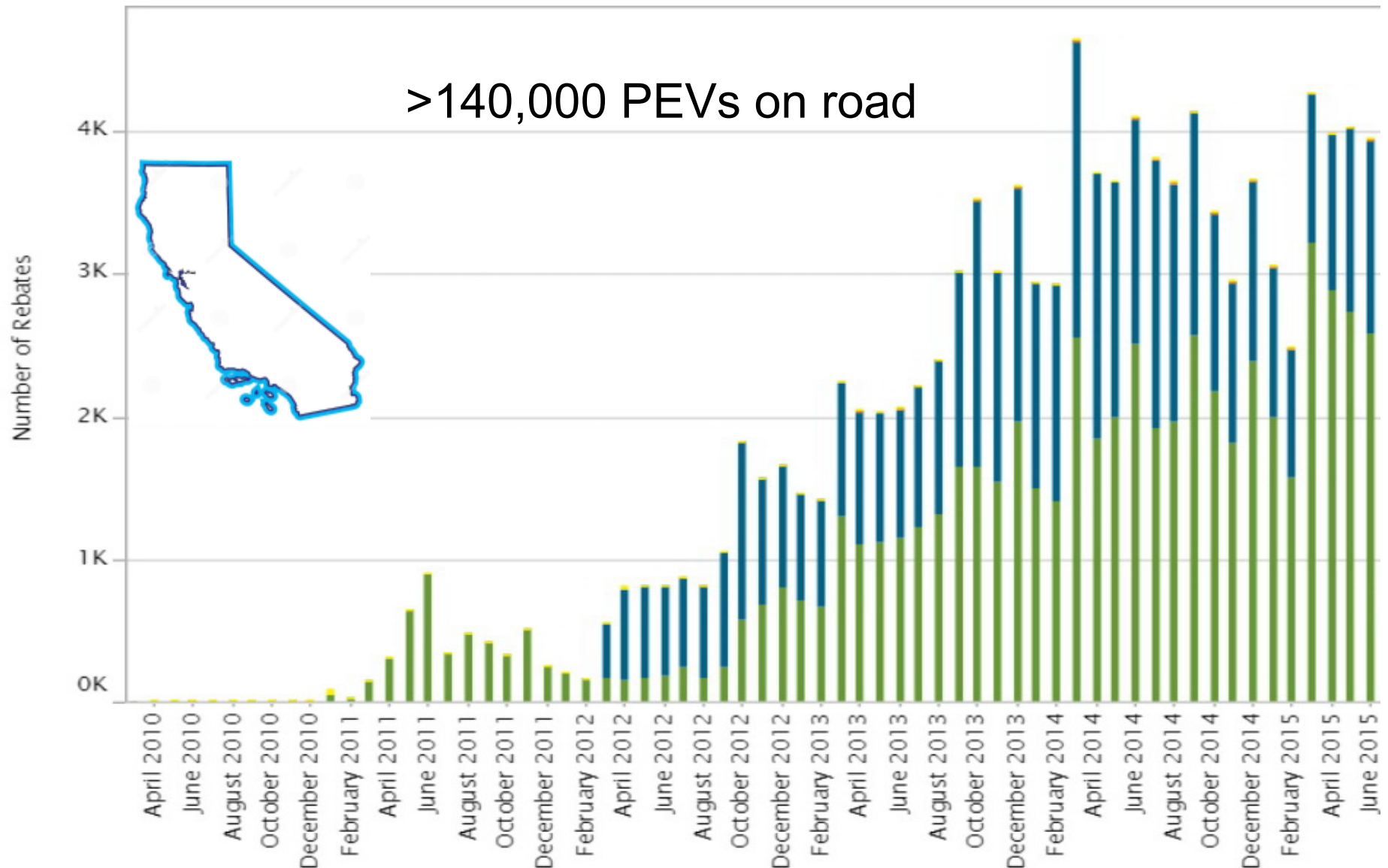
NEW MEMBERS?



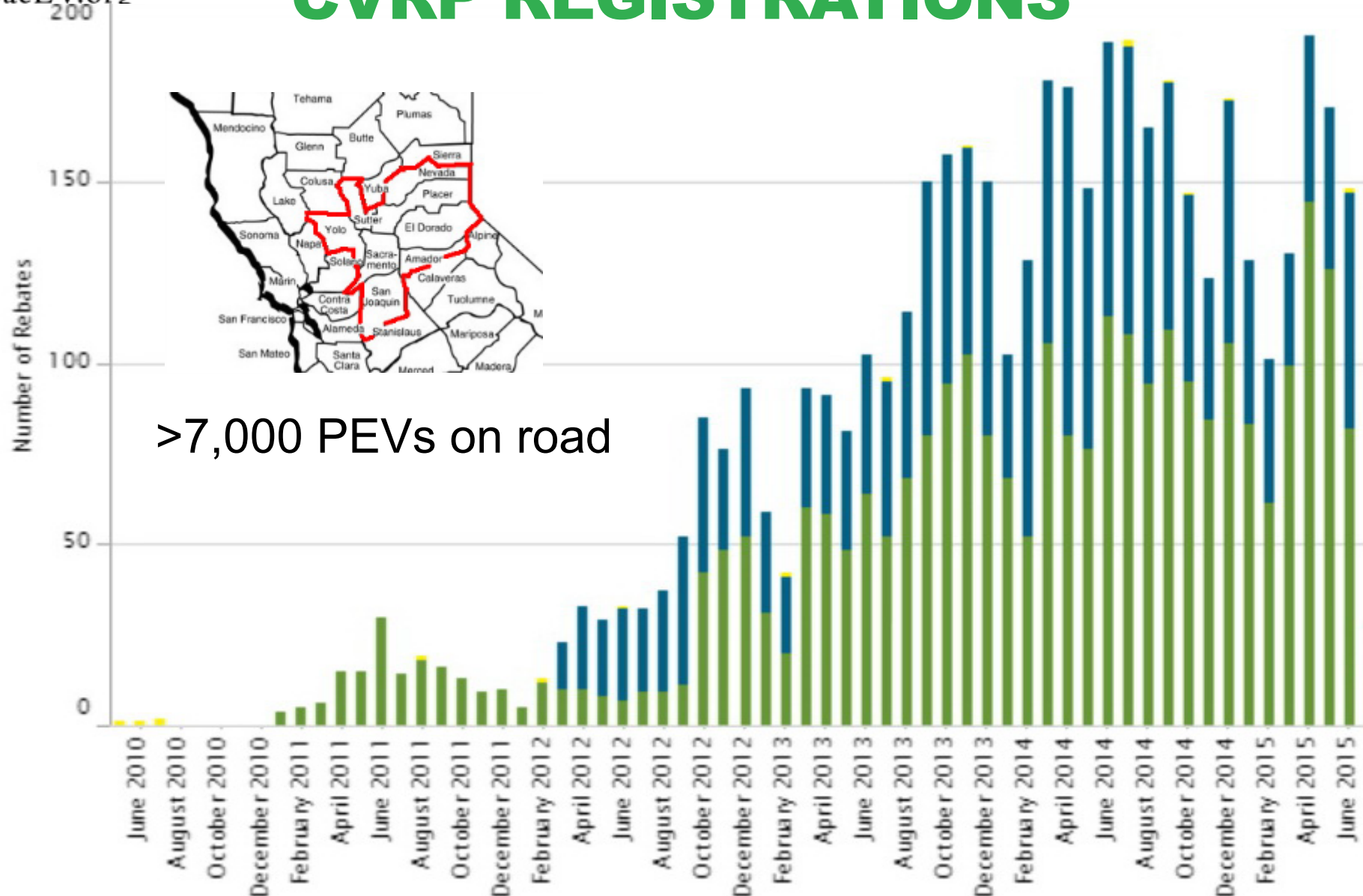
July 8, 2015



CALIFORNIA CVRP REGISTRATIONS



SACRAMENTO REGION CVRP REGISTRATIONS





UTILITY UPDATE

July 8, 2015



- Non-EV Rate users: Sign up for EV Whole House pricing plan and enter to win 1 or 4 Clipper Creek L2 charging station.
 - Issues with the DCFC CC readers – need weekly cleaning. Call with CC number if necessary.
-



- Submitted request for 23,000 chargers to CPUC. Expect to hear back next week on a hearing schedule.
-



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- Convert Paddle chargers in El Dorado Hills Park and Ride in town center to J1772
- Tesla investigating 6 super chargers in Placerville



- Supervisor Phil Serna Sponsorship
- Second Meeting last week
- Sacramento County Zoning Code support
- Increase EV adoption and infrastructure (incentives to fleet conversion.)



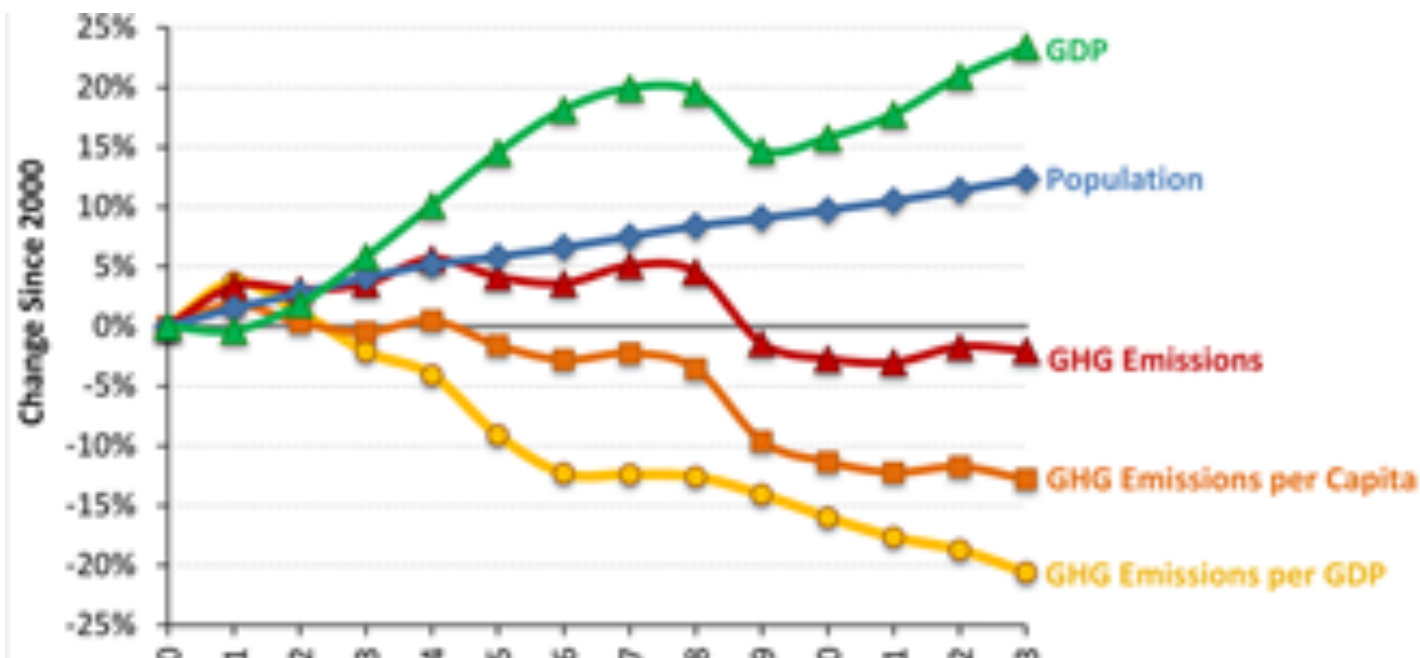
Lloyd Levine



- SacEV met with SMF reps
- Recommendations presented to the airport's executives and they are waiting for a response



Randal Freedman



Clean Vehicle Rebate Project

Grace Garcia, Program Manager



Truckee Donner Public Utility District

SacEV Meeting

July 8, 2015

Steven Poncet

PEV's and the Truckee Donner PUD

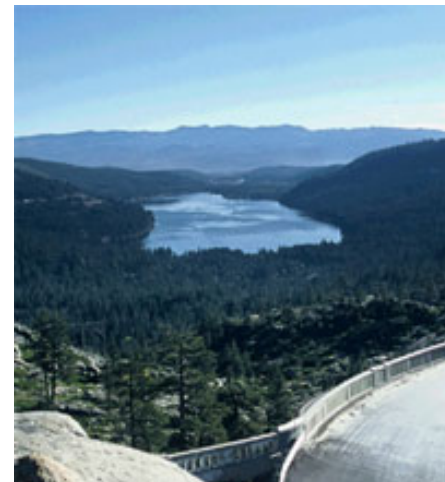




Truckee Donner Public Utility District

Truckee Donner PUD:

- Established in 1927
- ~14,000 customers, ~88 % residential
- Locally elected Board of Directors
 - 5 Directors
 - 4-year terms, staggered
- Electric and water utility
 - Serving greater Truckee area
 - Including portions of Placer County





Truckee Donner Public Utility District

TDPUD Positioned to be Electric Supplier of Choice:

- Transitioning to renewable energy sources
 - Customer driven
 - Legislative/regulatory requirements
 - Carbon benefits
 - Managing uncertainty
- Renewable Portfolio Standard (RPS) set by State (33% by 2020)
 - District achieved RPS of 52% in 2014
 - Fully resourced for 2020 mandate and beyond
- What's next?





Truckee Donner Public Utility District

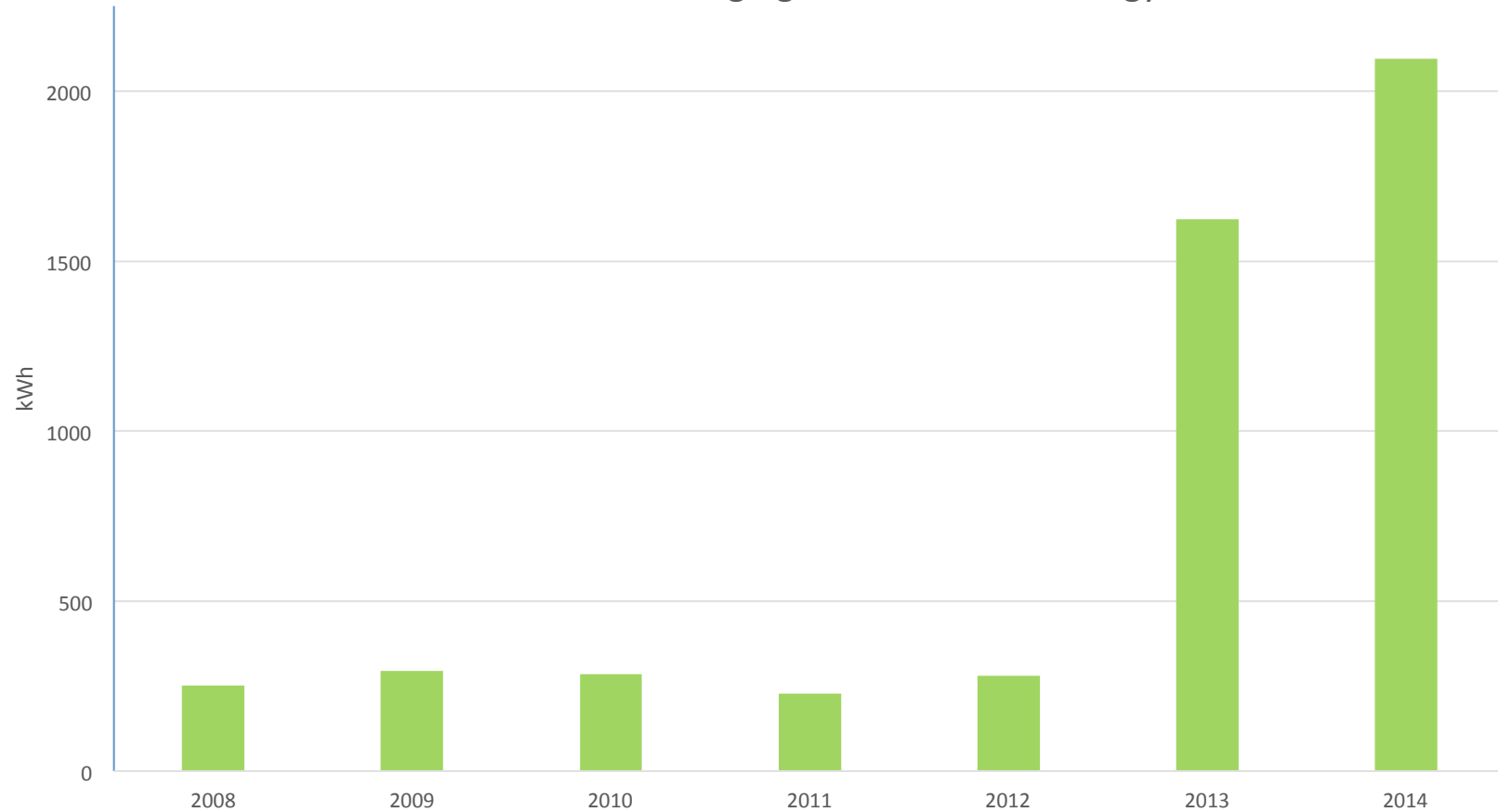
TDPUD Has Been Evaluating Emergence of PEV's

- Impacts to Electric Utility
 - Load
 - Utility distribution system
 - Opportunity to provide PEV public access charging
- TDPUD has been operating one Level 2 'Clipper Creek' station since 2007
- TDPUD purchased PEV to test in fleet
- Working on pilot installations and business case for PEV public access charging



Discussion Regarding PEV Public Access Charging

Meadow Park PEV Charging Station Annual Energy Use

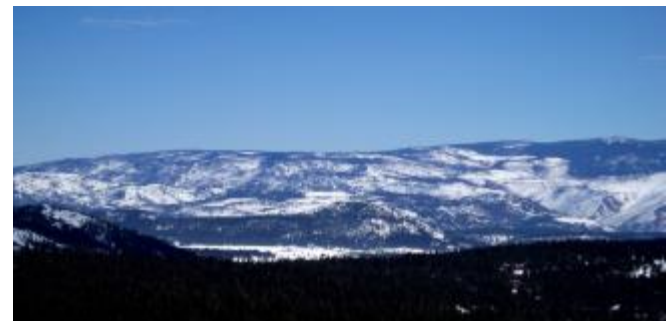




Truckee Donner Public Utility District

Truckee & PEV's

- Truckee is uniquely positioned for PEV's
 - Major stop on the I-80 Corridor
 - Iconic destination
 - >60% second homes (Bay Area & Sacto)
 - Gateway to Lake Tahoe and Northern Sierra
- Truckee-Tahoe Region has been overlooked
 - Hard for small/rural regions to compete for funds
 - Need AWD PEV's
 - Only Tesla's have adequate range





Truckee Donner Public Utility District

Current Opportunities for PEV's in Truckee

- Tahoe Truckee PEV Readiness Planning Grant
 - \$200K from CEC
 - Awarded Spring, 2015
- Significant private investment
 - Tesla
 - Ski resorts, hotels, home
- TDPUD PEV public access charging





Truckee Donner Public Utility District

Truckee Donner PUD:

- PEV Public Access Charging
 - 1-2 locations this Summer
 - Latest technology
 - Monetized
 - Generate additional operational and financial experience
 - Start with Level 2 chargers
 - Leverage joint-action, competitive procurements, and standardization
 - Positions the District for upcoming CEC grants





Truckee Donner Public Utility District

Leveraging Partnerships!

- Publically-Owned Utilities (POU's) Leading Effort for PEV public access charging
 - SMUD, LADWP, Burbank, Silicon Valley, etc.
 - CMUA's Electric Transportation Committee
 - Leveraging resources and joint-action
- California Energy Commission & Other Funders
 - Planning grants
 - Infrastructure grants
- Industry and Non-Profits
- Don't forget the Investor-Owned Utilities (IOU's)!
- Stronger together than alone...





Truckee Donner Public Utility District

Questions?

Steven Poncelet

Truckee Donner PUD

stevenponcelet@tdpud.org

530-582-3951



C A L I F O R N I A E N E R G Y C O M M I S S I O N

California Energy Commission Support for Adoption of Plug-In Electric Vehicles in California

SacEV Meeting
Nissan Fuel Cell Research Facility
West Sacramento, CA
July 8, 2015

Leslie Baroody
Emerging Fuels and Technologies Office
Fuels and Transportation Division
Leslie.Baroody@energy.ca.gov/916-654-4417



Assembly Bill 8 (Perea, Chapter 401, Statutes of 2013)

Assembly Bill No. 8

CHAPTER 401

An act to amend Sections 41081, 44060.5, 44125, 44225, 44229, 44270.3, 44271, 44272, 44273, 44274, 44275, 44280, 44281, 44282, 44283, 44287, 44299.1, and 44299.2 of, to add and repeal Section 43018.9 of, and to repeal Section 44299 of, the Health and Safety Code, to amend Sections 42885 and 42889 of the Public Resources Code, and to amend Sections 9250.1, 9250.2, 9261.1, and 9853.6 of the Vehicle Code, relating to vehicular air pollution, and declaring the urgency thereof, to take effect immediately.

[Approved by Governor September 28, 2013. Filed with
Secretary of State September 28, 2013.]

LEGISLATIVE COUNSEL'S DIGEST

AB 8, Perea. Alternative fuel and vehicle technologies: funding programs.
(1) Existing law establishes the Alternative and Renewable Fuel and Vehicle Technology Program, administered by the State Energy Resources Conservation and Development Commission, to provide to specified entities, upon appropriation by the Legislature, grants, loans, loan guarantees, revolving loans, or other appropriate measures, for the development and deployment of innovative technologies that would transform California's fuel and vehicle types to help attain the state's climate change goals. Existing law specifies that only certain projects or programs are eligible for funding, including block grants administered by public entities or not-for-profit technology entities for multiple projects, education and program promotion within California, and development of alternative and renewable fuel and vehicle technology centers. Existing law requires the commission to develop and adopt an investment plan to determine priorities and opportunities for the program. Existing law also creates the Air Quality Improvement Program, administered by the State Air Resources Board, to fund air quality improvement projects related to fuel and vehicle technologies.

This bill would provide that the state board has no authority to enforce any element of its existing clean fuels outlet regulation or other regulation that requires or has the effect of requiring any supplier, as defined, to construct, operate, or provide funding for the construction or operation of any publicly available hydrogen-fueling station. The bill would require the state board to aggregate and make available to the public, no later than June 30, 2014, and every year thereafter, the number of hydrogen-fueled vehicles that motor vehicle manufacturers project to be sold or leased over the next 3 years, as reported to the state board, and the number of hydrogen-fueled vehicles registered with the Department of Motor Vehicles through April 30. The bill would require the commission to allocate \$20 million annually, as specified, until there are at least 100 publicly available hydrogen-fueling

- Extends ARFVTP funding through January 1, 2024
✓ \$100 million per year
- To transform California's transportation market into a diverse collection of alternative fuels and technologies and reduce California's dependence on petroleum.
“...develop and deploy innovative technologies that transform California’s fuel and vehicle types to help attain the state’s climate change policies.” (Health and Safety Code Section 44272(a))

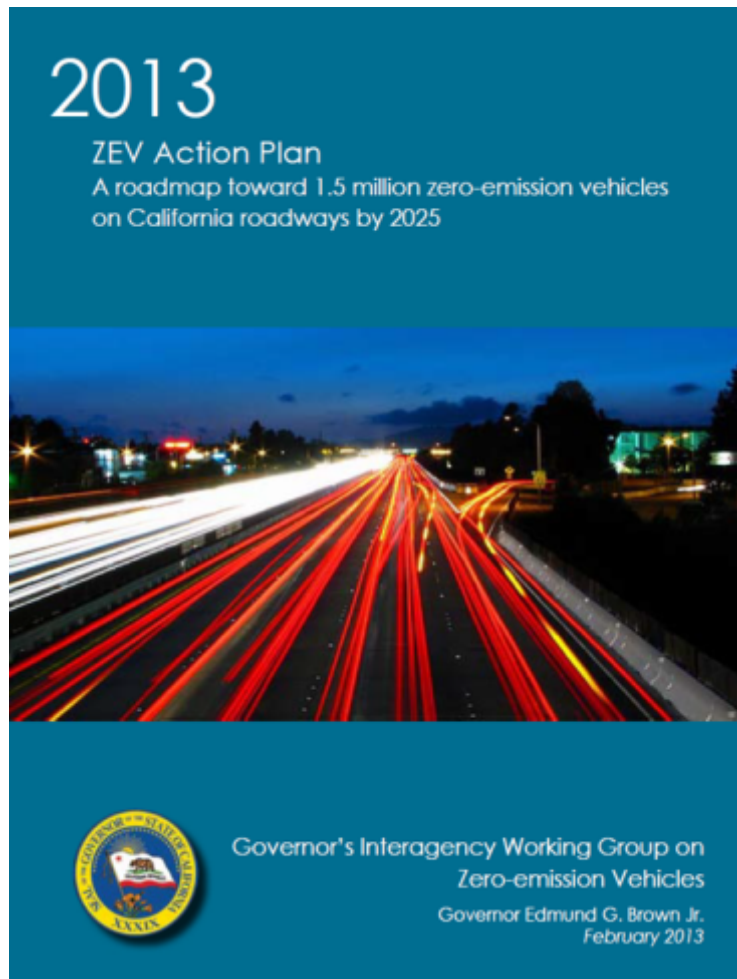


Key Policies and Regulations

Policy Objectives	Policy Origin	Goals and Milestones
Greenhouse Gas Reduction	AB 32, Executive Order S-3-05, LCFS Executive Order B-30-15	Reduce greenhouse gas emissions to 1990 levels by 2020, 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050 in California
Petroleum Reduction	Governor's State of the State Speech	Governor's new target of 50% reduction for cars and trucks by 2030
Low Carbon Fuel Standard	AB 32, California Global Warming Solutions Act	10% reduction in carbon intensity of transportation fuels in California by 2020
Federal Renewable Fuel Standard	Energy Policy Act of 2005, Energy Independence and Security Act of 2007	36 billion gallons of renewable fuel by 2022
Air Quality	Clean Air Act	80% reduction in NOx from current levels by 2023
ZEV Mandate	California Executive Order B-16-2012	Accommodate 1 million EVs by 2020 and 1.5 million by 2025 in California



2013 ZEV Action Plan EV Infrastructure Related Goals



By **2015**: the State's major metropolitan areas will be able to accommodate ZEVs through infrastructure plans and streamlined permitting

By **2020**: the State's ZEV infrastructure will be able to support up to 1 million vehicles

By **2025**: Over 1.5 million ZEVs will be on California roadways and their market share will be expanding. Californians will also have easy access to ZEV infrastructure.



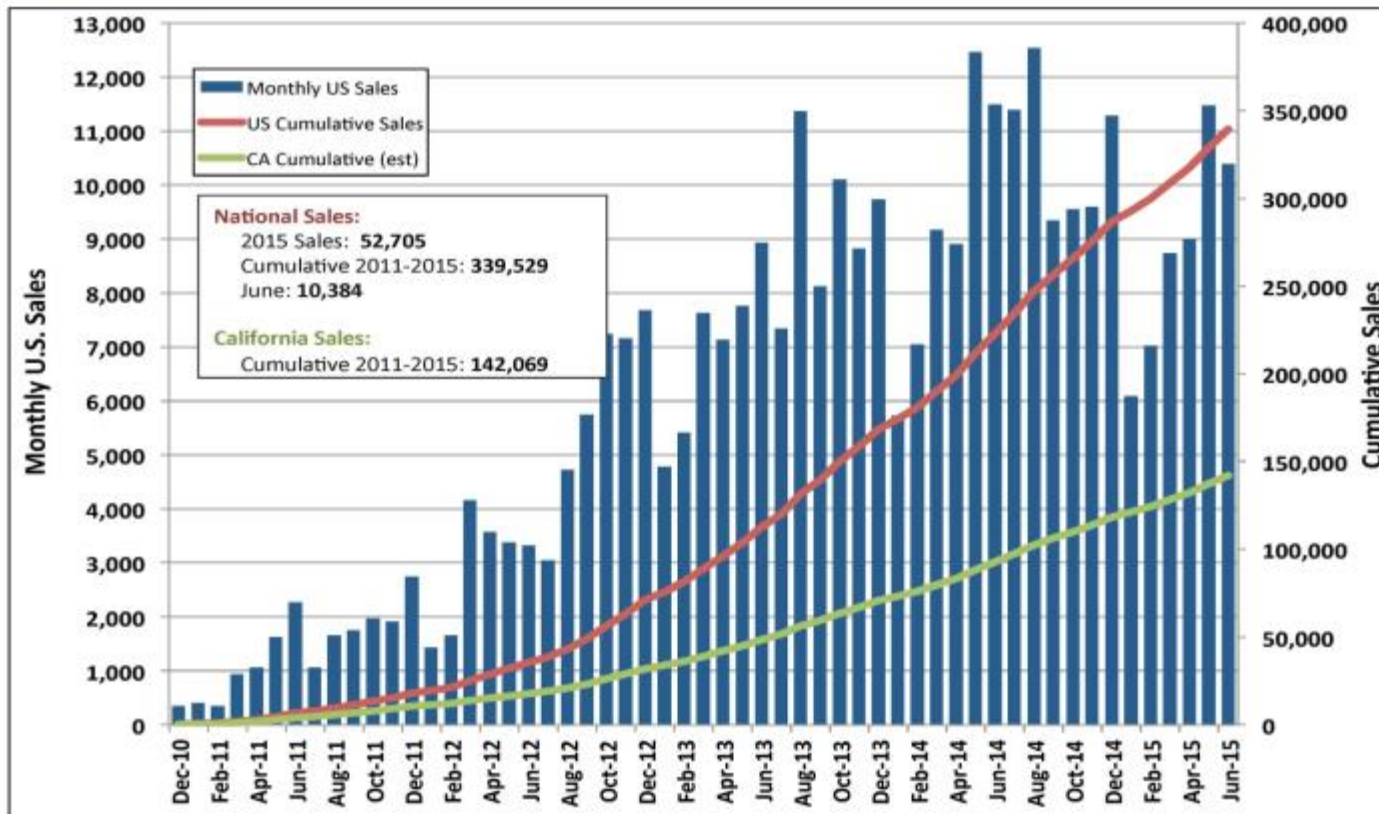
ARFVTP Funding Summary: 2009-2015

Investment Areas	Funding Amount (in millions)	Percent of Total (%)	Number of Awards
Biofuels	\$157	27	56
Electric Drive	\$193	33	150
Natural Gas	\$97	17	182
Hydrogen	\$99	17	33
Workforce Development	\$25	4	55
Market & Program Develop.	\$13	2	16
Total	\$584	100	492



CALIFORNIA ENERGY COMMISSION

June 2015 PEV Sales



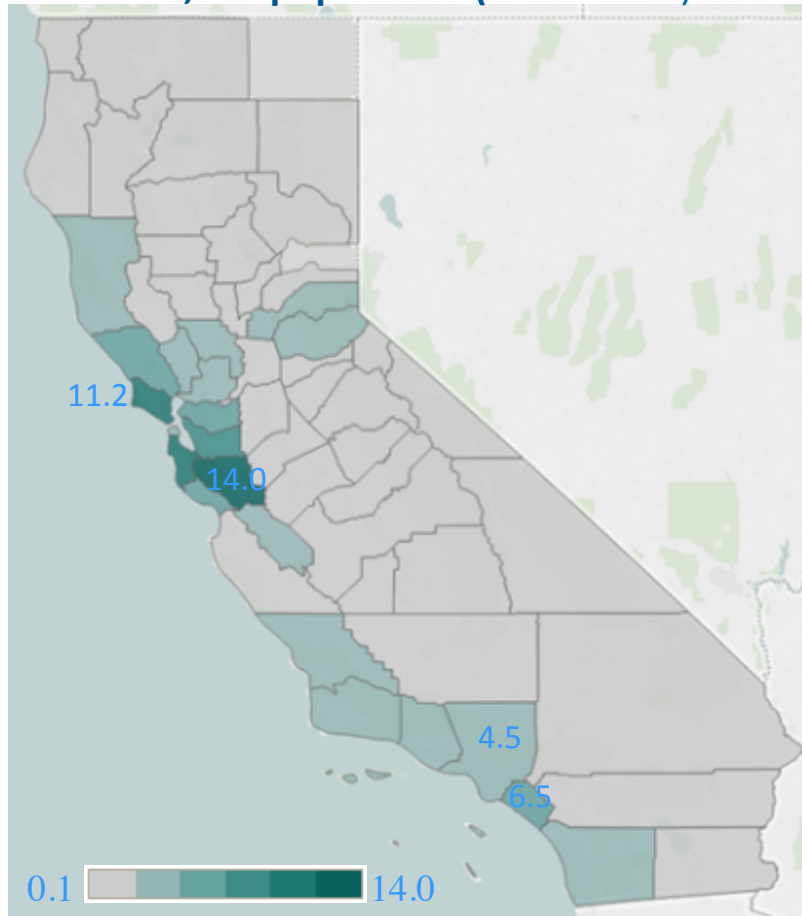
Note: Approximation assumes CA sales are 45% of national sales.
Reference: www.hybridcars.com

7/6/2015

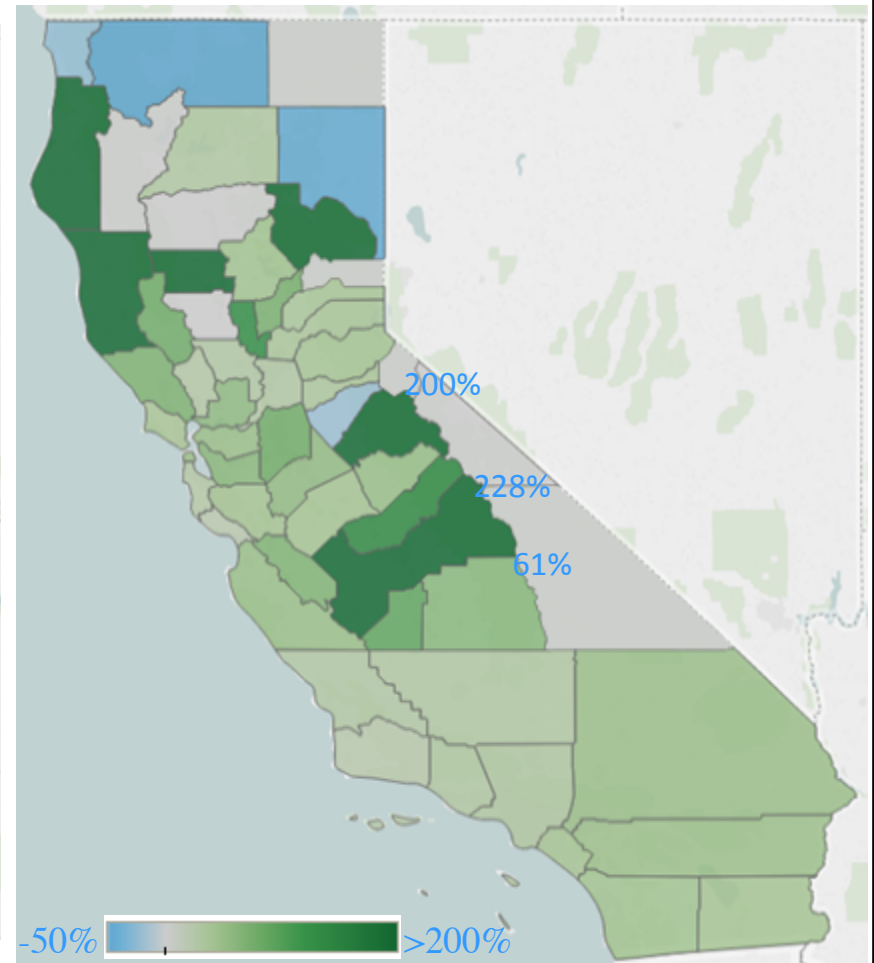


Where are ZEVs Located?

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



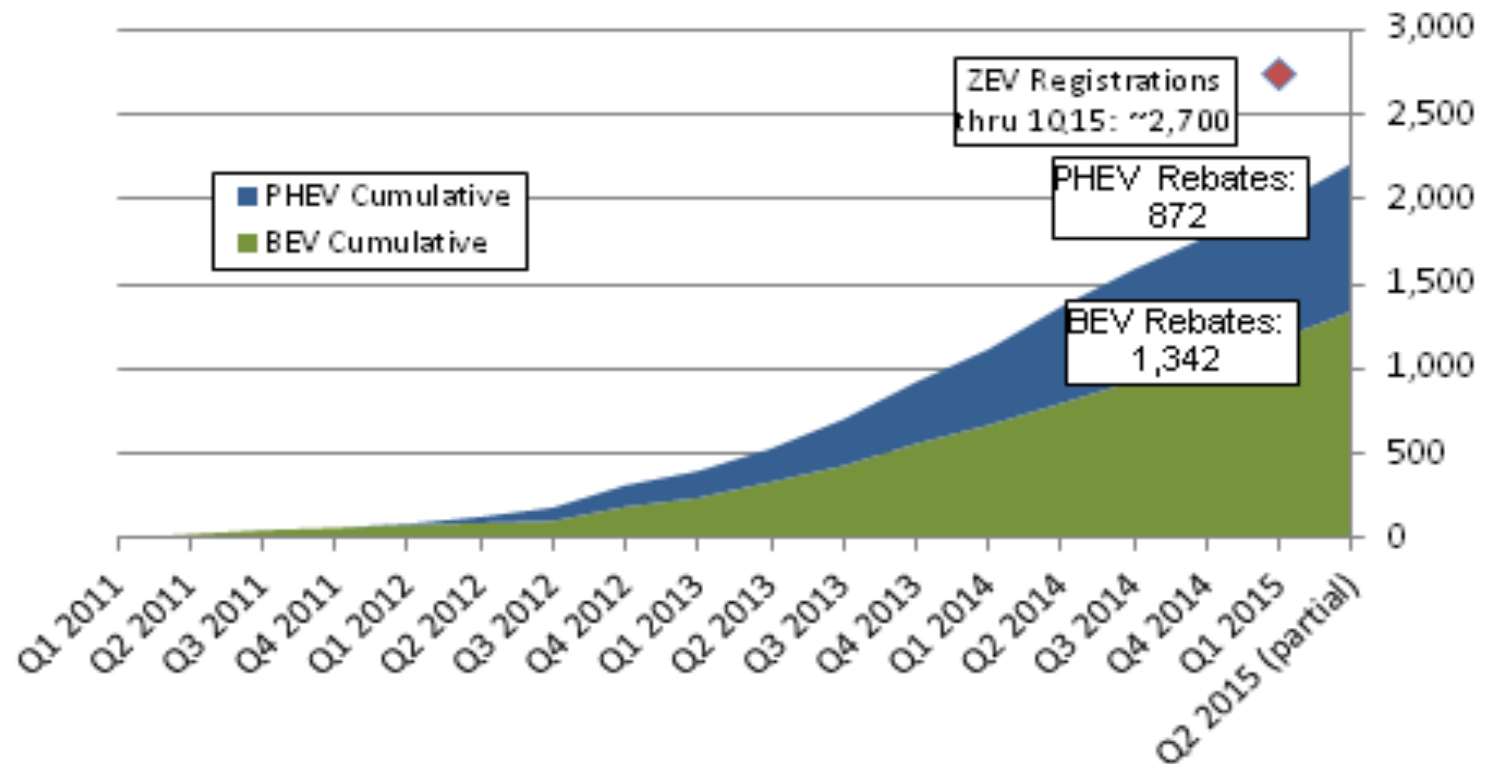
Percent change in density, 2013–2014





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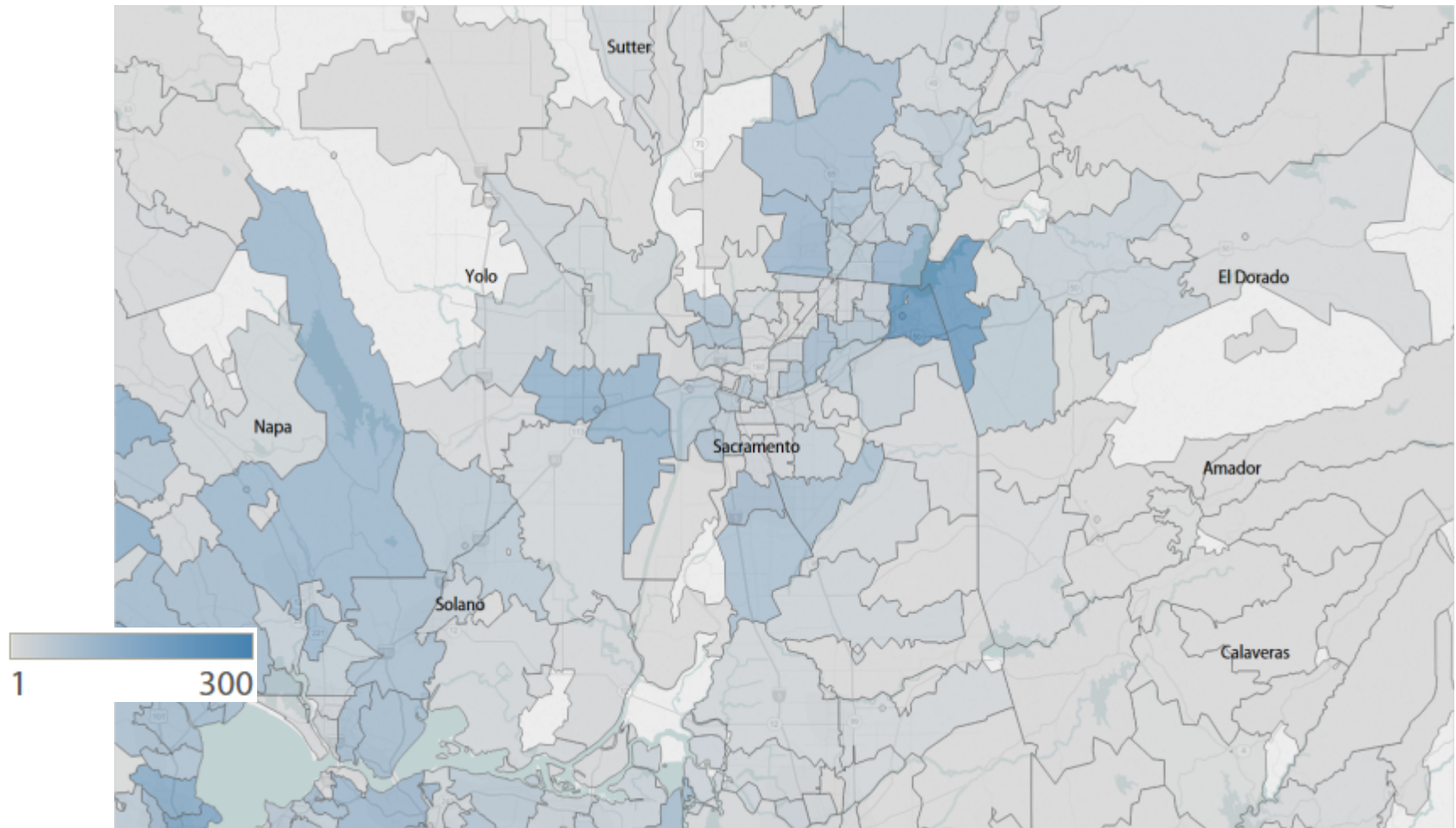
Cumulative Sacramento County CVRP Rebates





CALIFORNIA ENERGY COMMISSION

Sacramento County CVRP Rebates by Zip





If you build it, they will come...

to California....

7,200 public charging
outlets and 253 DC
Fast Chargers

11 Regional PEV
Readiness Plans

142,000

PEVs

24 models+



CEC Electric Vehicle Support

\$38.7 Million for:
Total chargers= ~7,624

- Residential = 4,175
(MUDs: 239)
- Commercial = 2,797
- Workplace* = 718
- Fleets = 133
- DC Fast Chargers = 120

*219 workplace chargers overlap with commercial

**\$4.65 M for 19 Regional
PEV Readiness Planning
Grants**

Total CVRP Support:
= \$49 million
Over 21,000 vouchers





CEC Charging Infrastructure Investments in the Sacramento Region

Category	Level 1	Level 2	DC Fast Chargers	TOTALS
Fleet		52		52
Residential		199		199
Workplace		3		3
Public	10	246	3	259
TOTALs	10	500	3	513

Note: Number of chargers in 6 county
region representing 12 projects for \$2.15
million



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Sacramento State Garage EVSE Installation 9 L2 Chargepoint Chargers



Scripps Institute of Oceanography, UC San Diego AES L2 Charger



CEC Charging Infrastructure Investment PON-13-606

- \$13.67 million for Workplaces, Corridors, Destinations, Multi-Unit Dwellings
- 91 DC Fast Chargers
- 937 Charge Points
- Required to coordinate with PEV Readiness Plans



DC Fast Charger recently installed
at Fresno State University



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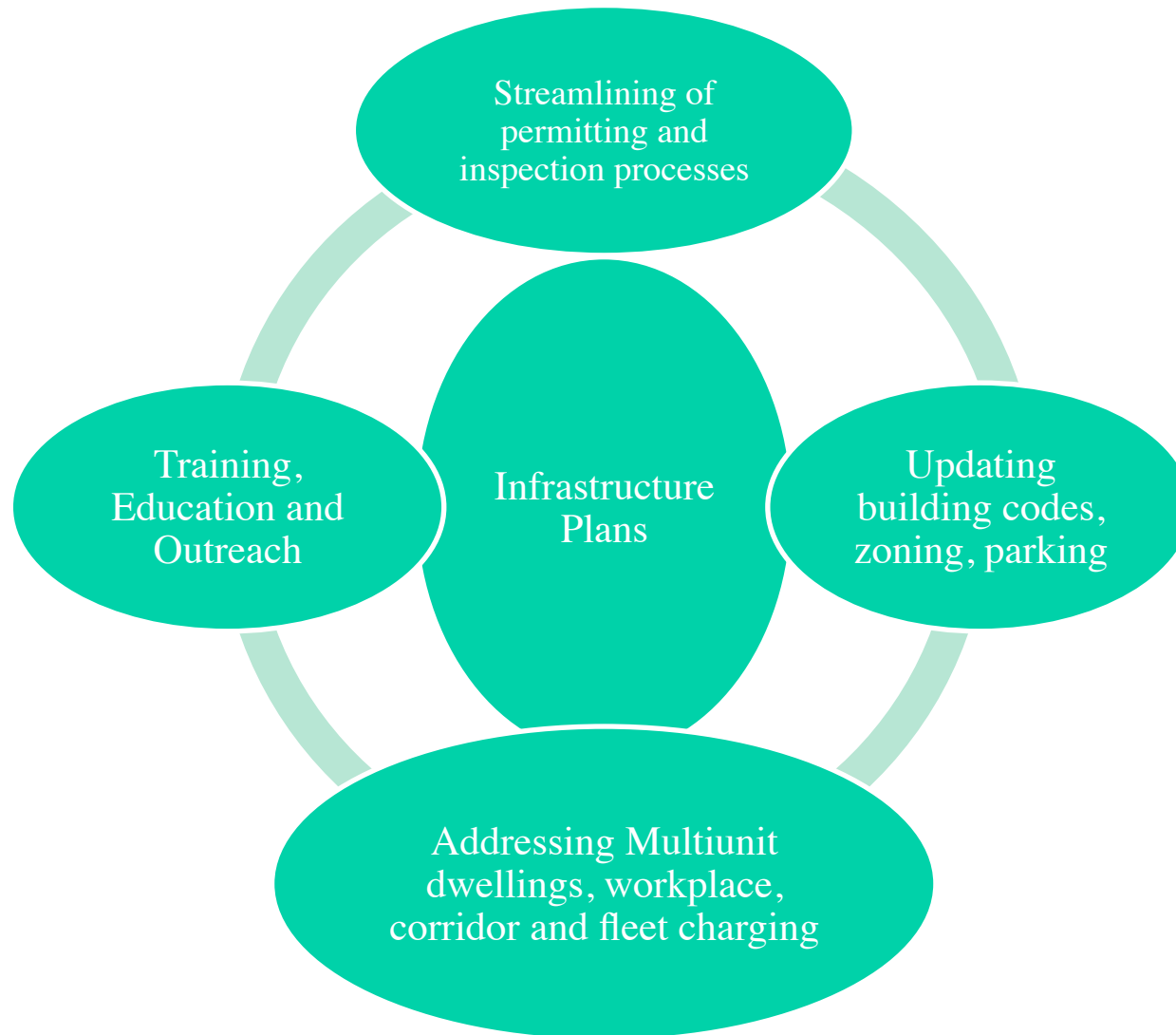


Energy Commission Regional Readiness and ZEV Implementation Solicitations

- PON-10-602:** Established 10 Regional PEV Readiness Plans for \$2M
- PON-13-603:** Awarded 8 Alternative Fuels Readiness Plans for \$2.27M (7 PEV-related plans for \$1.67M)
- PON-14-603:** Awarded 8 ZEV Implementation Projects for \$2.03M (\$1.67M PEV-related)
- PON-14-607:** Awarded 5 PEV Implementation Projects, 2 regional ZEV projects for \$1.375M (\$1.206M PEV-related)



Regional PEV Readiness





PEV Implementation Activities

- Permitting and Inspection Process
- EVCS Installation Process
- PEV Signage
- PEV Awareness
- Local Government Code Adoption and Training



2014 Integrated Policy Report: Next Steps

- Continued support of regional PEV readiness plans
- Development of solicitations to promote low cost/high benefit charging infrastructure for consumers
- Develop DC Fast Charger Corridor gaps analysis and strategy
- Develop strategies to: 1) remove barriers to multi-unit dwellings and workplace charging deployment, 2) address charging congestion in metro areas, and 3) increase PEV driver range confidence and electric miles driven
- Refine assumptions in NREL Statewide PEV Infrastructure Assessment



Investor-Owned Utility Proposals

	SDG&E	SCE	PG&E
Charge Points	5,550 L1/L2 550 facilities with average of 10 L1/L2 chargers (VGI enabled) at each site	30,000 L1/L2 Phase 1: One year pilot for 1,500 chargers followed by second phase over 4 years for 30,000 total. 10 charger minimum/site	25,000 L2 and 100 DC fast chargers
Timelines	2016-2021	2016-2021	2016-2021
Targeted Areas	MUDs and workplaces	Long dwell-time locations	Public facilities, workplaces and MUDs
Cost	\$103 M	\$355 M	\$653 M



CEC Upcoming Investments in Charging Infrastructure and Regional Readiness

- 2015-2016 ARFVTP Investment Plan
 - \$17 M for Charging Infrastructure
 - \$2 M for Regional Alternative Fuel Readiness and Planning
- CA Pollution Control Financing Authority - CalCAP EV Charging Station Financing Program (\$2 M)
- Currently, ~\$27 M Available EV Infrastructure Solicitation(s)



Resources

- Governor's 2013 ZEV Action Plan
http://opr.ca.gov/docs/Governor%27s_Office_ZEV_Action_Plan%2802-13%29.pdf
- Investment Plan for the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP)
<http://www.energy.ca.gov/2014-ALT-01/>
- 2014 Integrated Energy Policy Report Update
http://www.energy.ca.gov/2014_energypolicy/
- California Air Resources Board
<http://www.driveclean.ca.gov/>



Resources (continued)

- California Statewide Plug-in Electric Vehicle Infrastructure Assessment
<http://www.energy.ca.gov/2013-ALT-01/documents/index.html>
- Most Recent Electric Vehicle Charging Infrastructure Solicitation
<http://www.energy.ca.gov/contracts/transportation.html#PON-13-606>
- PEV Collaborative Statewide and Regional PEV Readiness Reports
<http://www.pevcollaborative.org/pev-readiness-reports>
- CalCAP EVCS Financing Program
<http://www.treasurer.ca.gov/cpcfca/calcap/evcs/>



Questions?

For more information contact
Leslie.Baroodly@energy.ca.gov