CVRP Implementation Status Update

CVRP Long-Term Planning Workshop

8 December 2015, Sacramento CA

Colin Santulli, M.A., PMP – Senior Program Manager, Transportation
Brett Williams, M.Phil.(cantab), Ph.D. – Principal Advisor, Transportation

Additional thanks to John Anderson, Clair Johnson, and others at CSE

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Outline

- Background
- CVRP: Implementation Overview
  - Rebate Processing
  - Outreach
  - Transparency
- Long-term Planning Assets: Public Data & Tools
  - Rebate Data & Dashboard
  - Survey Data & Dashboard
- Summary of Program Participation
  - Rebated Vehicles: How many? Where? Rebated at what rate?
  - Rebated Consumers: Who? Why?

Background

Center for Sustainable Energy (CSE)

Building Performance

Clean Transportation

Distributed Generation

Energy Efficiency

Energy Storage

Renewable Energy

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CSE's Plug-In & Fuel-Cell Electric Vehicle (EV) Activities

CLEAN VEHICLE REBATE PROJECT™

MOR-EV
Massachusetts Offers Rebates for Electric Vehicles

CHEAPR
Connecticut Hydrogen and Electric Automobile Purchase Rebate

Incentives Design & Administration

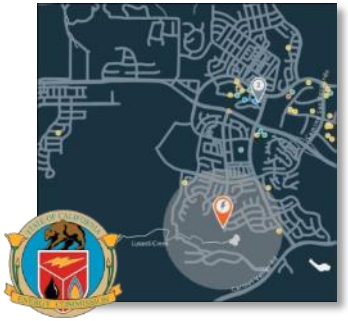
Consumer & Dealer Outreach

California Environmental Protection Agency
Air Resources Board

CALIFORNIA PLUG-IN ELECTRIC VEHICLE COLLABORATIVE

Stakeholder Engagement

Fleet Assistance & Clean Cities



PEV, Alt.-Fuel, & ZEV Planning & Implementation

2nd Life Battery Research & Vehicle-Grid Integration

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CSE has processed >130k rebates totaling >$275M

California (CVRP), 2010–present

- 2007 Legislation (AB118, then AB8) allowing vehicle registration fees
- Greenhouse Gas Reduction Fund

CALIFORNIA CLEAN VEHICLE REBATE PROJECT℠

Massachusetts (MOR-EV), 2014–present

- Regional Greenhouse Gas Initiative

MOR-EV
Massachusetts Offers Rebates for Electric Vehicles

Connecticut (CHEAPR), 2015–present

- Utility Settlement
- Both a vehicle rebate and dealer incentive
  - Consumer can also assign vehicle rebate to dealer

CHEAPR
Connecticut Hydrogen and Electric Automobile Purchase Rebate

CVRP Implementation Overview

Rebate Processing

Application: Simplicity is Key

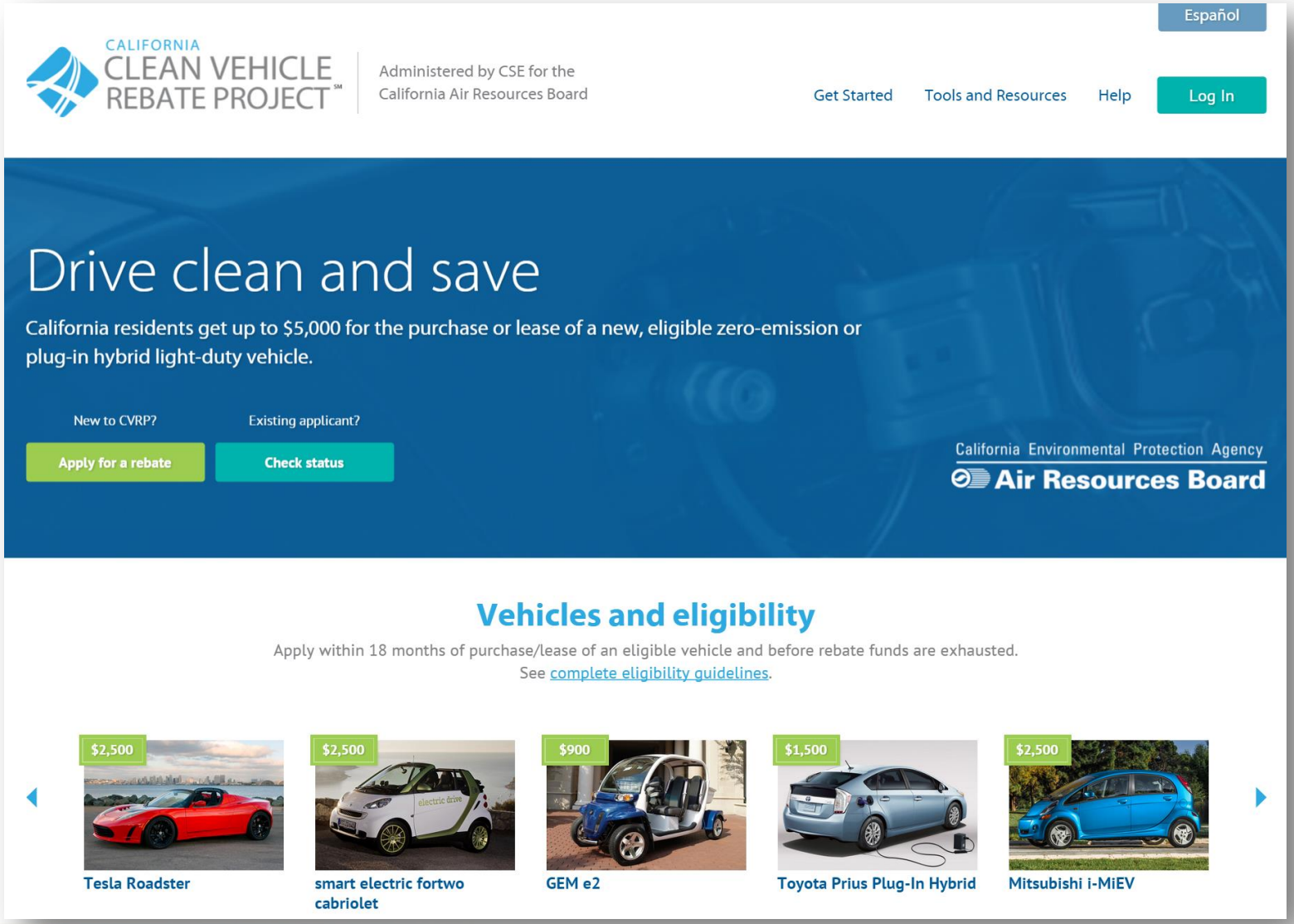
Step 1 Go to cleanvehiclerebate.org

Step 2 Select your vehicle and fill out application

Step 3 Submit supporting documentation

Step 4 Receive check in mail

Project Website: Accessibility



Cleanvehiclerebate.org

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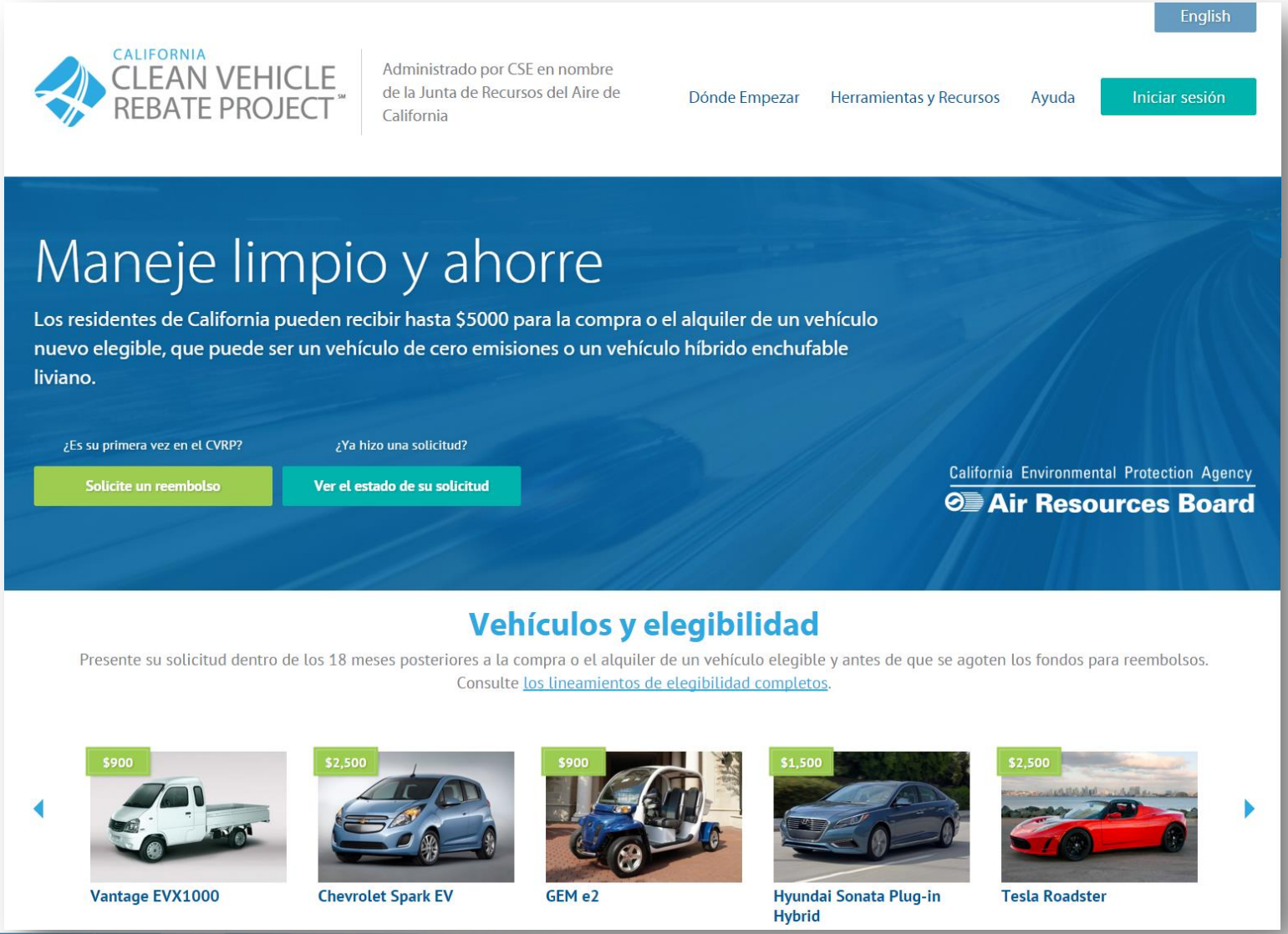
Project Website: Accessibility



cleanvehiclerebate.org/es

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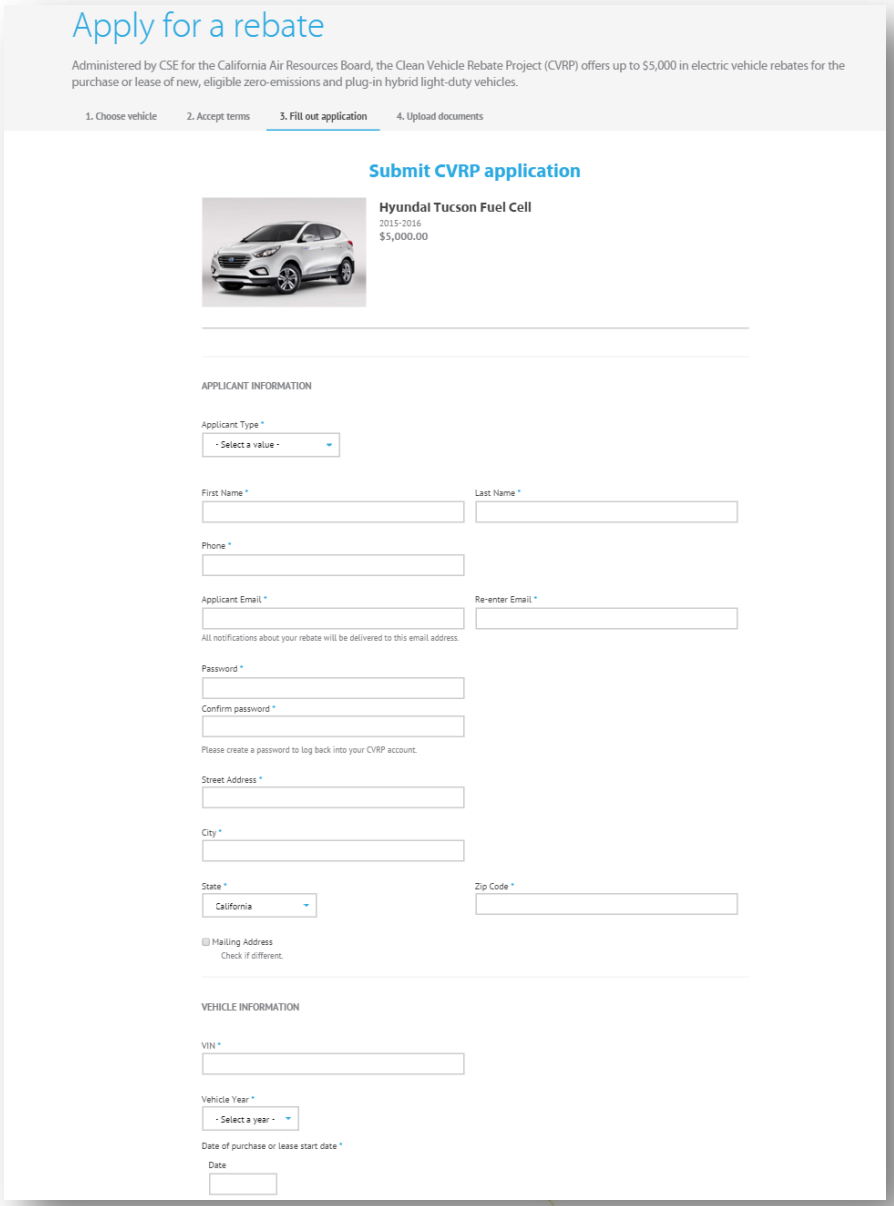
Application: Simplicity is Key

- Streamlined application process (10 mandatory fields)
- Upload documents online or send via email
- Possible to complete at dealership



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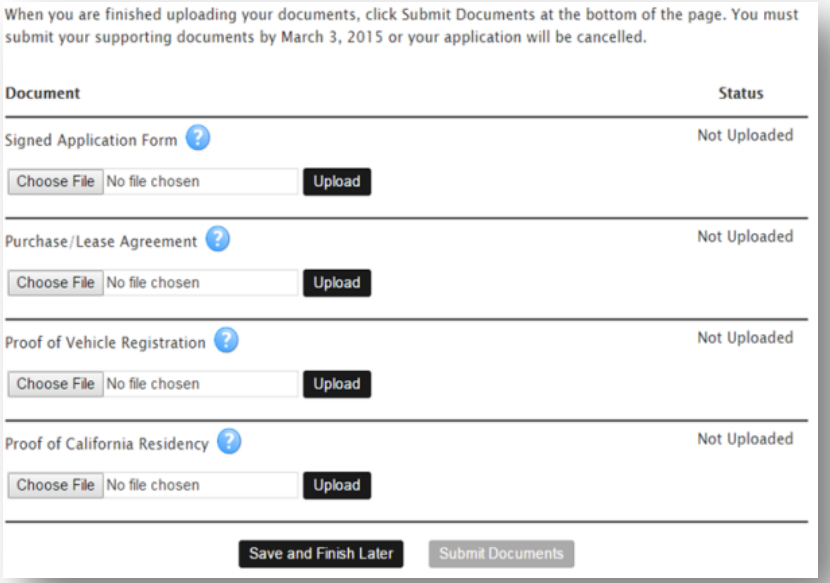

One third of applications are submitted within **one day of purchase**

Over half of applications are submitted **within 7 days of purchase**

Nearly 80% of applications are submitted within 30 days of purchase

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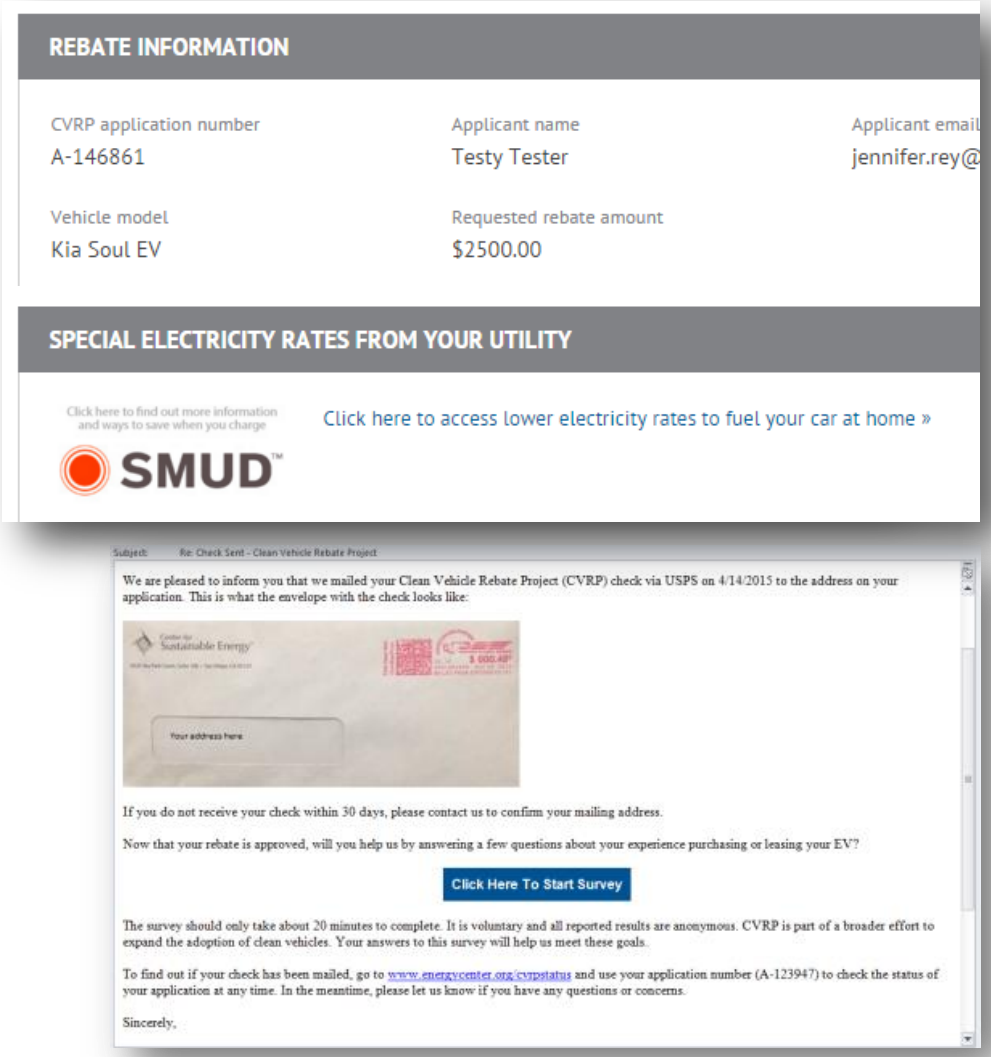
Processing: Automation is Key



- Eligibility pre-screening and application detail verification
- Application status updates and emails
- Reduced administrative burden and allows us to focus on approving applications

Applications approved in ~5 days from submittal

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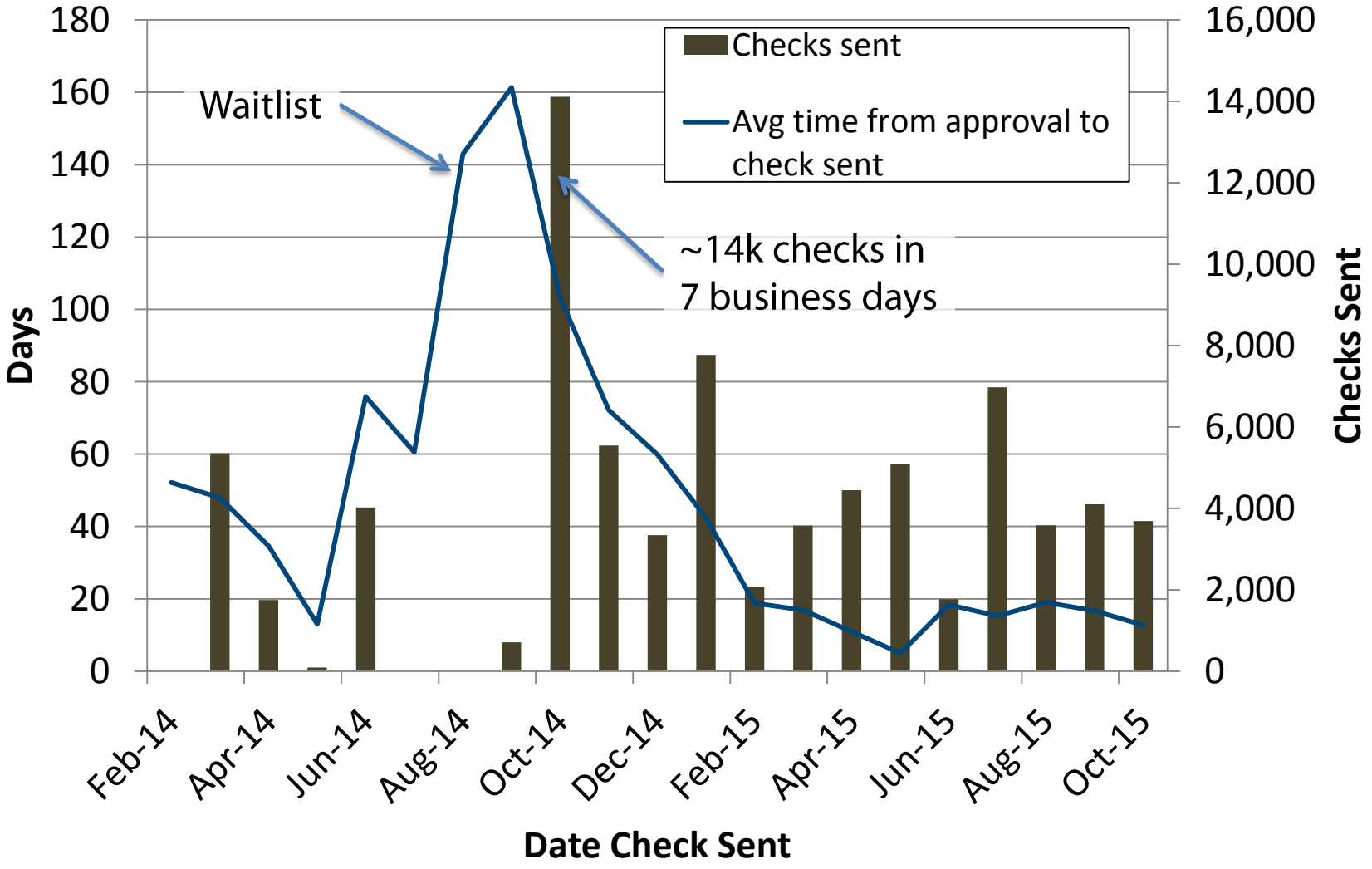
Check Sent Timeline



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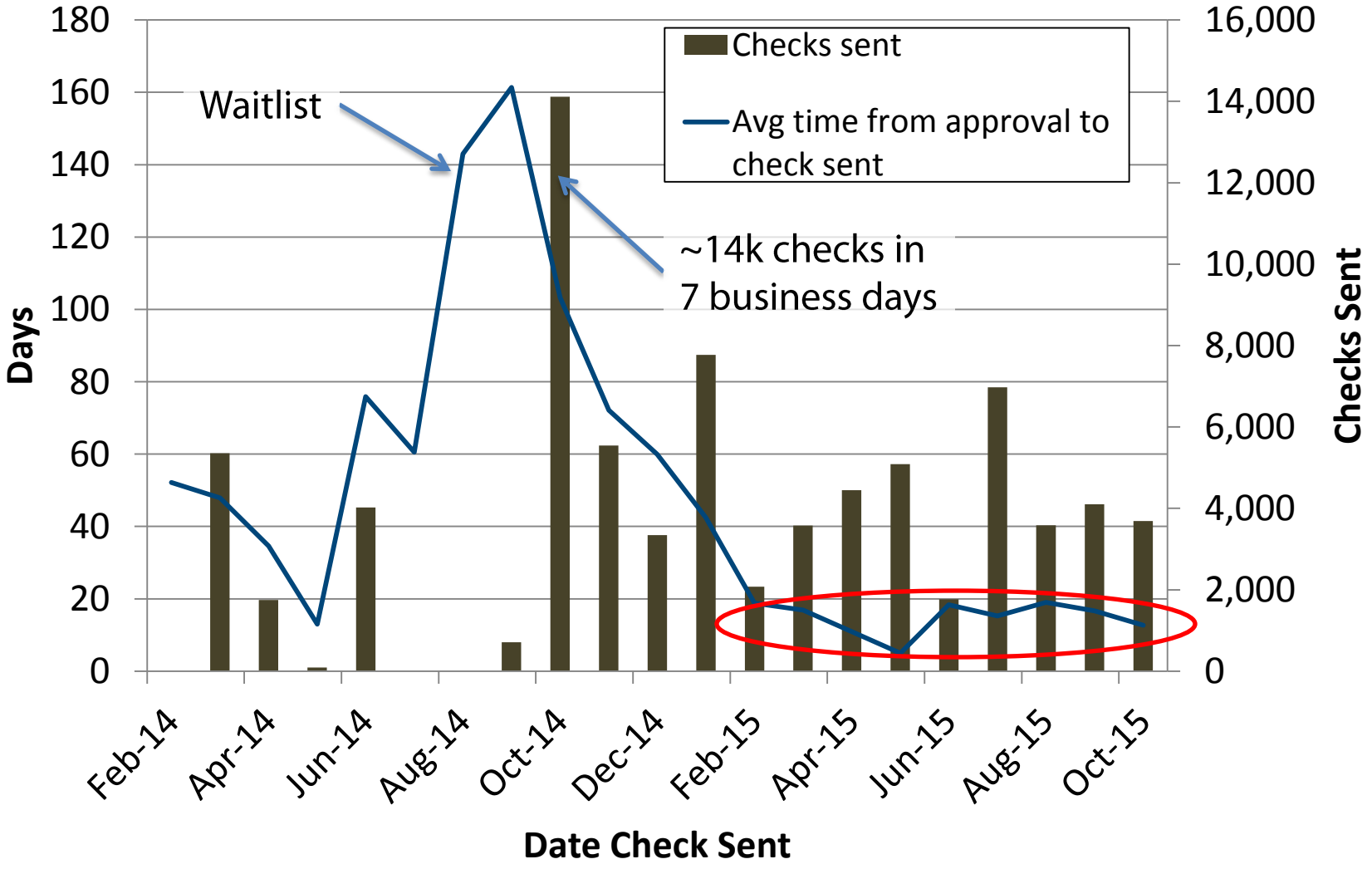

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Outreach

Outreach: New Car Shoppers

Target Audience: Lowest Barriers to EV Adoption

- Homeowners
- 2-car households
- Affluent (HHI: $100K+)
- College educated+

Activities:

- Community and industry events with branded booth and marketing materials
- Digital marketing through CVRP Social Media pages and promotion
- Project website and new content

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Outreach: New Car Shoppers

Target Audience: Lowest Barriers to EV Adoption

- Homeowners
- 2-car households
- Affluent (HHI: $100K+)
- College educated+

Activities:

- Cross-Program Collaboration
  - CVRP collateral distribution at events
  - Cross-promotion via digital marketing
  - Examples:
    - Statewide Test Drive Campaigns
    - Energy Upgrade California

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Outreach: New Car Shoppers

Target Audience: Lowest Barriers to EV Adoption

- Homeowners
- 2-car households
- Affluent (HHI: $100K+)
- College educated+

Results FY 14-present:

- Events: +130
- Collateral Distributed: +7.5K
- Conversations: +14K
- CVRP website page views: ~25K/month

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Outreach: Underserved Communities

Target Audience:

- Disadvantaged communities (DACs)
- Non-DAC low-to-moderate income consumers

Activities:

- Integrate CVRP messaging into community based organizations and other agencies though workshops and events
  - Charge Ahead Coalition
  - Energy Upgrade California
  - GRID Alternatives
  - Building Healthier Communities
  - Air Districts

Outreach: Underserved Communities

Target Audience:

- Disadvantaged communities (DACs)
- Non-DAC low-to-moderate income consumers

Activities:

- Increase usability and accessibility of the CVRP website and marketing collateral
  - New content targeted to underserved communities
  - Underserved communities FAQs
  - Multi-lingual resources

Outreach: Underserved Communities

Target Audience:

- Disadvantaged communities (DACs)
- Non-DAC low-to-moderate income consumers

Results FY 14-present:

- Events: +30 (40 additional planned for FY 15-16)
- Collateral Distributed: +1.5k
- Conversations: +1K

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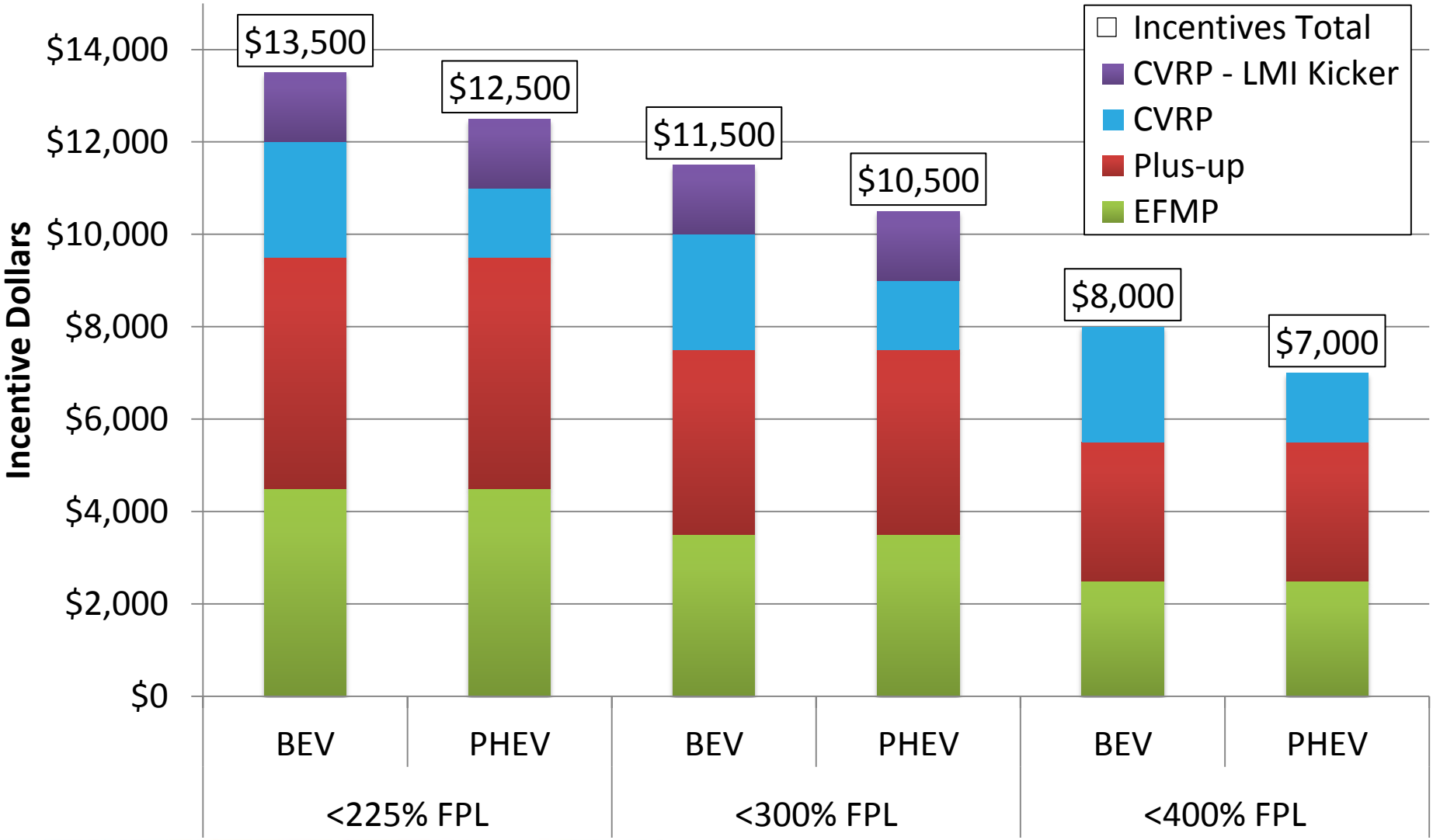
Stacked Incentives: LMI Increased Incentive

	CVRP	CVRP-LMI (≤300% FPL)
Hydrogen Fuel-Cell Electric Vehicles	*$5,000*	*$6,500*
Battery Electric Vehicles (& i3 REx)	*$2,500*	*$4,000*
Plug-in Hybrid Electric Vehicles	*$1,500*	*$3,000*
Neighborhood Electric Vehicles	*$900*	
Zero-Emission Motorcycles	*$900*	

Stacked Incentives: South Coast and San Joaquin



FPL = federal poverty level (a function of household size). 300% of FPL for a 3-person HH is ~$73k/y.

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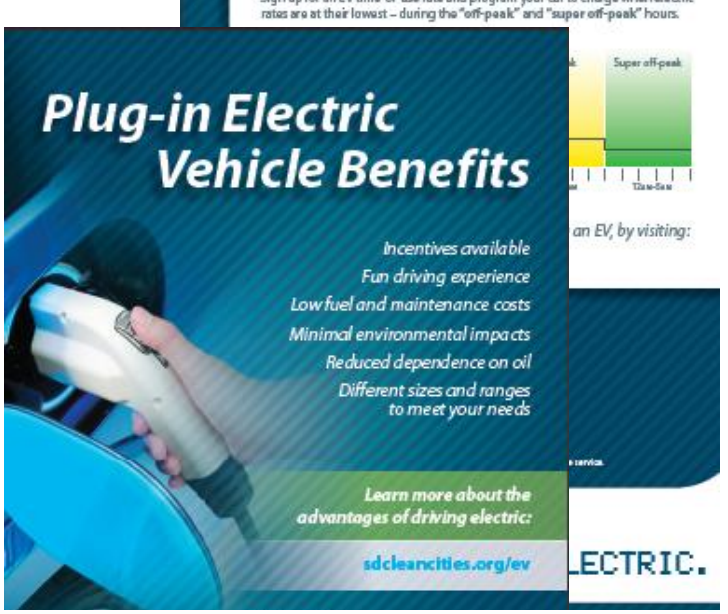
Outreach: Dealerships & Sales Staff

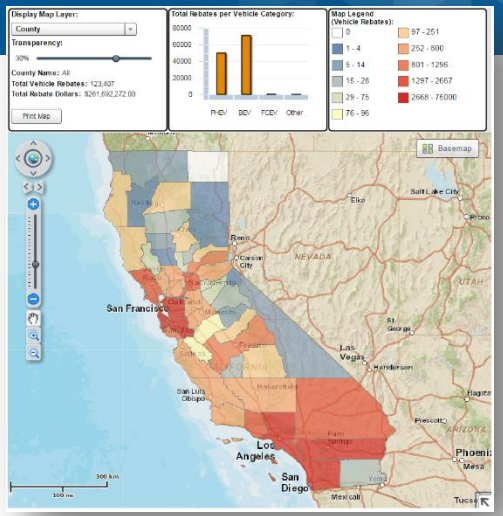
- Quarterly sales staff webinars
- OEM- and dealer-association-sponsored group training
- Direct dealership outreach
- 1-on-1 inquiry support
- Dealership-targeted outreach brochure and EV marketing materials

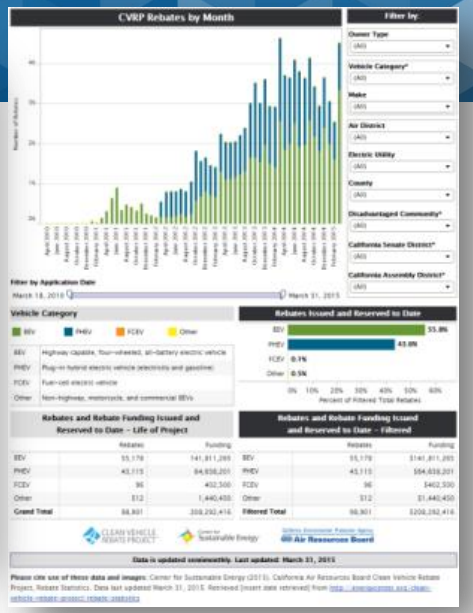


Transparency

Transparency

- Real time or near-real time data updates
- Facilitates informed decision making for consumers and stakeholders
- Provides data for measuring incentive and outreach effectiveness
- Reduces administrative burden



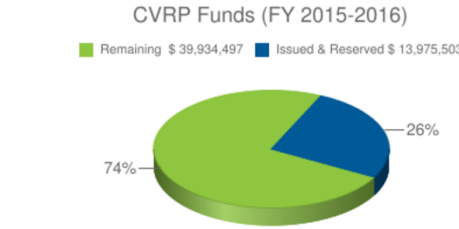


CVRP Funding Status

See CVRP funding status in real time.

Fiscal Year 2015-2016

Rebates Issued and Reserved	$13,975,503
Remaining Funds	$39,934,497



Since Program Began

Rebates Issued	$265,197,274

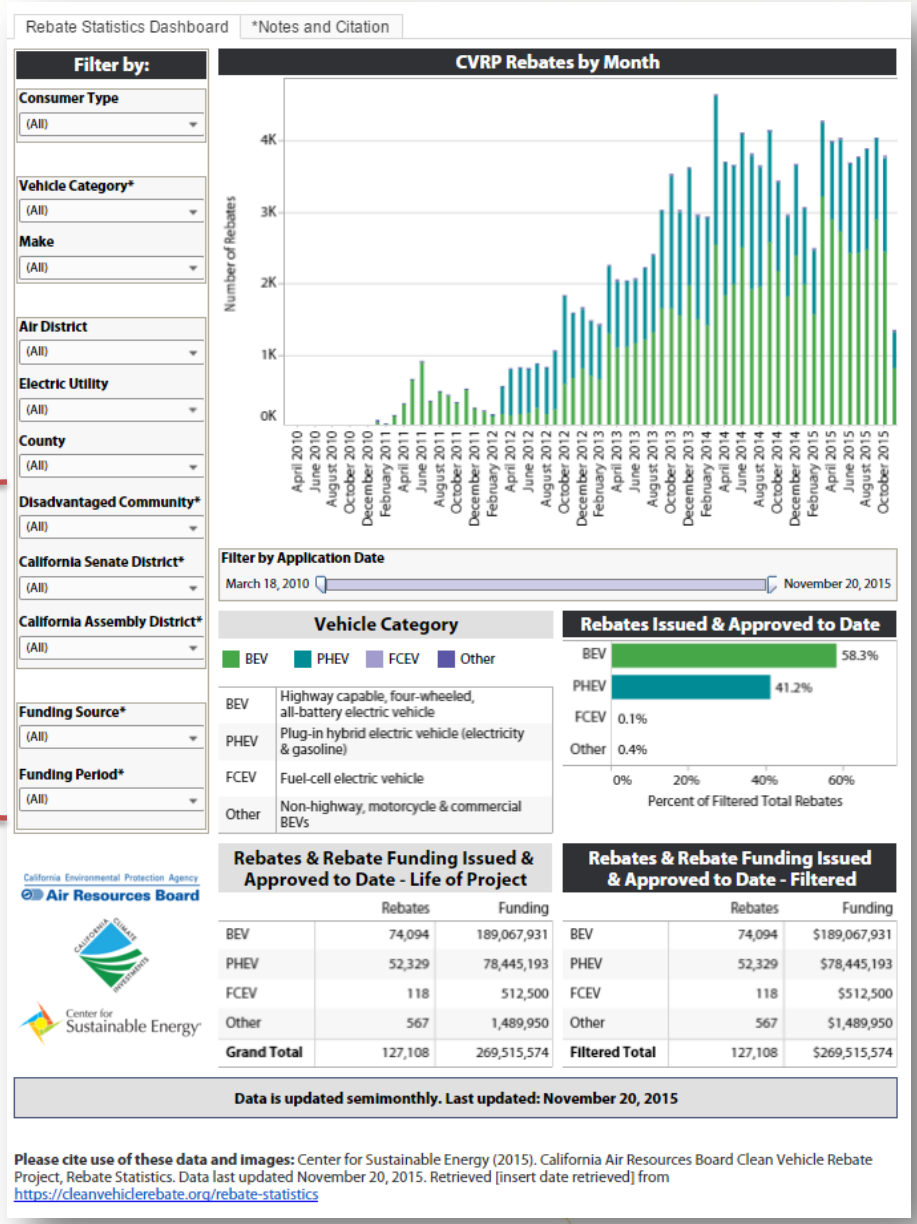
Public Tools and Available Data

Planning Inputs/Assets

Rebate Dashboard: Filters

Filter by:

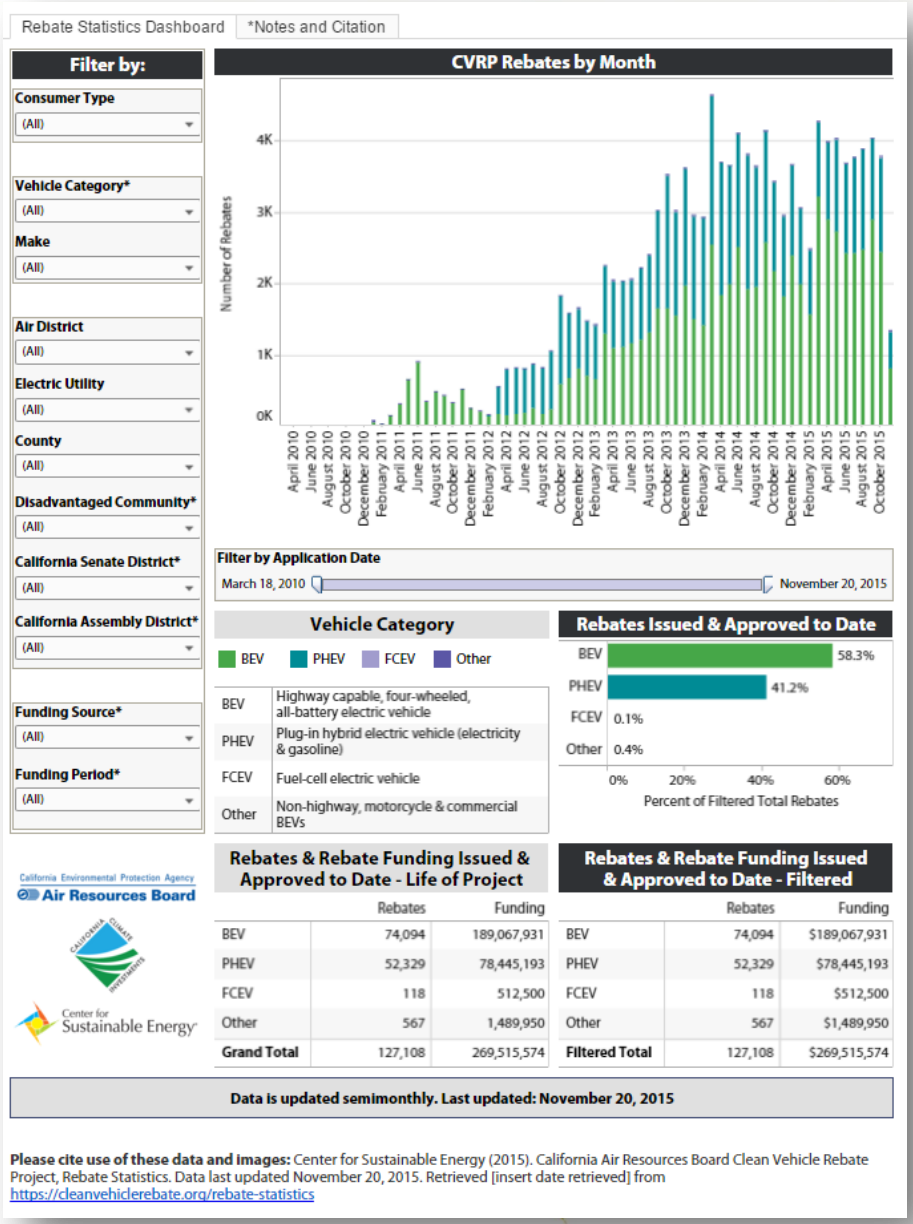
- Consumer type
- Vehicle category
- Make
- Region:
  - Air district
  - Utility territory
  - County
  - Legislative district
  - Disadvantaged Community status
  - Funding Source
- Application date



Rebate Dashboard: Results

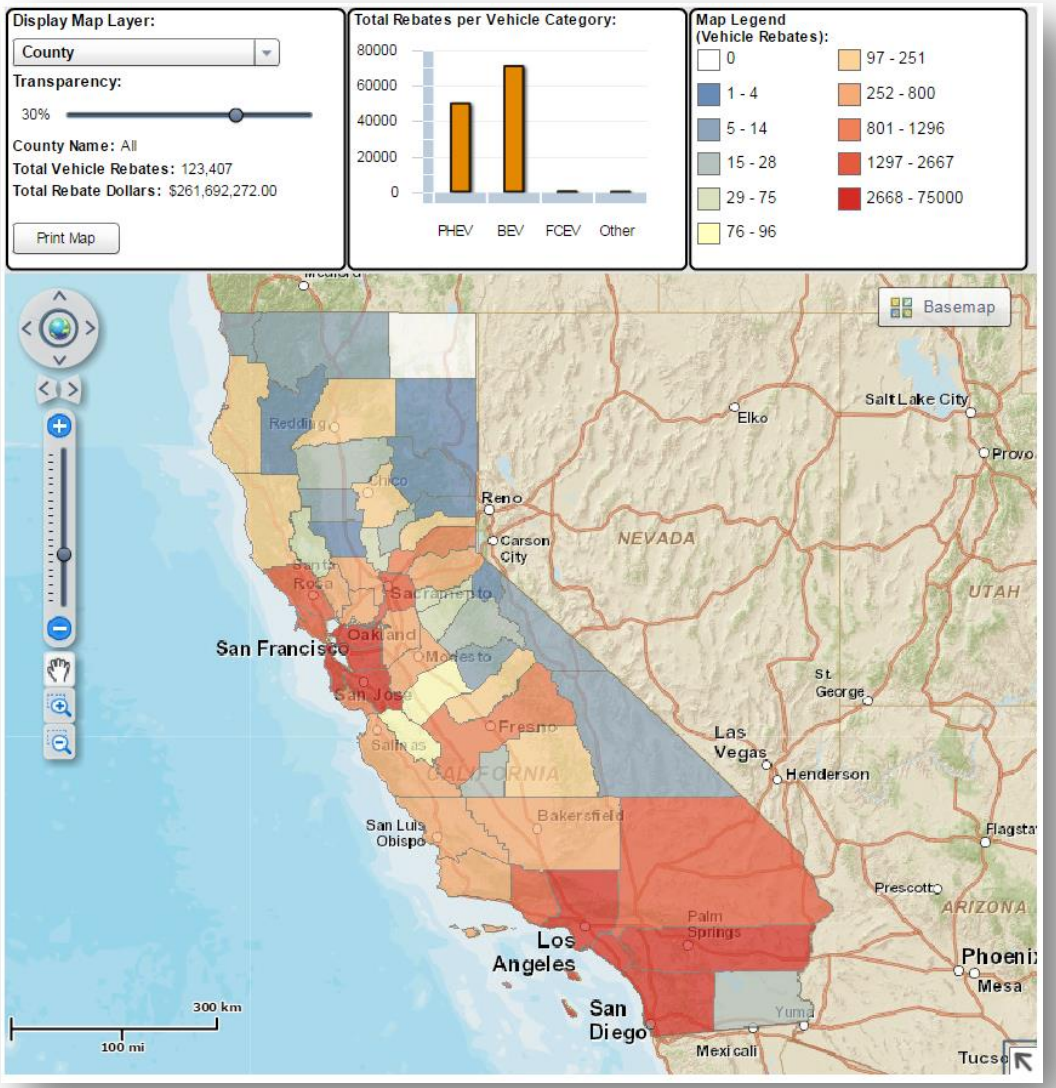
Results by:

- Rebated vehicles and funds:
  - Life-of-project (grey headings) vs. filtered selection (black)
- Rebated vehicles:
  - By month
  - By vehicle category
    - Filtered totals and %
- Downloads:
  - Images
  - Raw data (incl. Census tract)



Rebate Map

- Rebated vehicles and funds over the life of the project by:
  - County
  - Utility
  - Air District
  - Zip Code (census tract coming soon)
  - State Assembly District
  - State Senate District
- PDF image download



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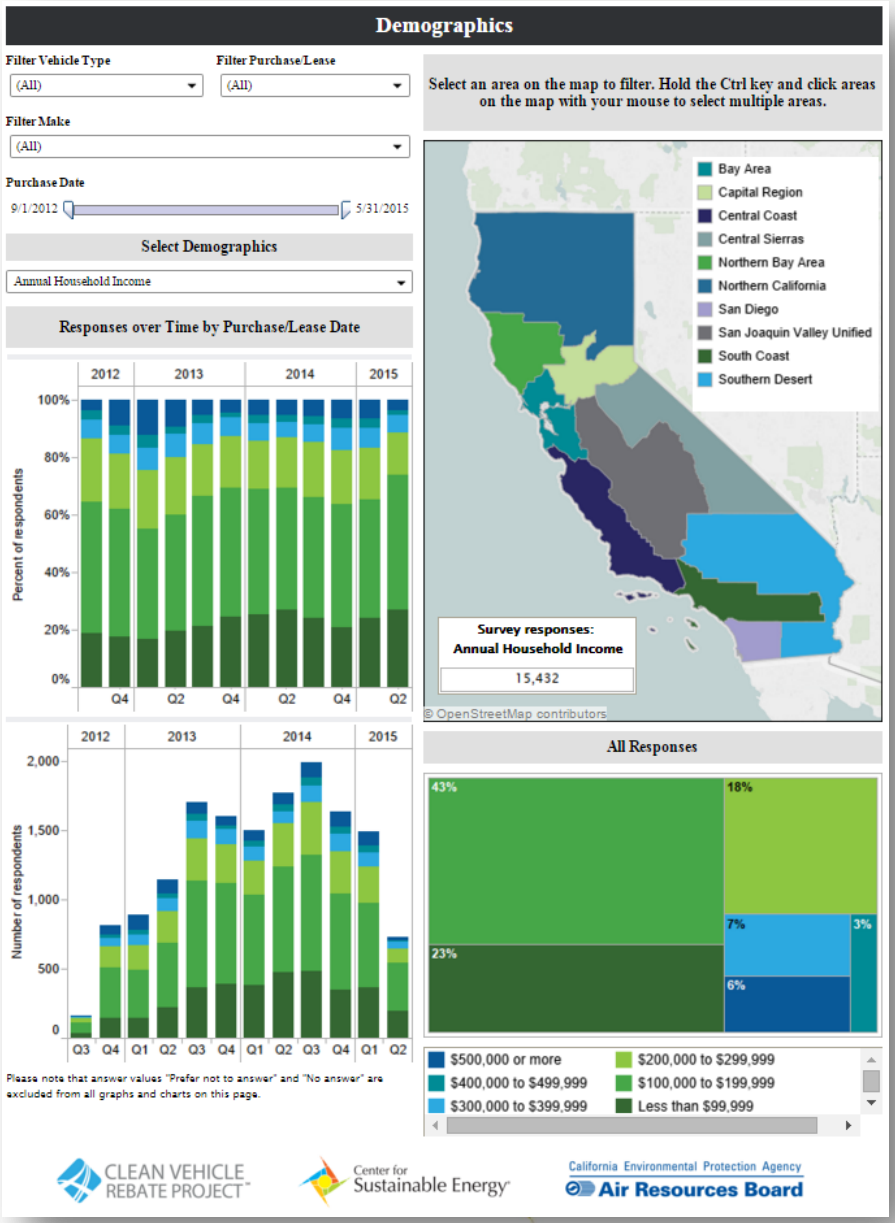
Consumer Survey Dashboard

- All rebate recipients invited to take a survey
- >25,000 CVRP responses
- Topics include:
  - Demographics
  - Information channels
  - Purchase motivations and enablers
  - Dealership experience
  - Utility rate awareness
- Filter by: vehicle category, buy/lease, make, region
- Survey results reasonably represent all rebate recipients



Program Participation

Rebated Vehicles & Rebated Consumers

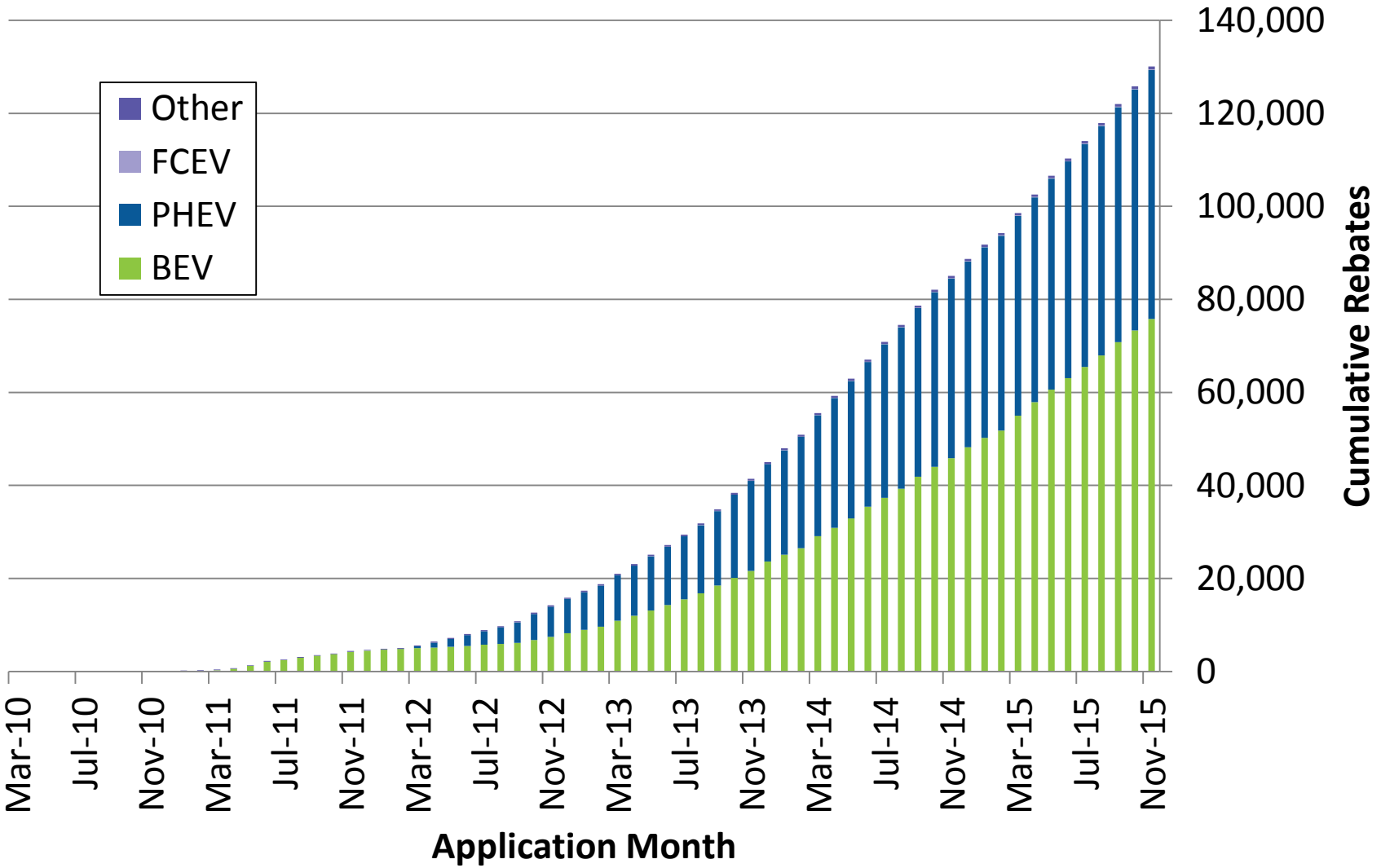
Program Participation

- Rebated Vehicles (application data)
  - How many? What type?
  - Where?
  - Rebated at what rate?
- Rebated Consumers (survey data)
  - Who?
    - Demographic and housing characteristics
    - Income comparisons
  - Why?
    - Motivations to purchase
    - Impact of rebate

How many? What type?

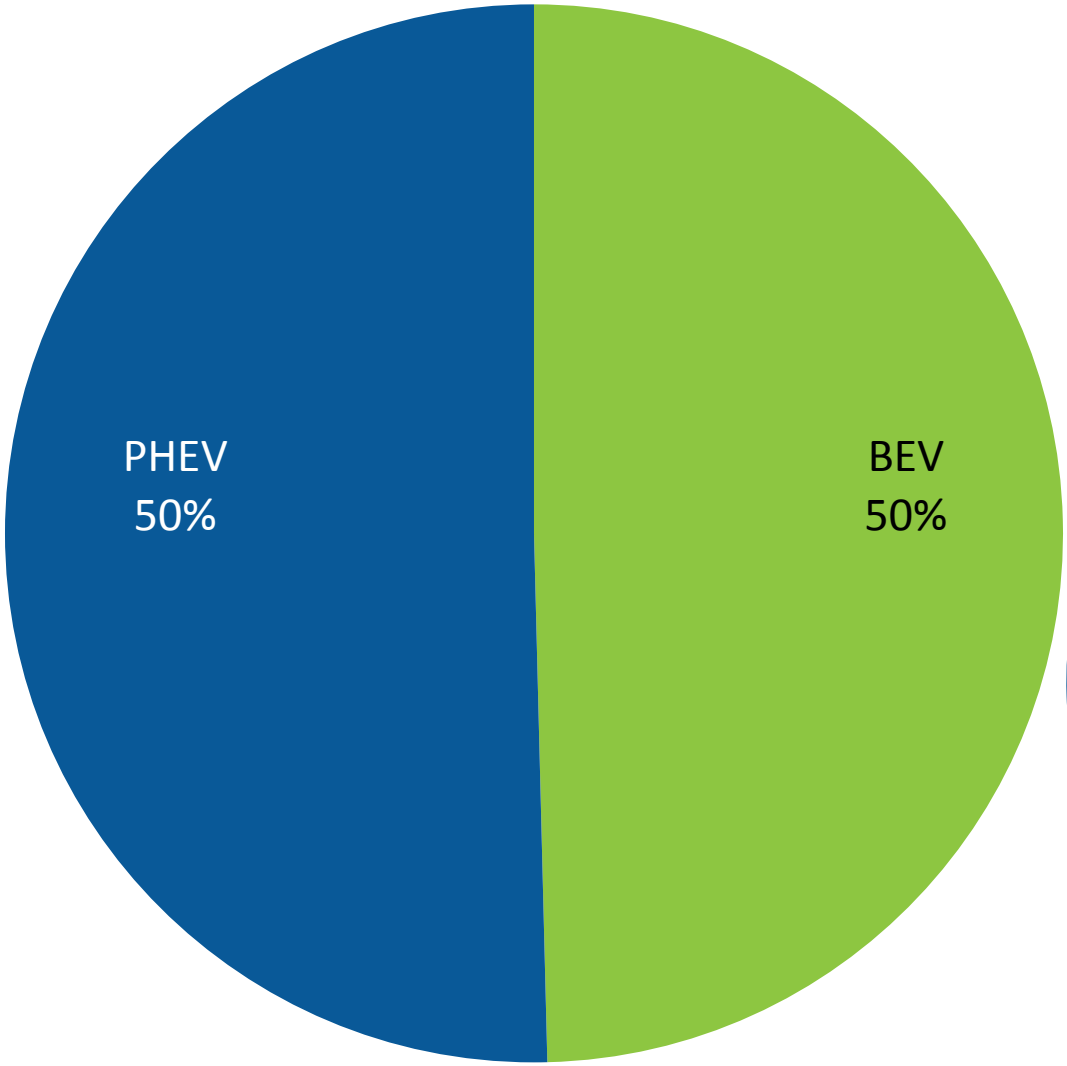
Rebated Vehicles

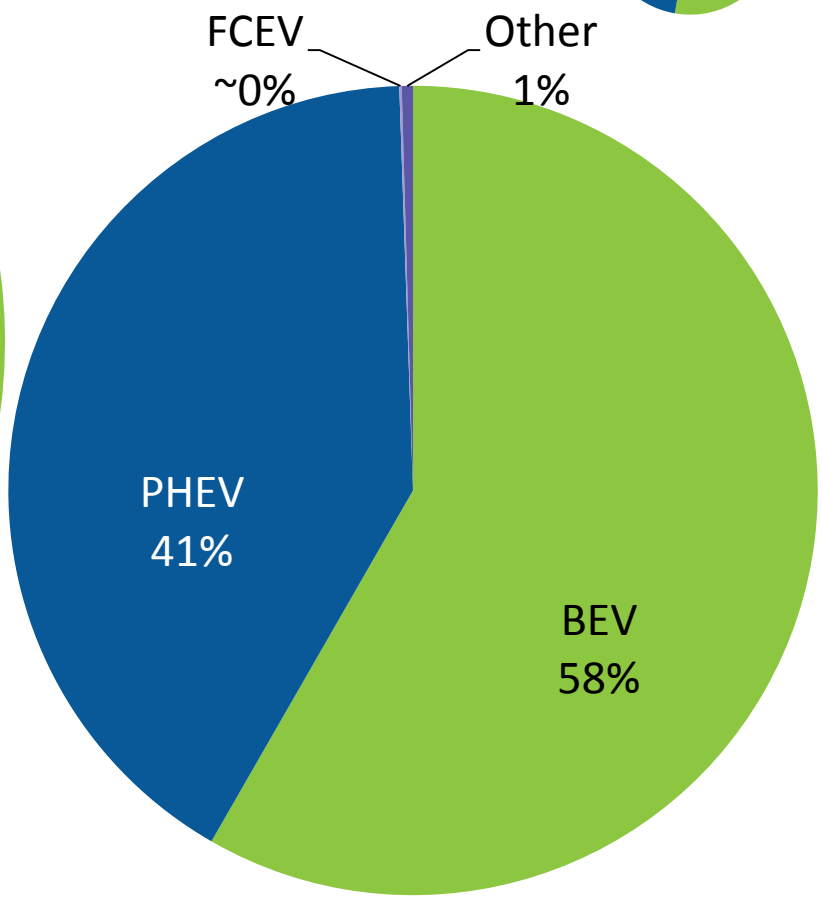
Cumulative CVRP Rebates by Vehicle Category

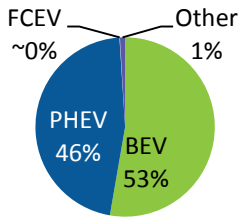


Through Nov 2015, approved and in progress applications

Share by Vehicle Category: All PEVs, Rebates, DAC Rebates







Rebates through Nov 2015. Overall market includes vehicles registered prior to 6/1/2015 and uses content supplied by R.L. Polk & Co.; *Copyright © R.L. Polk & Co., 2015. All rights reserved*

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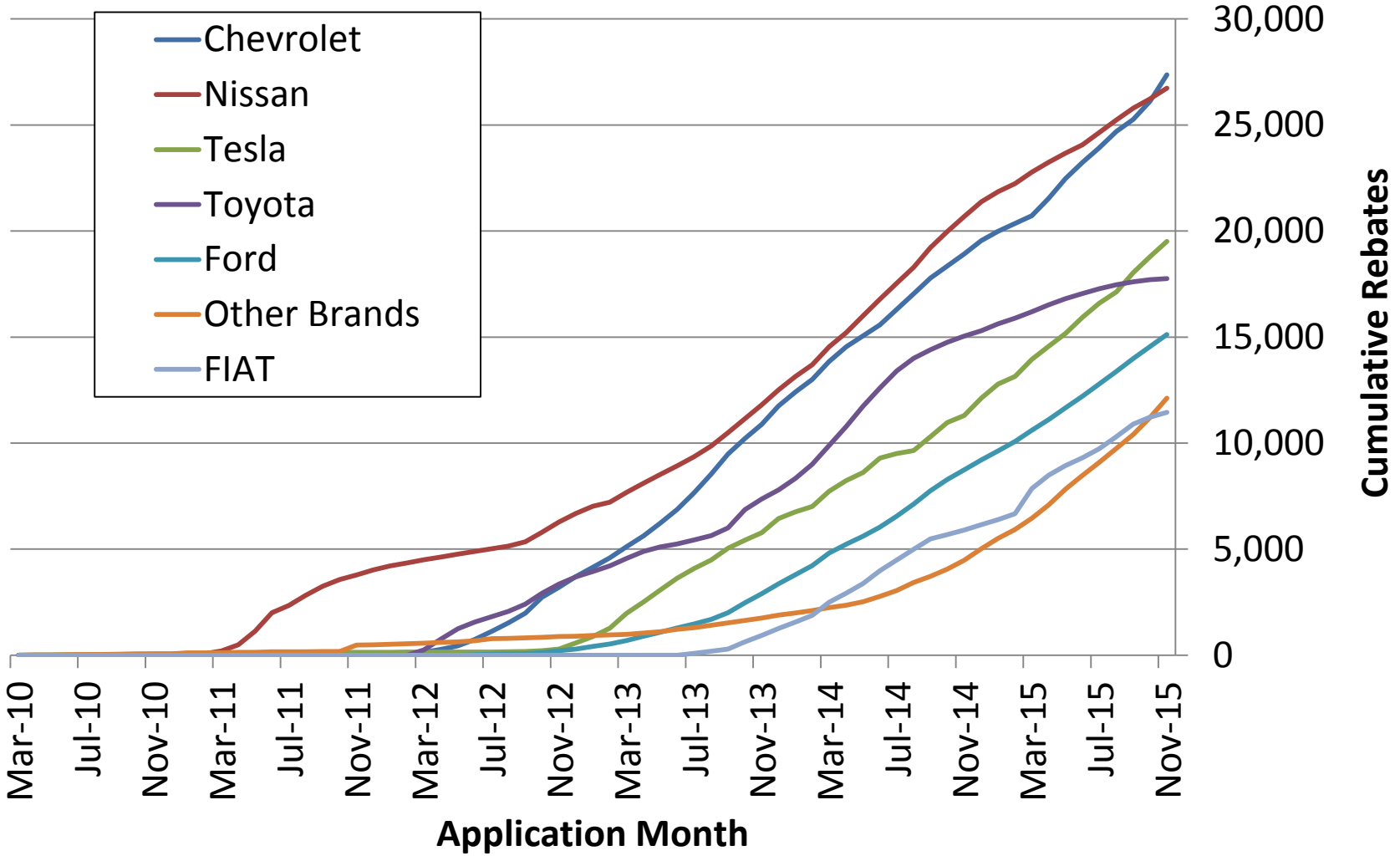
Cumulative Rebates by Major Brand



Through Nov 2015, approved and in progress

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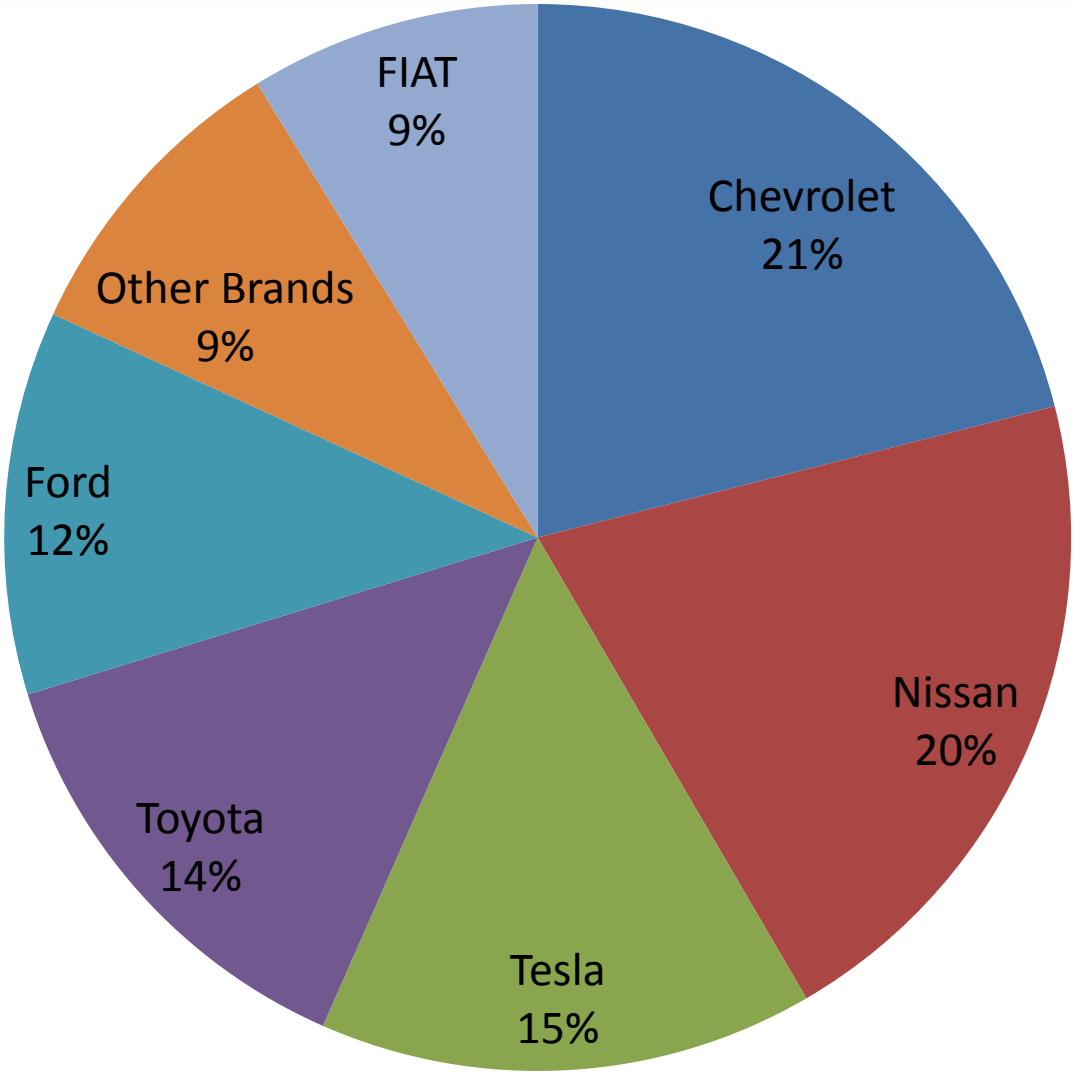
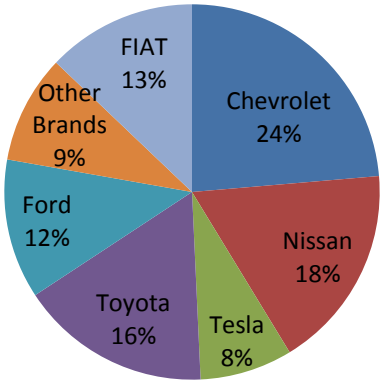
Rebate Share by Major Brand: CA & DACs





Through Nov 2015, approved and in progress. "Major" > 10,000 rebates

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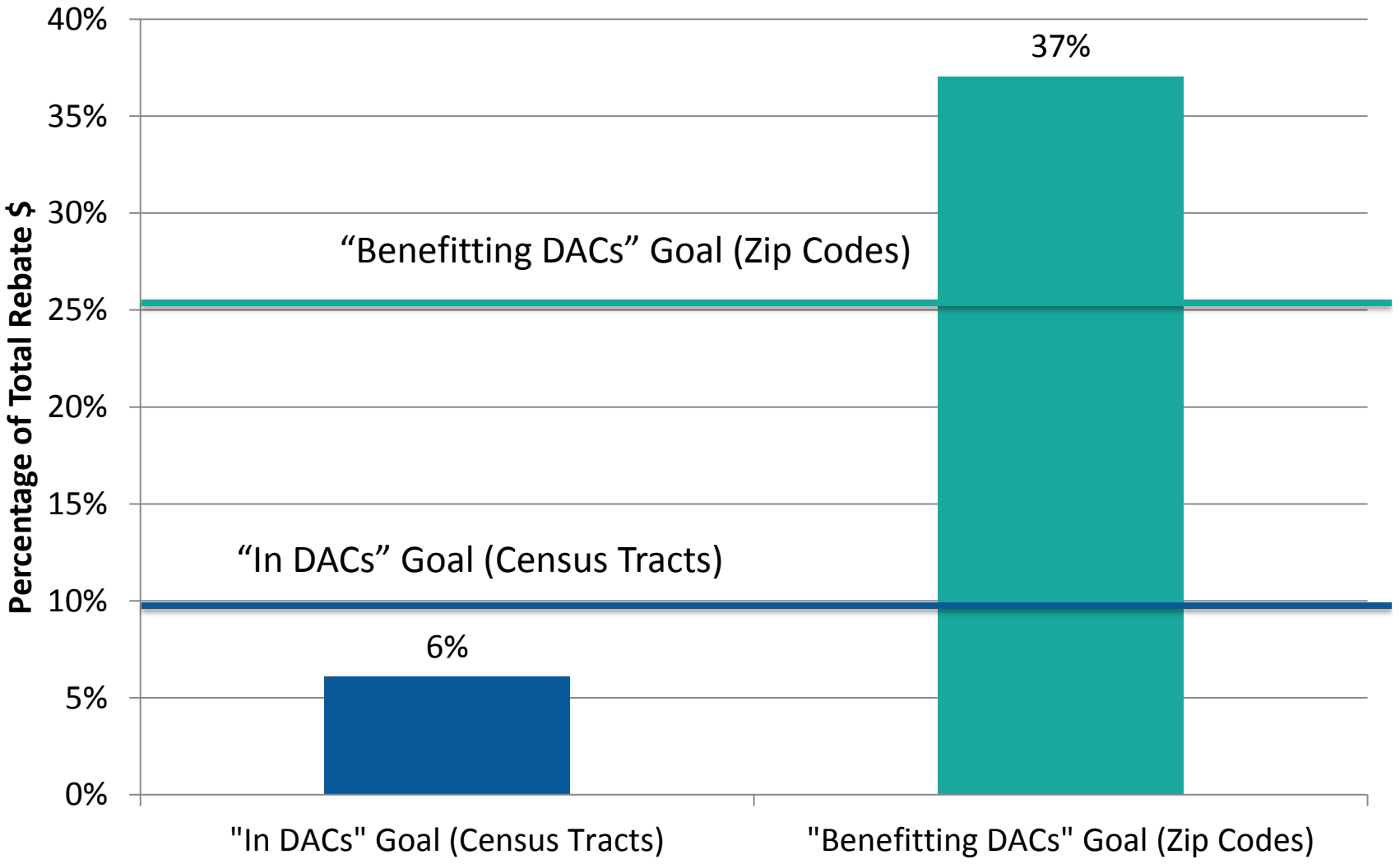
Rebate Dollars to Disadvantaged Communities



Vehicles purchased/leased through Nov 2015, approved and in progress

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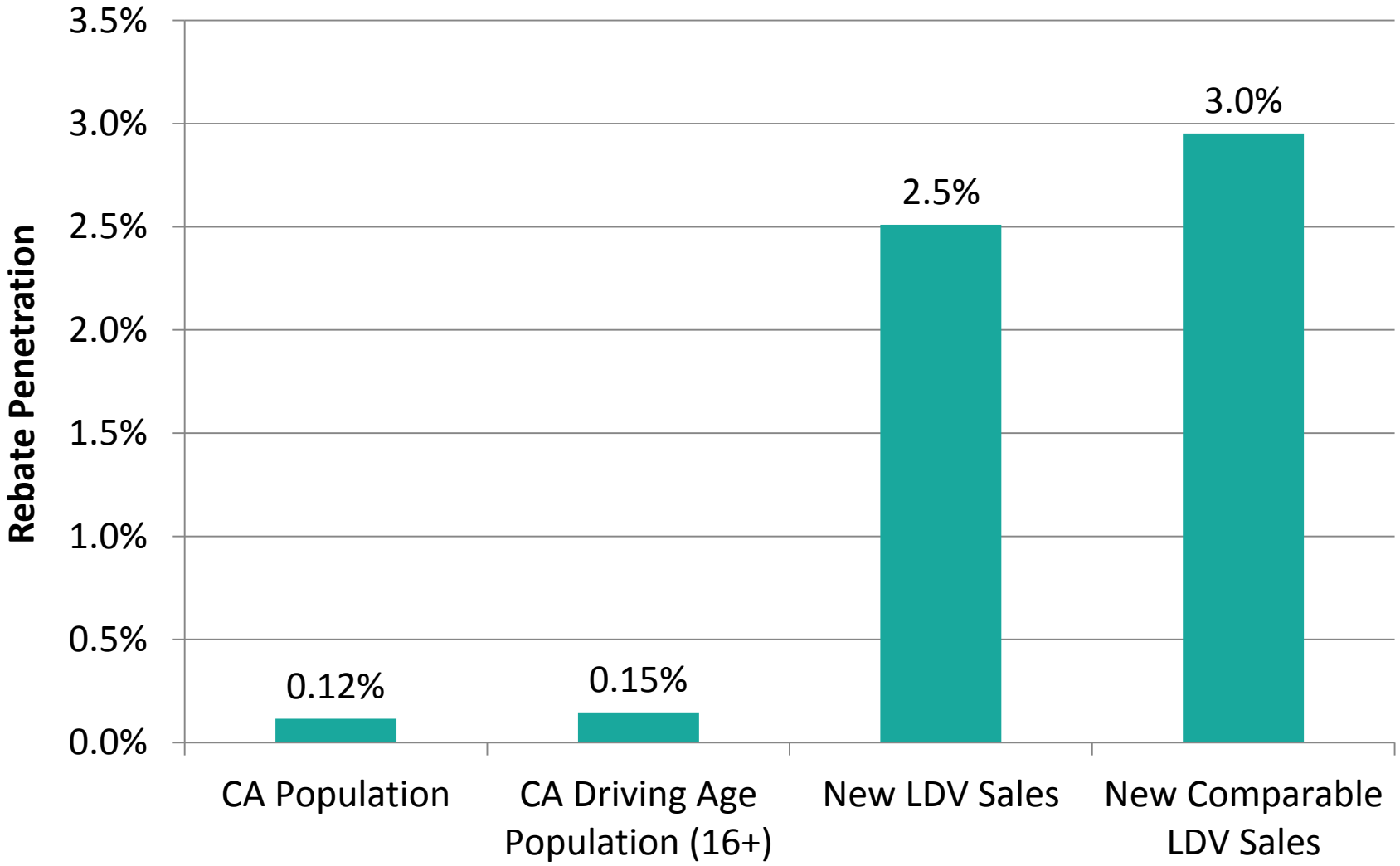
Context Is Important (2014)



Includes vehicles purchased/registered in 2014. Population data from U.S. Census Bureau, 2014 estimates. Uses content supplied by R.L. Polk & Co.; *Copyright © R.L. Polk & Co., 2015. All rights reserved*

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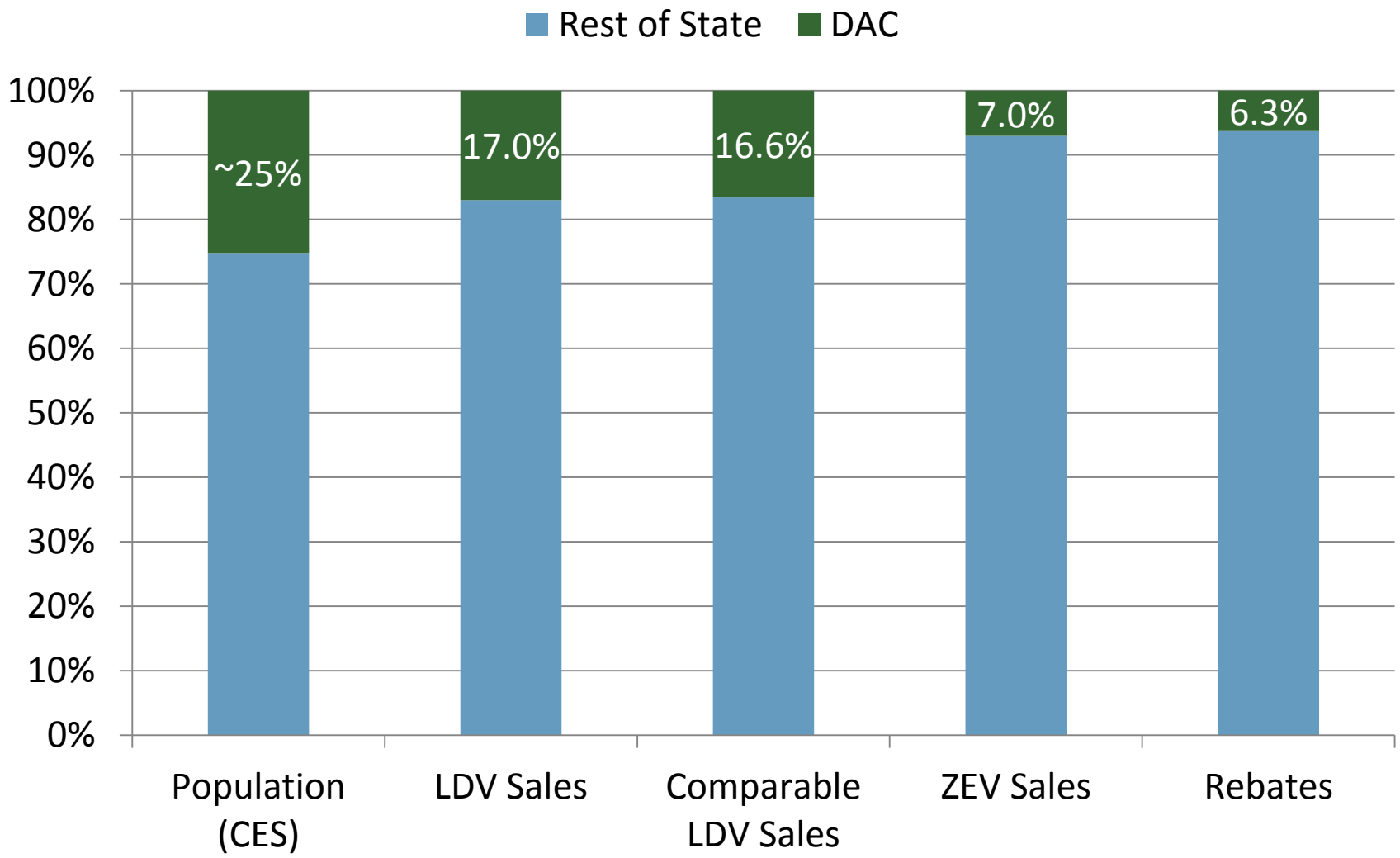
DACs as a Percentage of Entire State (2014)



Includes vehicles purchased/registered in 2014. Population data from U.S. Census Bureau, Population Division, 2014 estimates. Uses content supplied by R.L. Polk & Co.; *Copyright © R.L. Polk & Co., 2015. All rights reserved*

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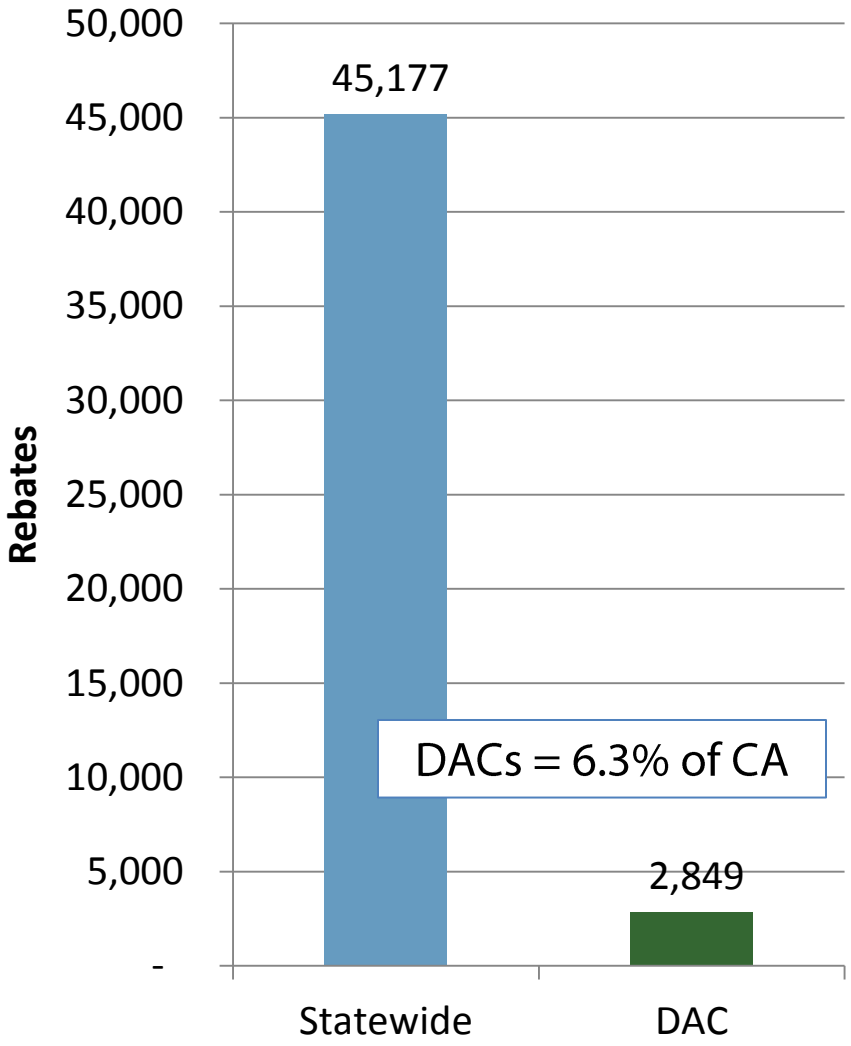
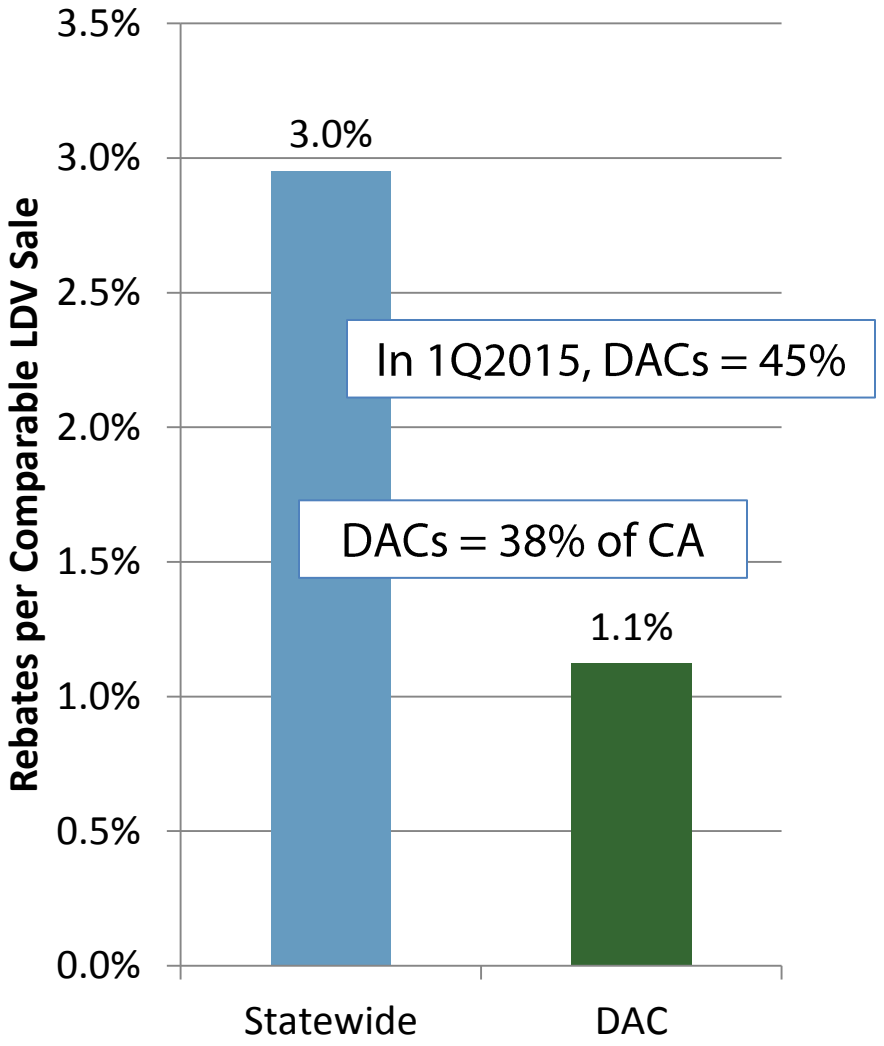
Rebates as a % of Comparable New Car Sales

(2014 calendar year)





Includes vehicles purchased/registered in 2014. Uses content supplied by R.L. Polk & Co.; Copyright © R.L. Polk & Co., 2015. All rights reserved

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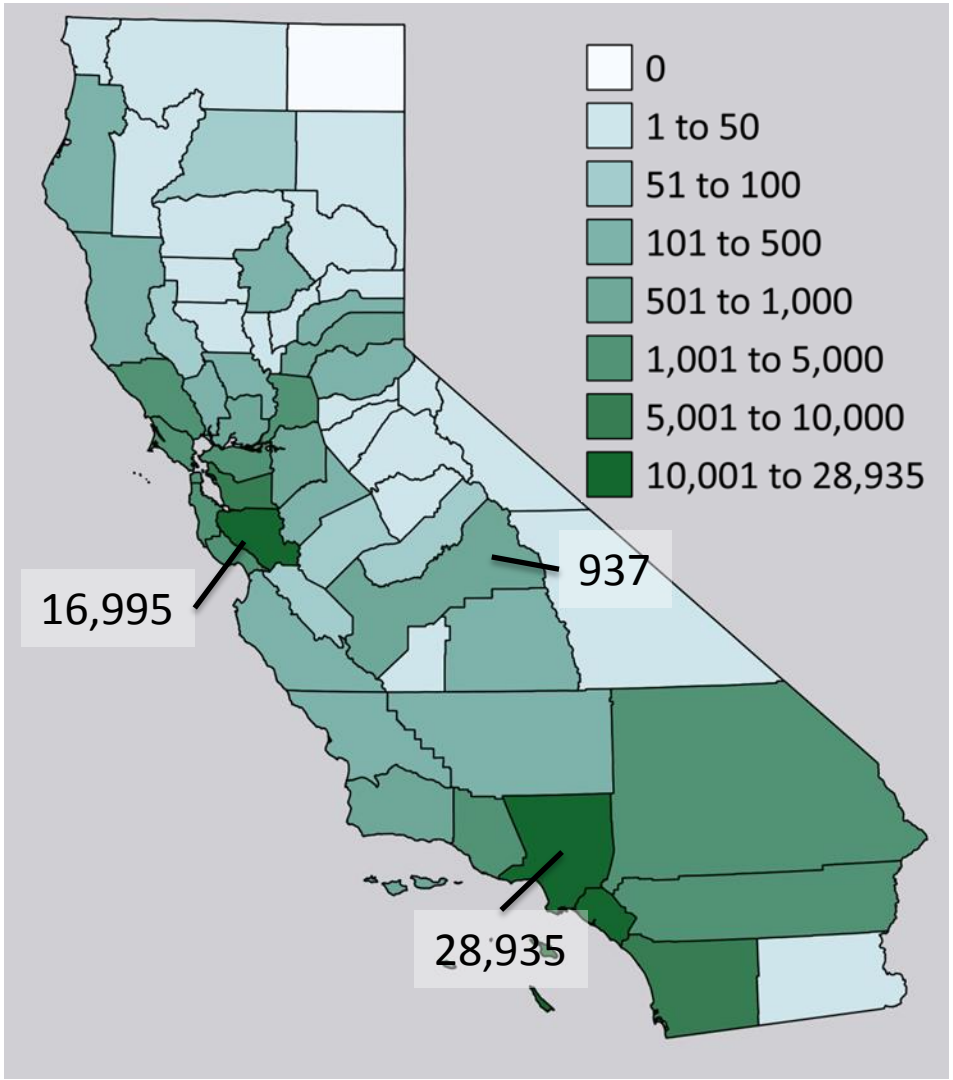
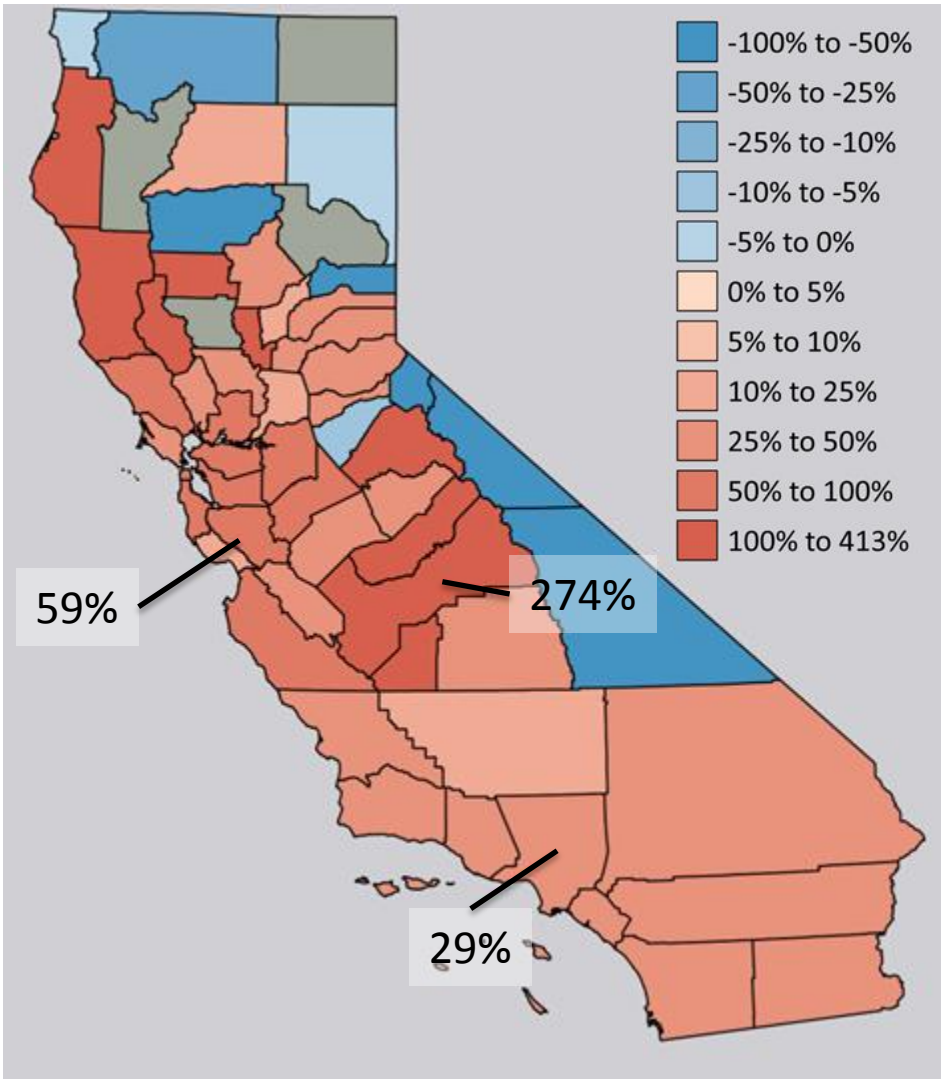
Where?

Rebated Vehicles

Rebates by County (thru May 2015) , Growth (2013 to 2014)





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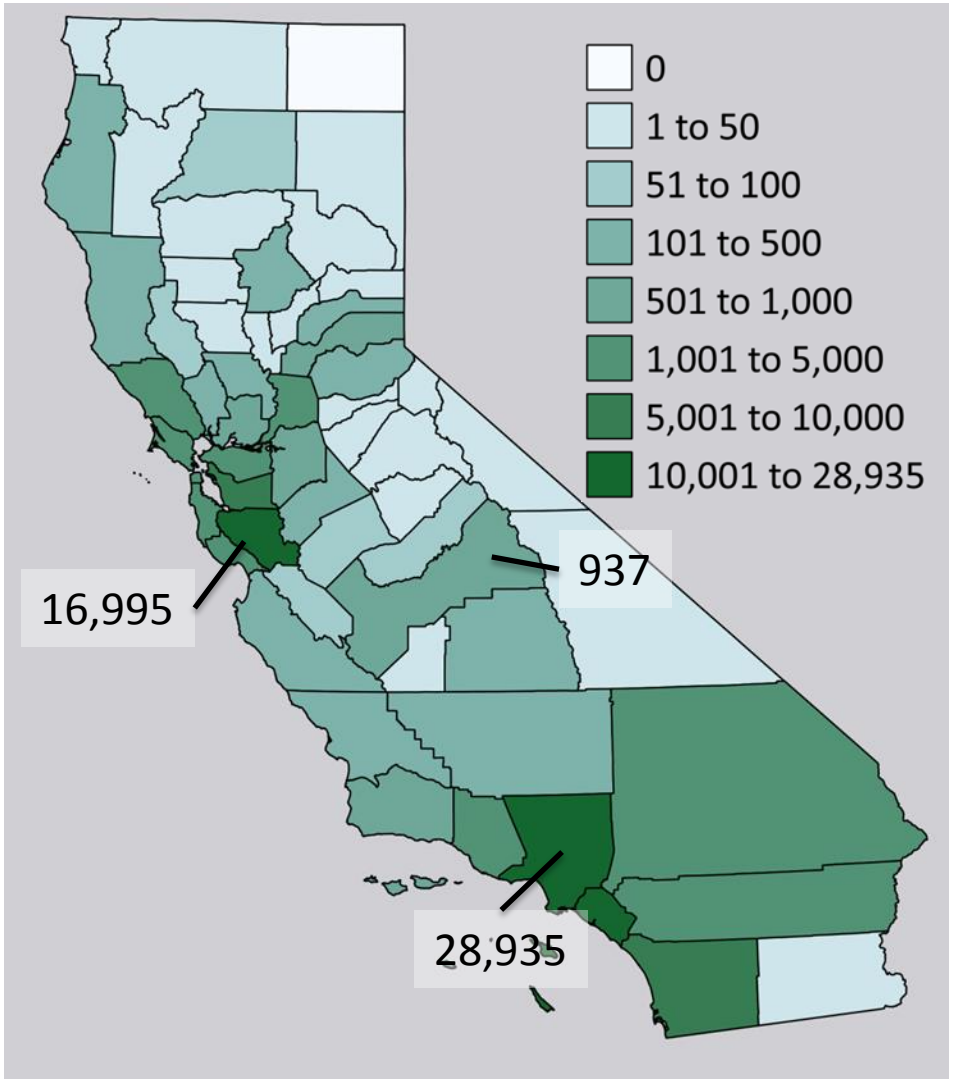
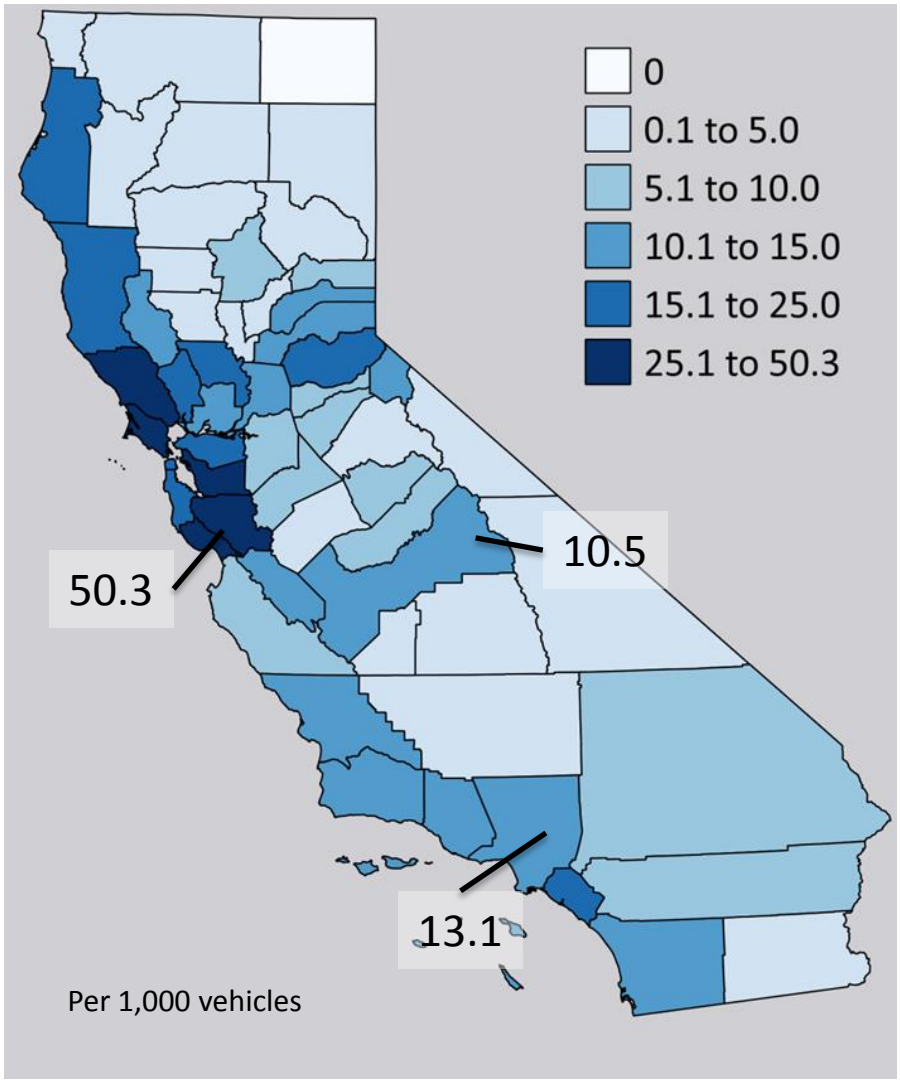
Rebates by County & Normalized to Comparable Sales
(thru May 2015)





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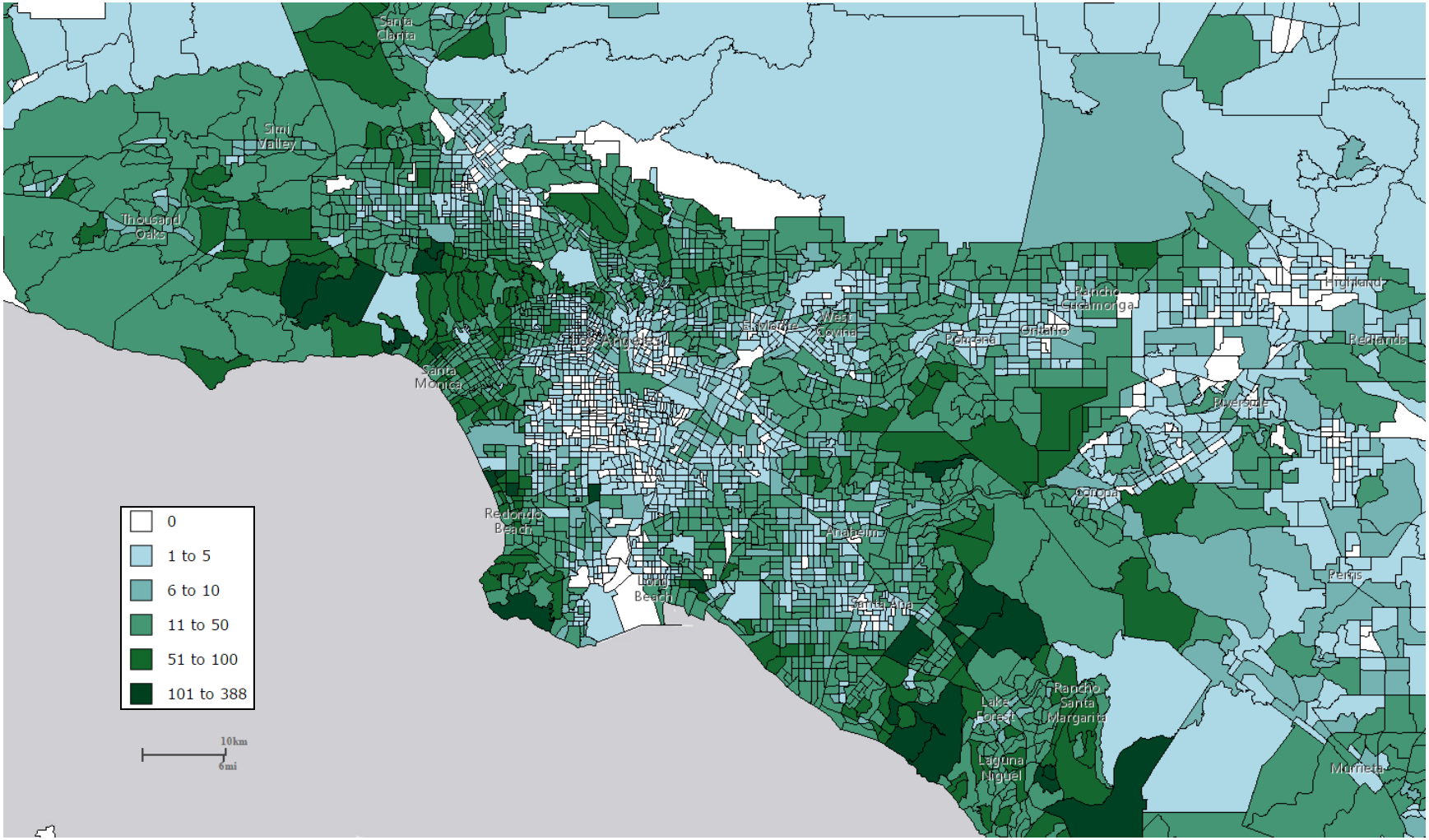
Rebates by Census Tract: Los Angeles Region



As of 10/25/2015

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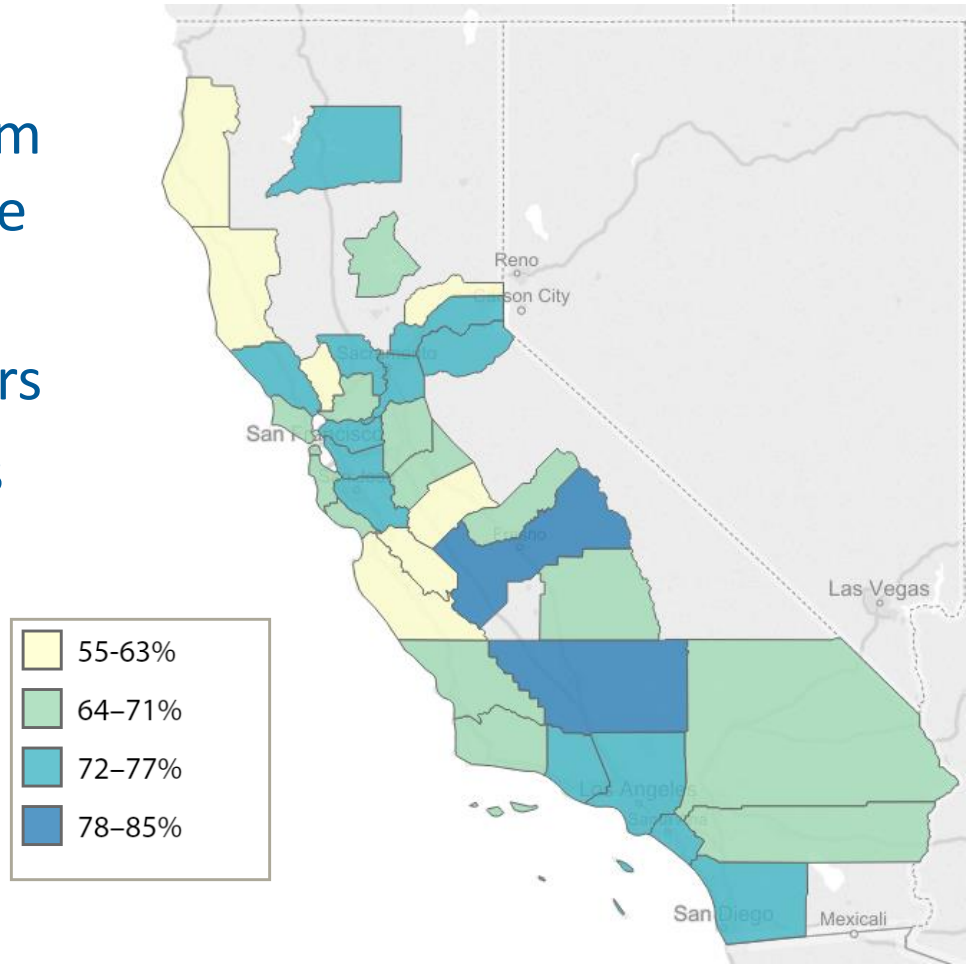
Rebated at what rate?

Rebated Vehicles / Eligible Vehicles

CVRP Participation (March 2010–March 2015)*

- Statewide, life-of-program average participation rate >74%
- >67% for PHEV consumers
- >81% for BEV consumers



*Topic brief available for download from the Program Reports page at https://cleanvehiclerebate.org

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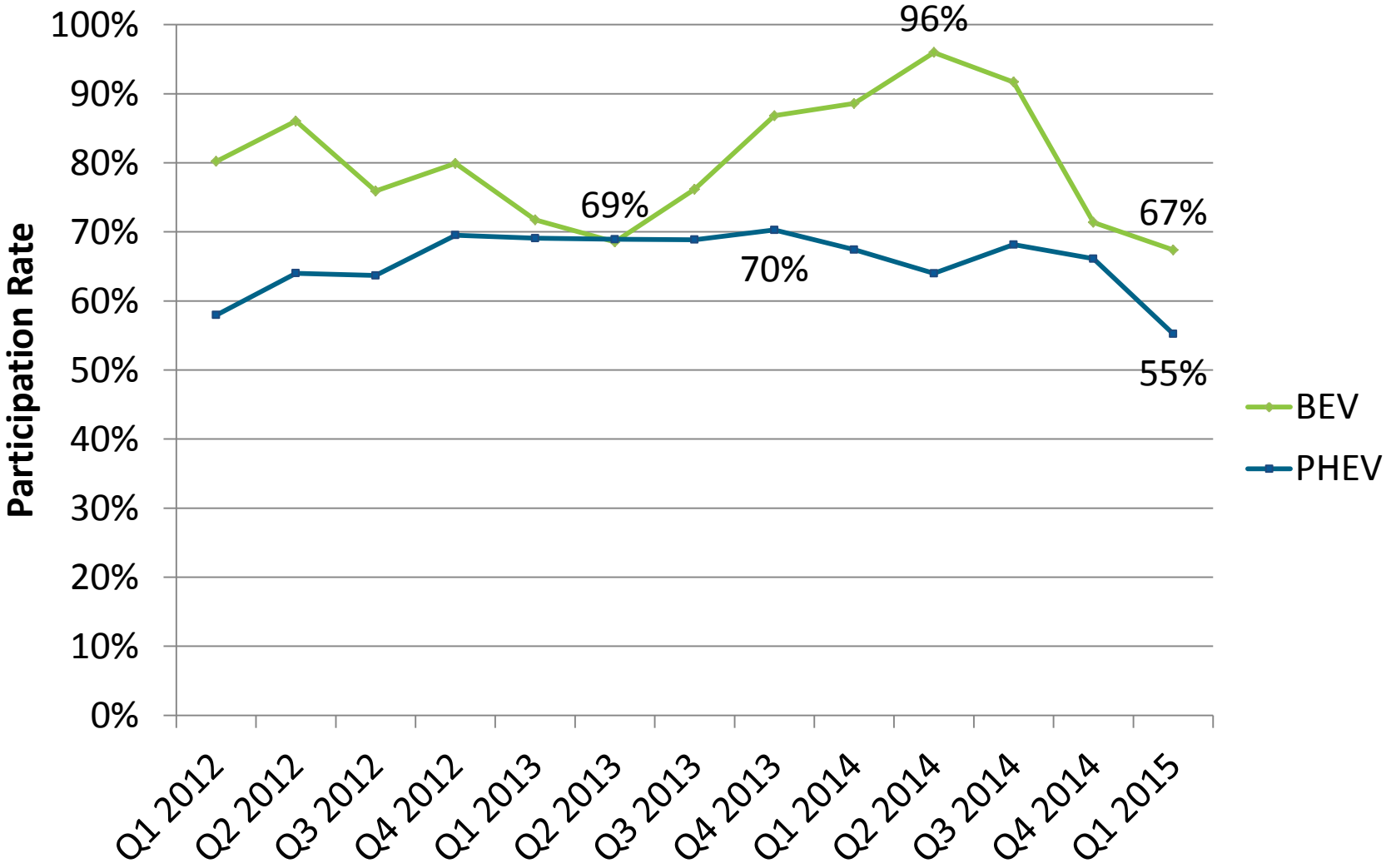
CVRP Participation by Major Vehicle Category



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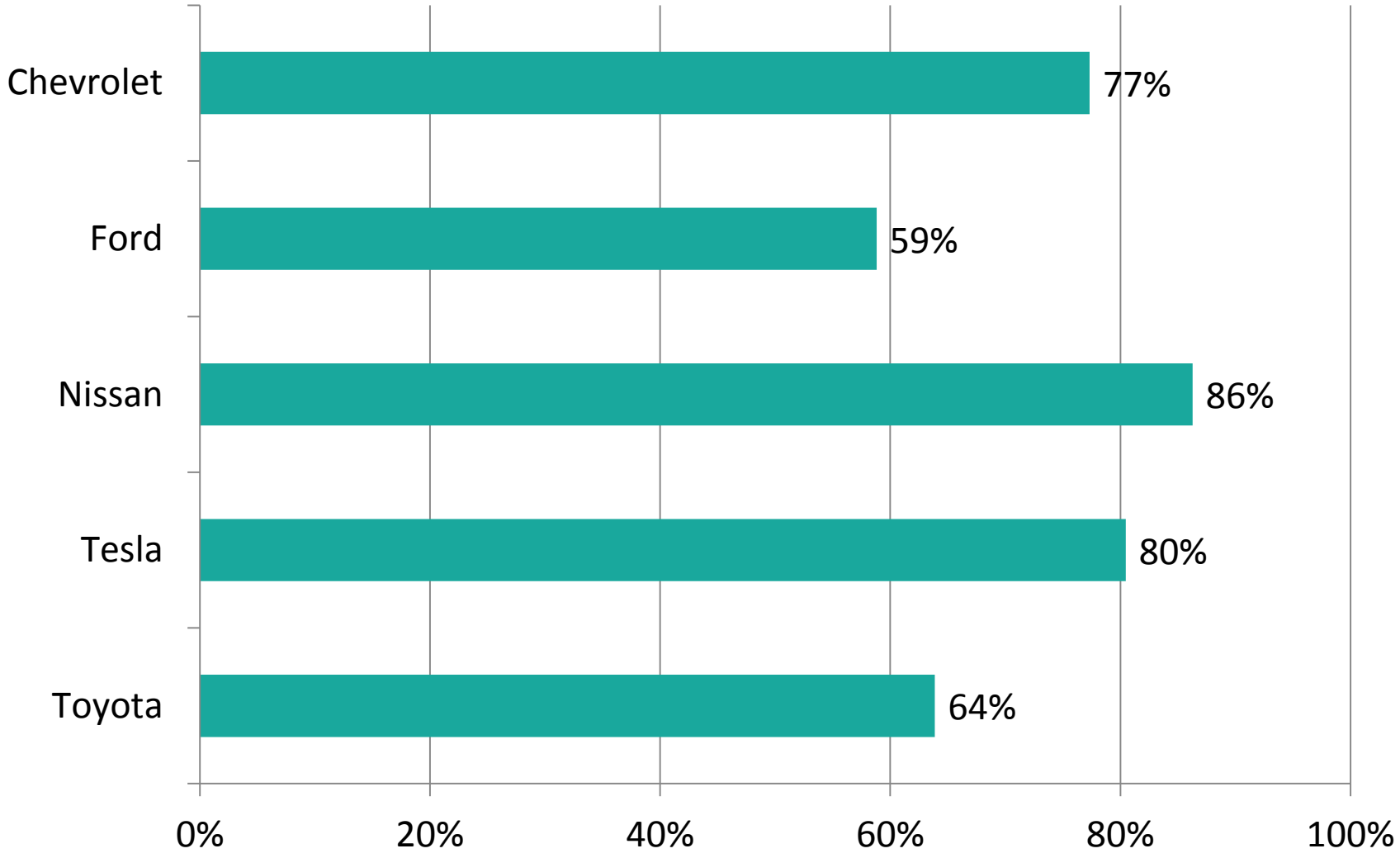
CVRP Participation by Major Vehicle Brand



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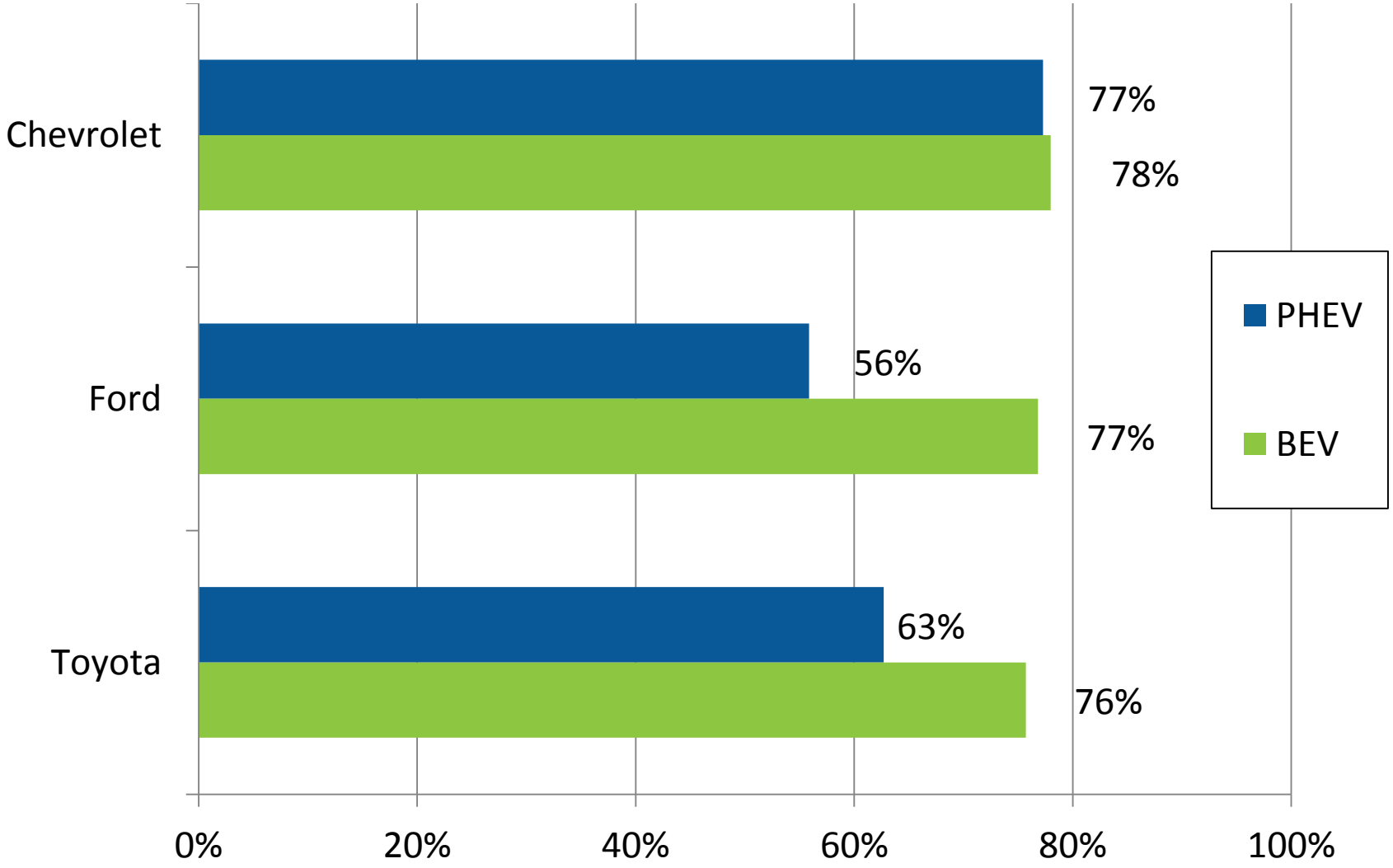
CVRP Participation by Vehicle Category
(for major brands offering multiple categories)



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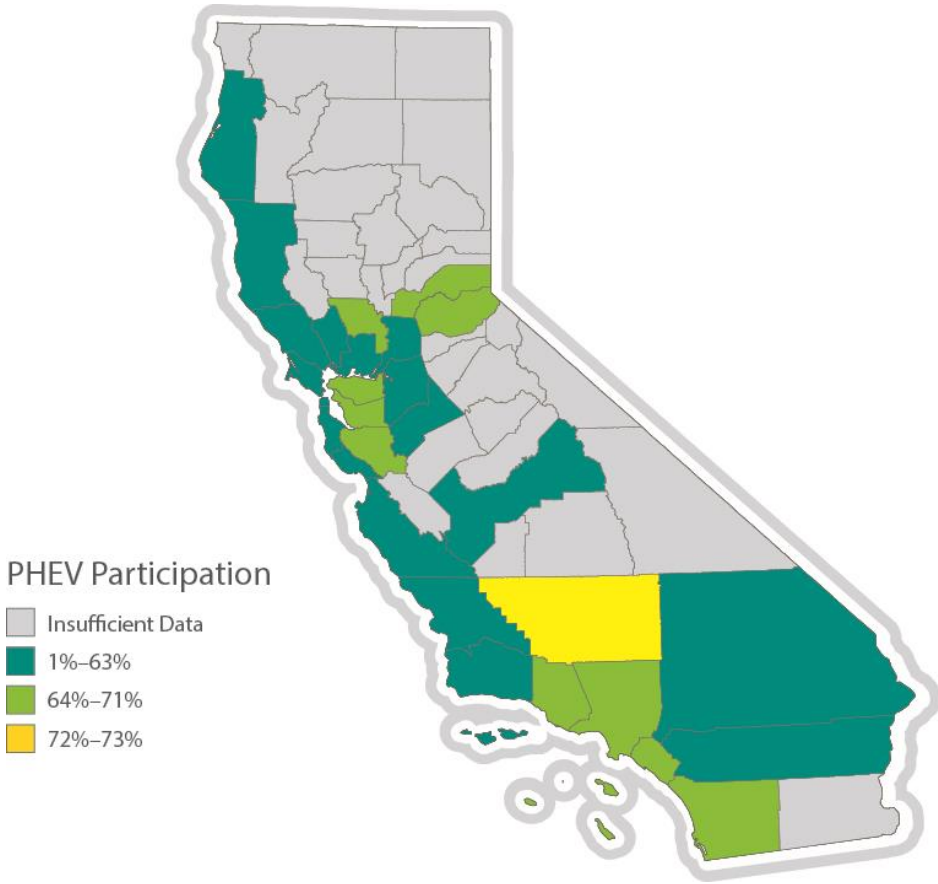
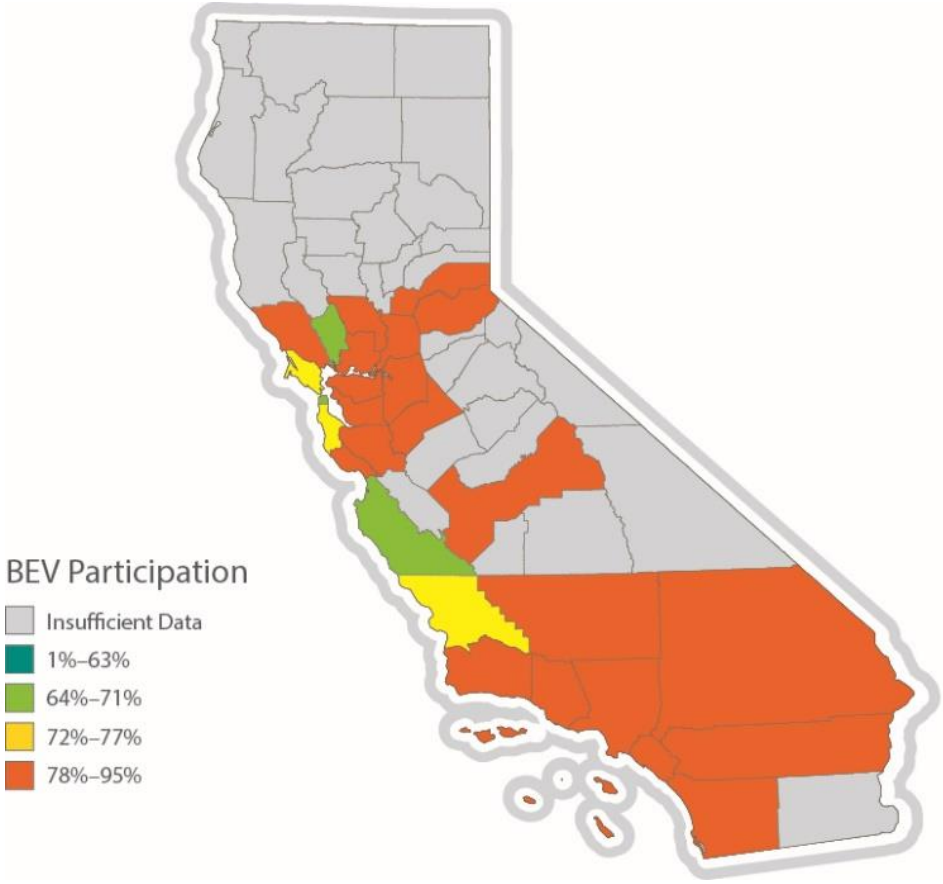
CVRP Participation by County: PHEVs and BEVs





Topic brief available for download at https://cleanvehiclerebate.org

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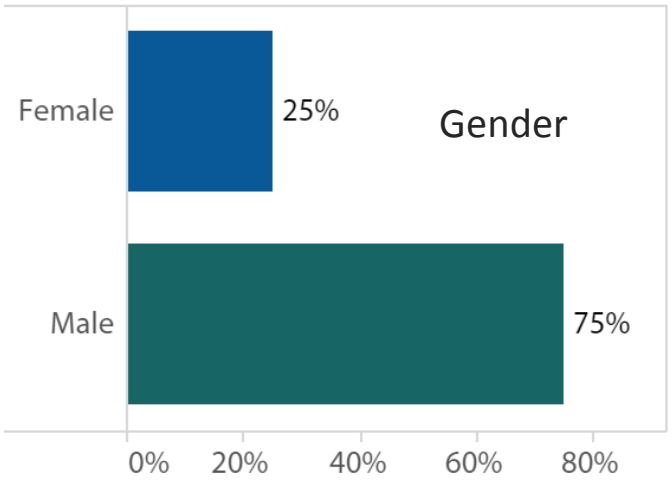
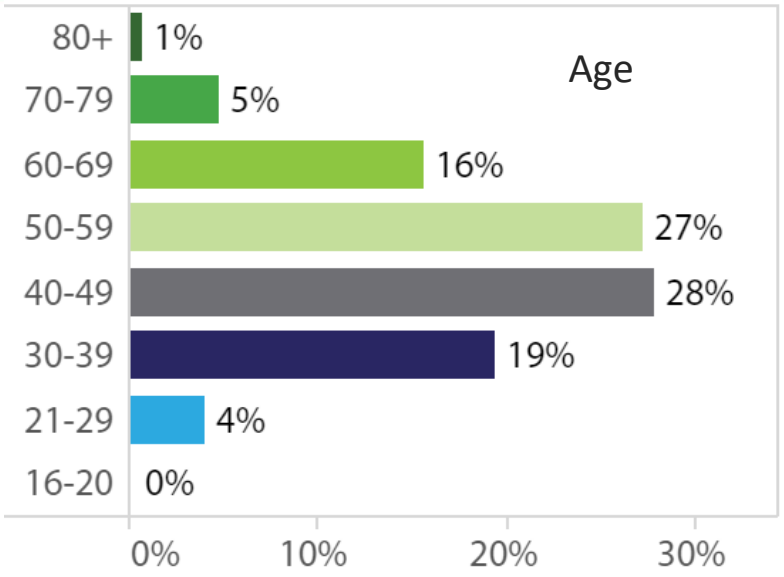
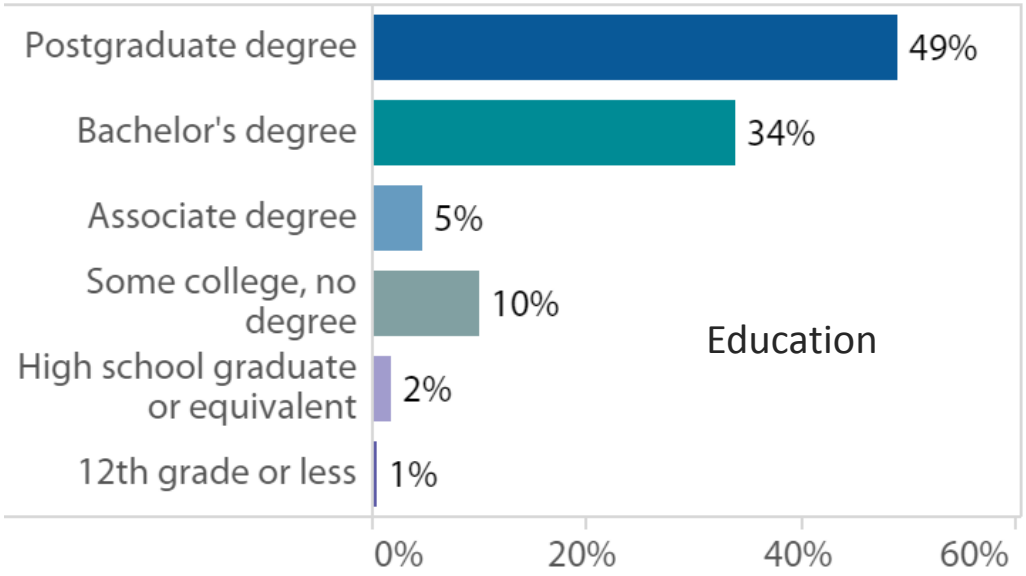
Who is participating?

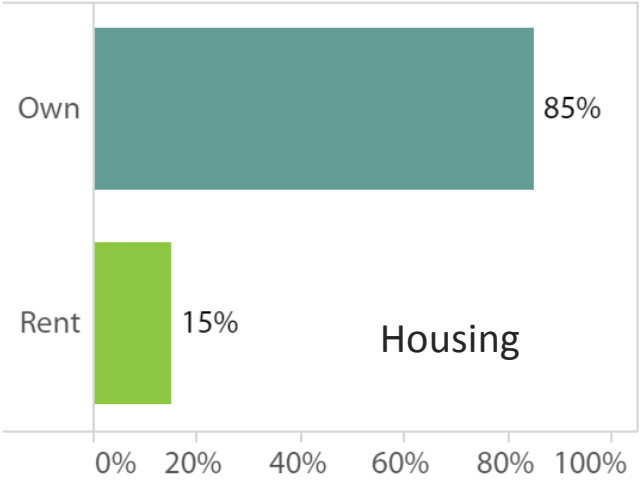
Rebated Consumers

Rebated Consumer Characteristics









Total Responses: 25,217

Overall Time Frame: 9/1/2012–11/15/2015

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Majority Characteristics of CVRP Consumers

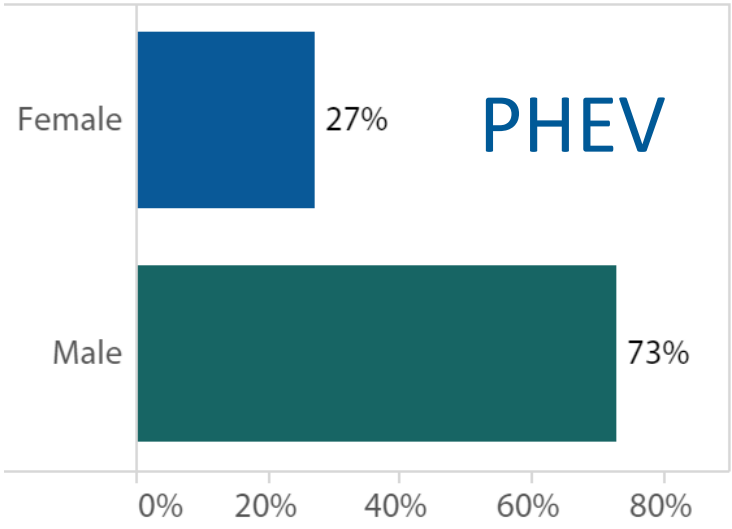
	CVRP rebate recipients (CVRP 2012–2015)	**New-vehicle "intenders"** (CHTS 2012)	**CA residents** (Census 2014)
40–59 years old	55%	52%	27%
Bachelor's	83%	66%	31%
Postgraduate	49%	34%	11%
Male	75%	49%	50%
White/Caucasian	64%	76%	62%
Detached homes	83%	75%	66%
$50–200k/y household income	61%	58%	51%

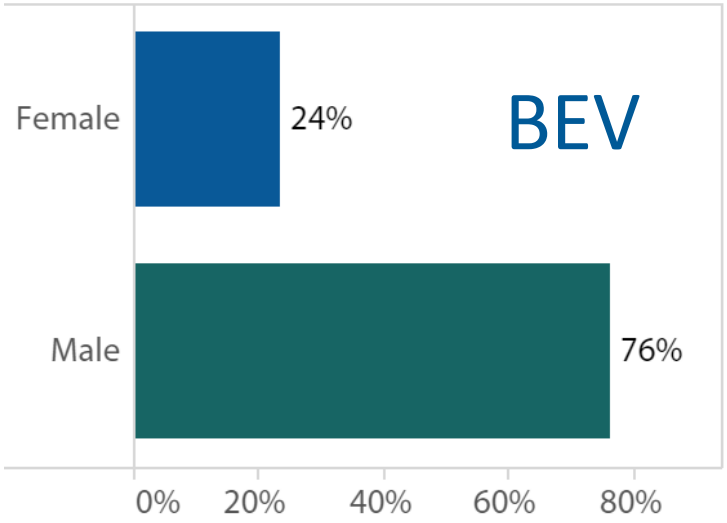
Weighted CHTS data

By Product Type

PHEV consumers tend to more often be:

- Older
- Female
- Renters
- Multi-unit dwellers
- 1-vehicle households
- Lower income





Total PHEV Gender Responses: 9,266, BEV Gender Responses: 14,942
Overall Time Frame: 9/1/2012–11/15/2015

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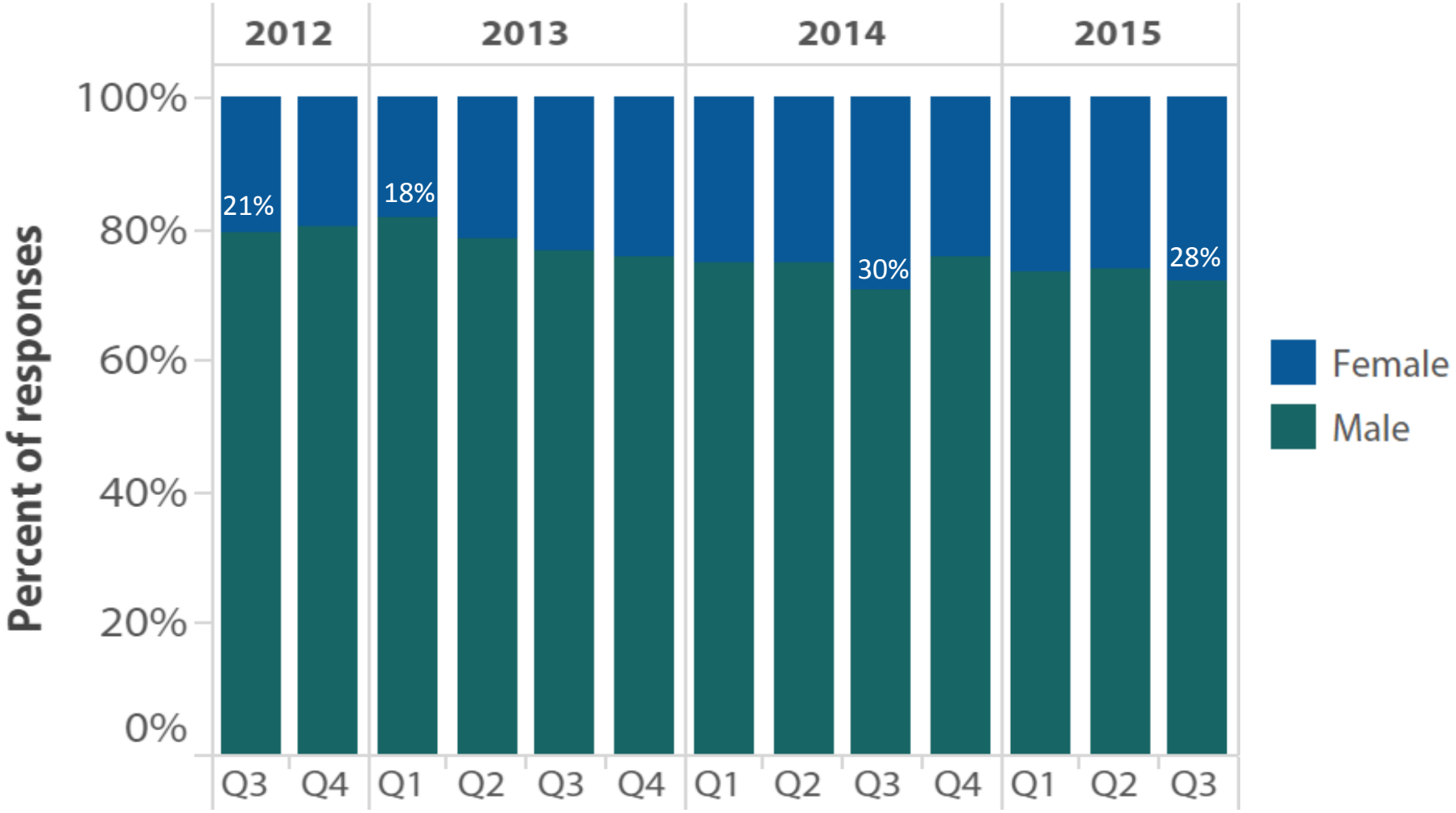
Over Time: Gender



Total Responses: 23,371
Overall Time Frame: 9/1/2012–9/30/2015

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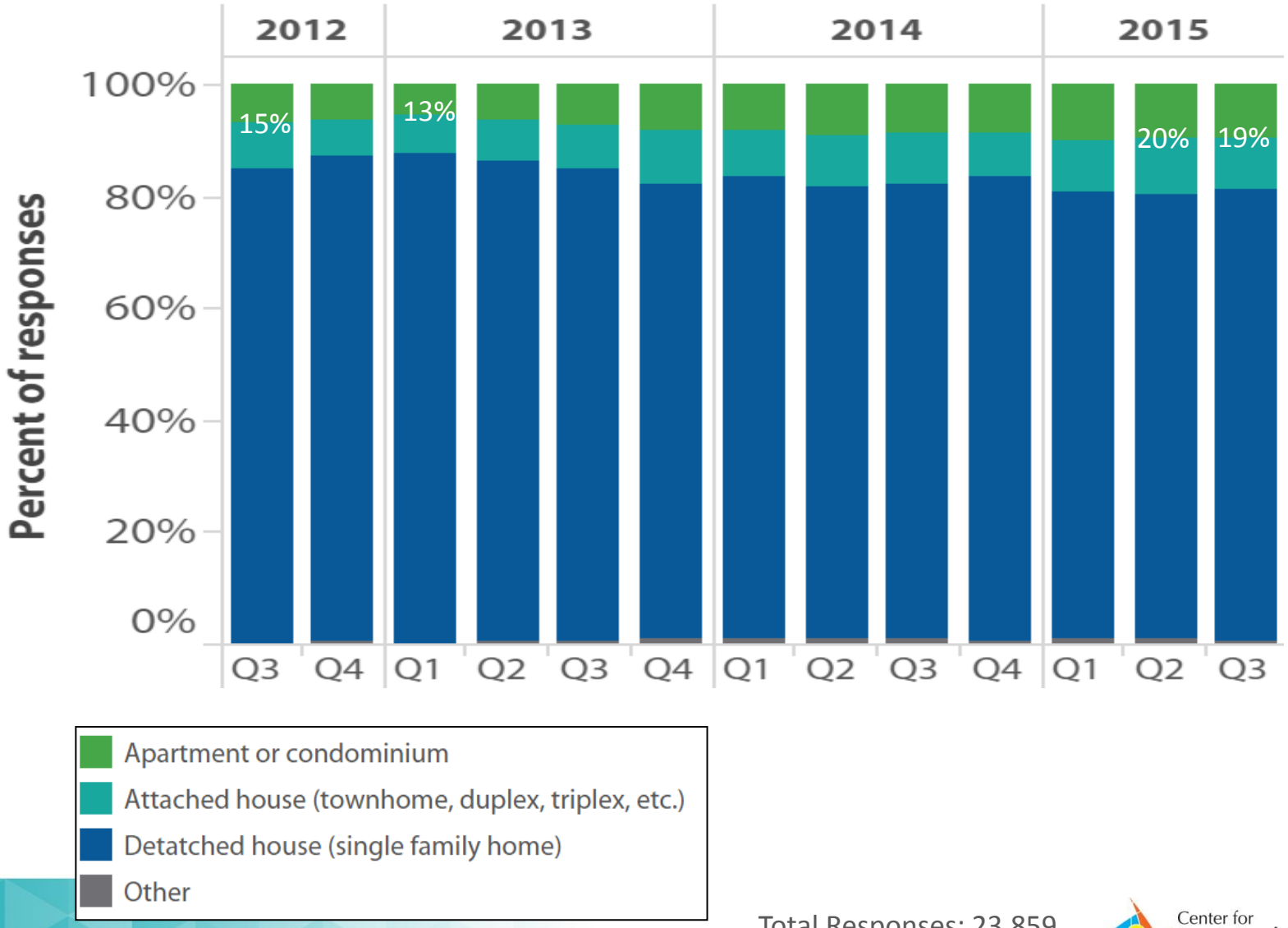
Rebate Recipients Over Time: Housing Type



Total Responses: 23,859

Overall Time Frame: 9/1/2012–9/30/2015

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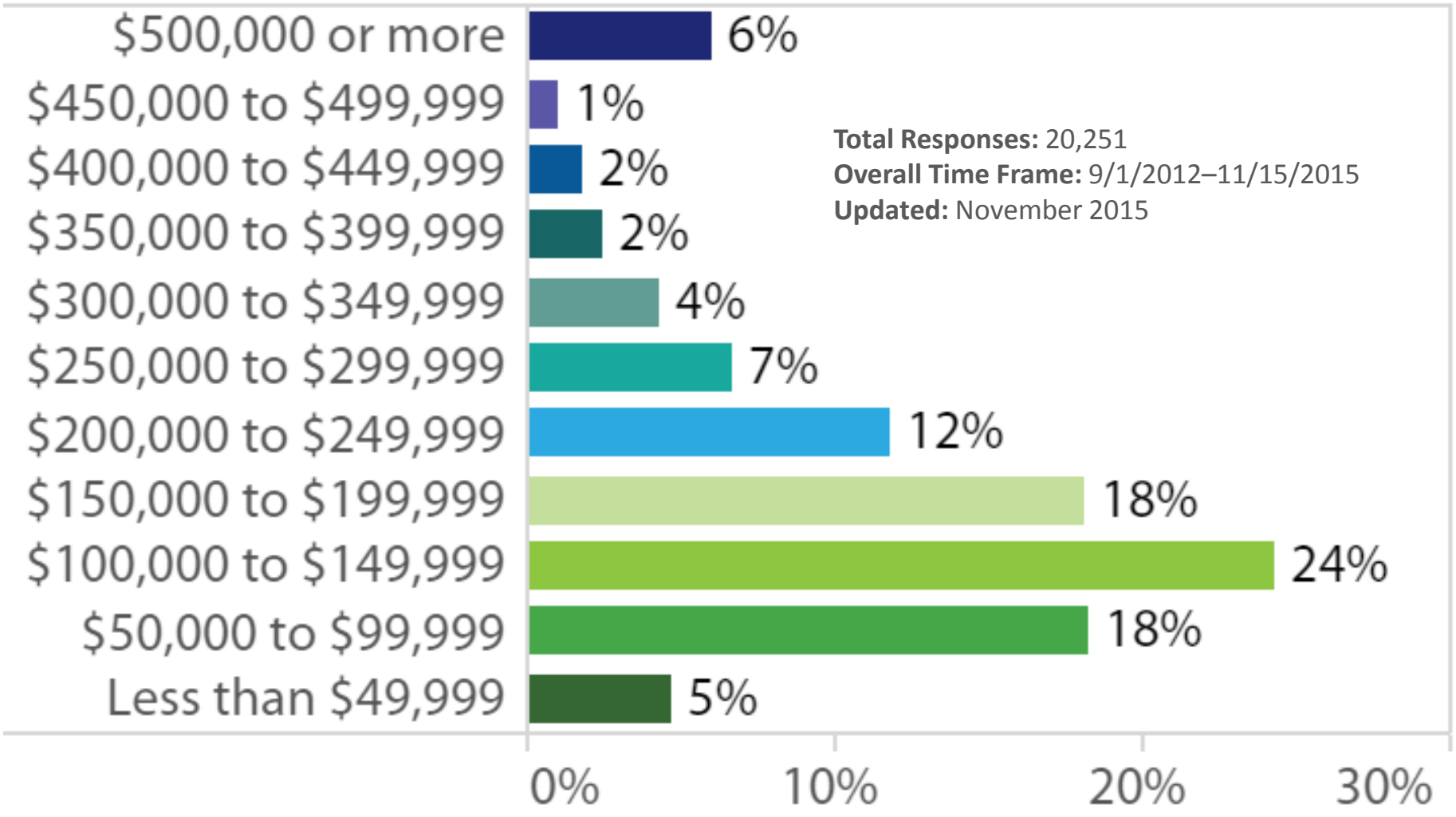
Spotlight: Income Comparisons

Rebate Recipient Household Income Distribution



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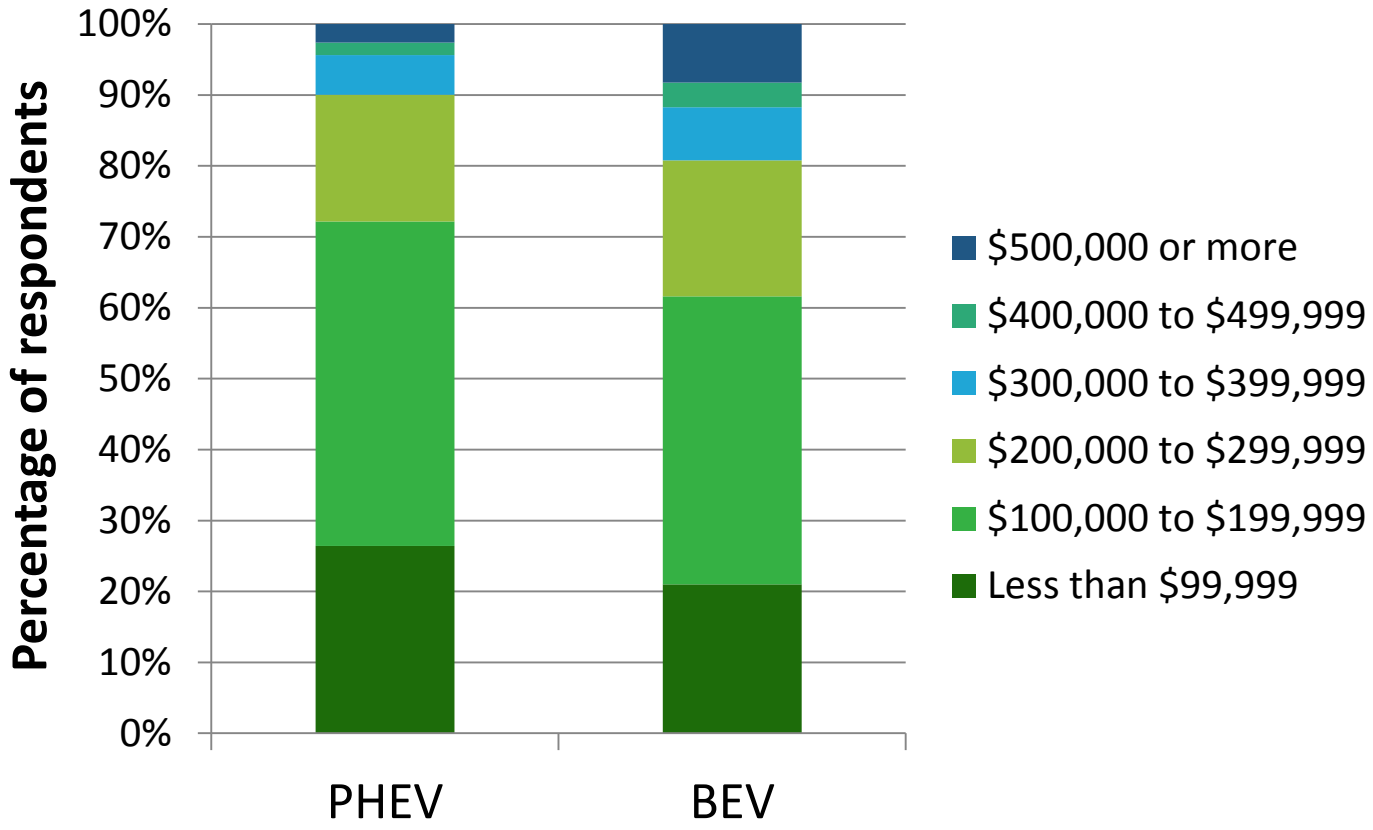
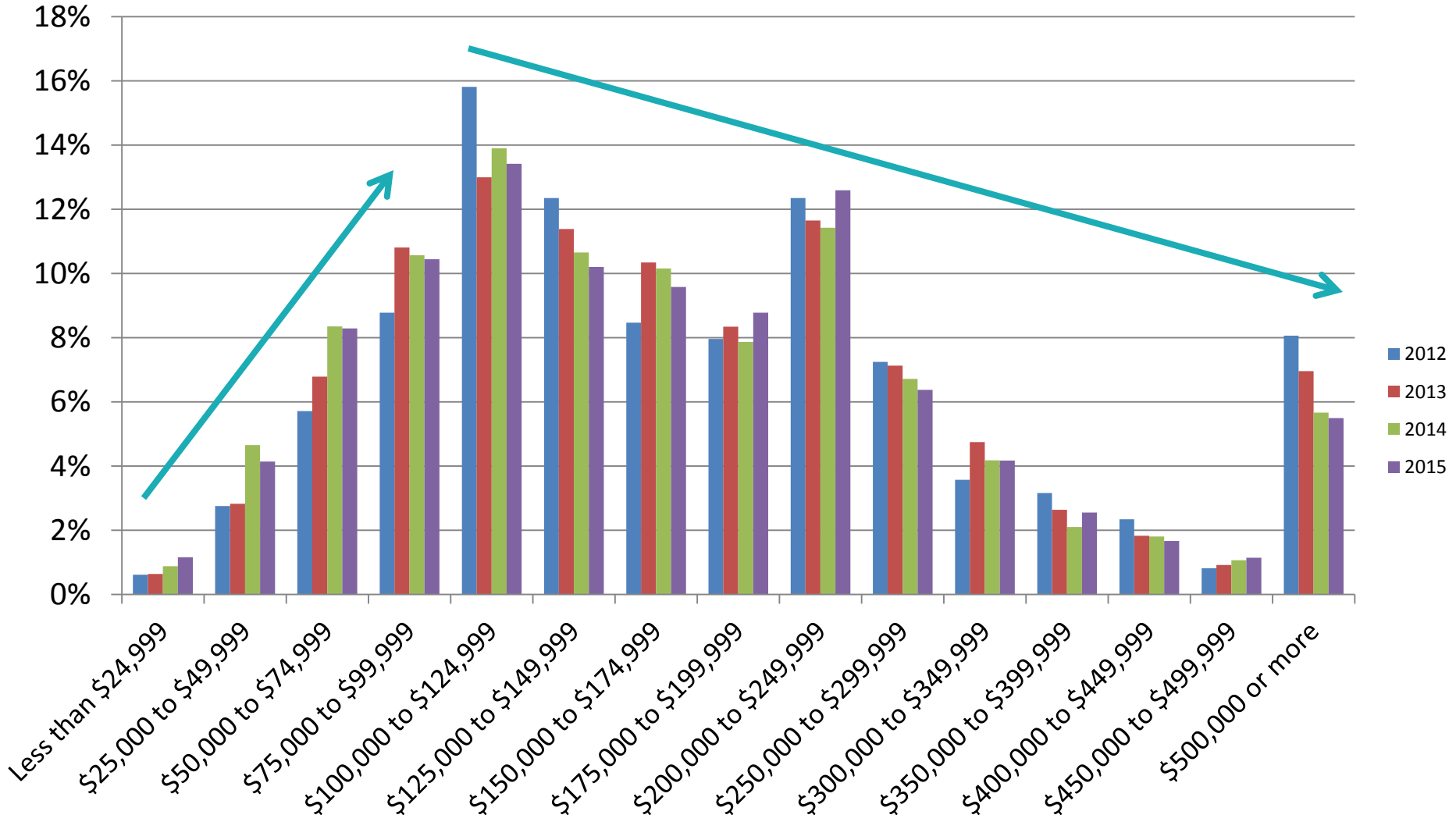
Rebate Recipient Household Income by Product Type



Total Responses: 20,251
Overall Time Frame: 9/1/2012–11/15/2015

CVRP Income Dist. Through Time



Total Responses: 20,251
Overall Time Frame: 9/1/2012–11/15/2015

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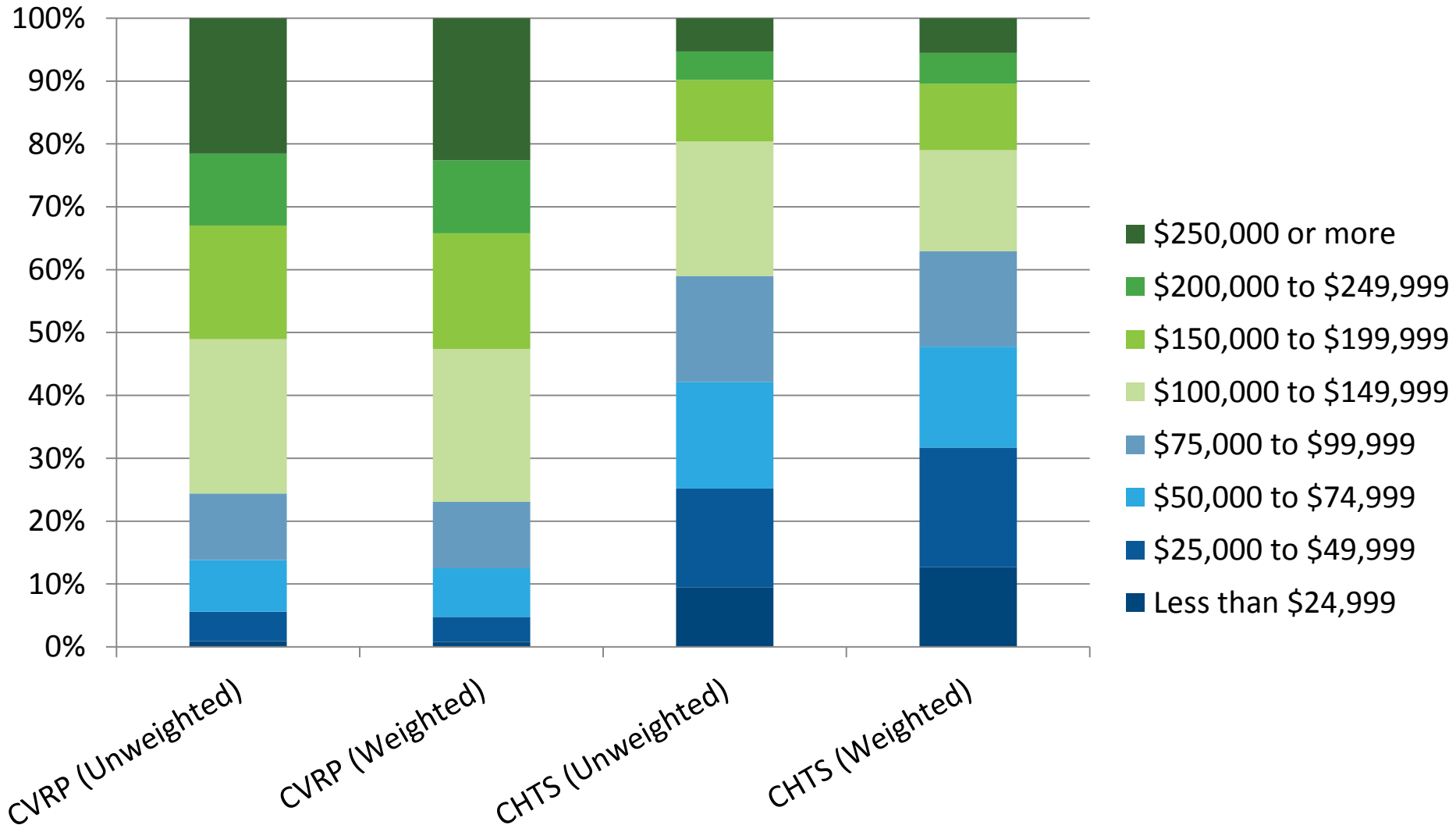
New-vehicle “intenders” and CVRP Income Distributions: Unweighted vs. Weighted



Weighted CVRP (2012-2014) & CHTS (2012) data

California Median Household (HH) Incomes

California population (Census 2014)	**New-vehicle "intenders"** (CHTS 2012)	**CVRP rebate recipients** (CVRP 2014)
~$61,500	$75,000-$99,999	$150,000-$174,999

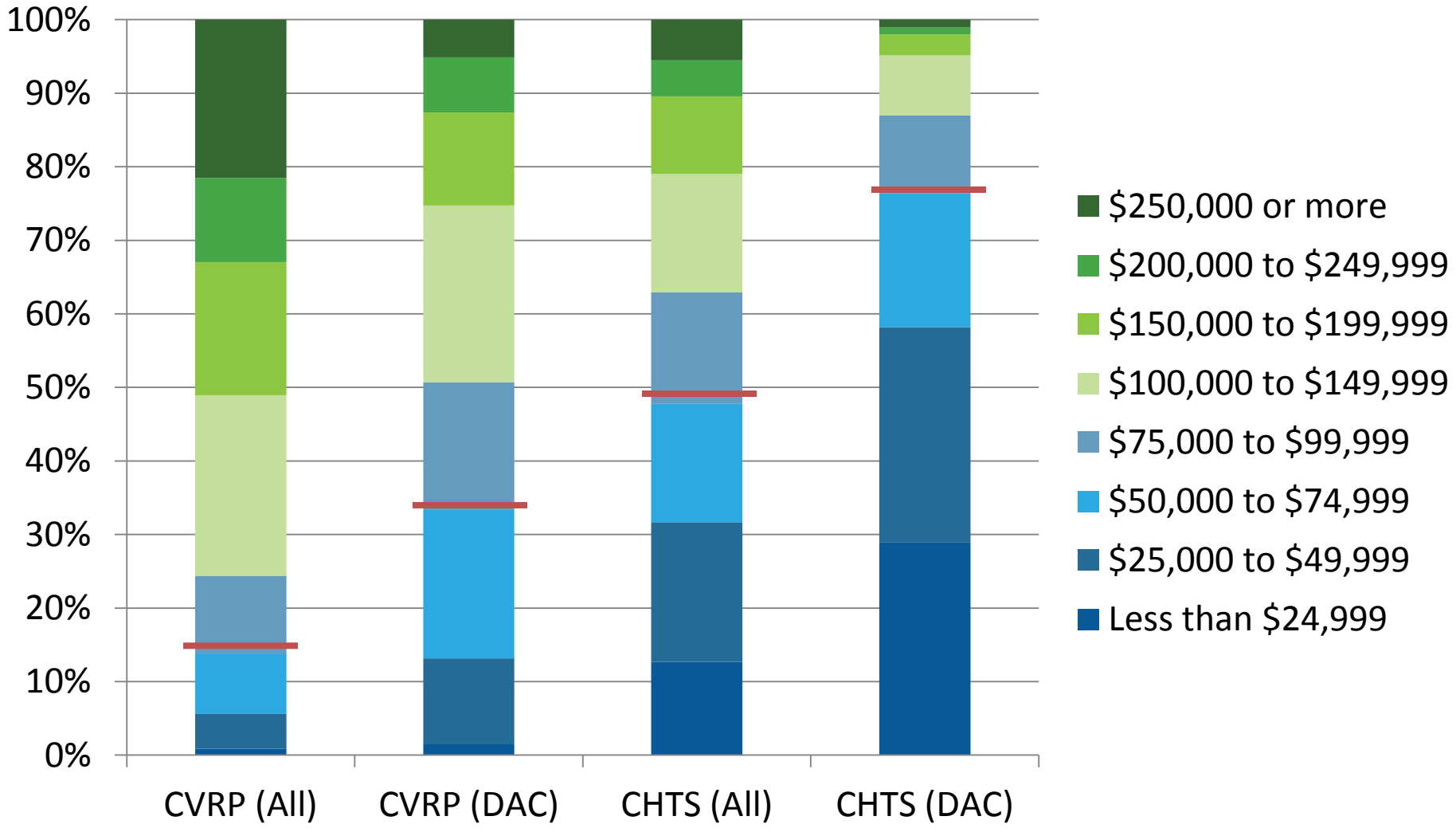
Weighted or unweighted CVRP (2014) & weighted or unweighted CHTS (2012) data

CA Median HH Incomes: All vs. DAC

	New-vehicle "intenders" (CHTS 2012)	**CVRP rebate recipients** (CVRP 2014)
All:	$75,000-$99,999	$150,000-$174,999
DAC:	$25,000-$49,999	$75,000-$99,999
DAC/All	25-67%	43-67%

Weighted or unweighted CVRP (2014) & weighted CHTS (2012) data

New-vehicle “intenders” and CVRP Income Distributions: All vs. DACs



Weighted CVRP (2014) & weighted CHTS (2012) data

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Rebate Recipients and New-vehicle "intenders" with Low-to-Moderate Income

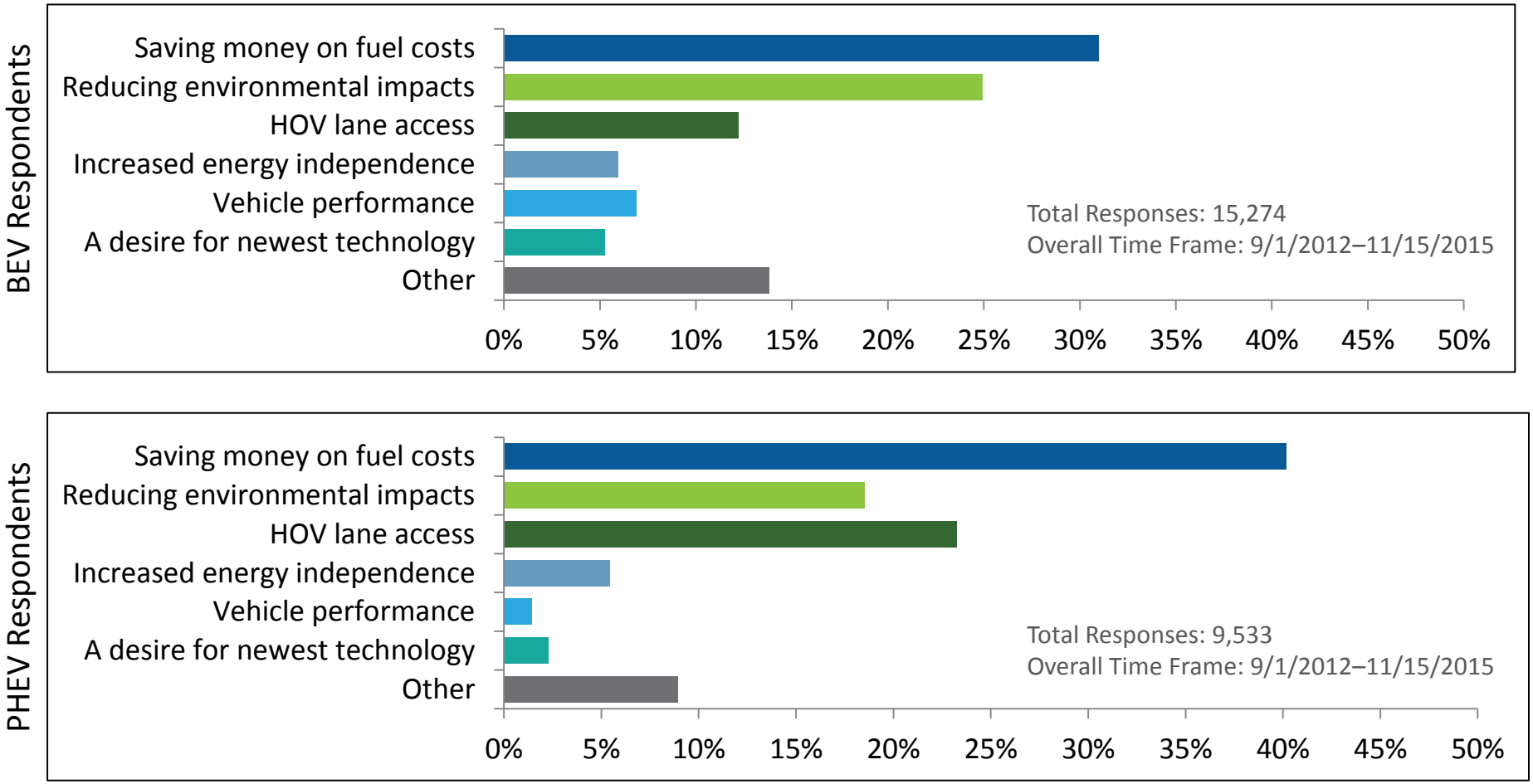
	LMI (CVRP, 2014)	LMI (CHTS, 2012)
CA Overall	4% - 10%	28% - 42%
In DACs	10% - 25%	57% - 71%

Weighted CVRP (2014) & weighted CHTS (2012) data

Why are they purchasing/leasing?

Rebated Consumers

Primary Purchase Motivations: BEV vs. PHEV



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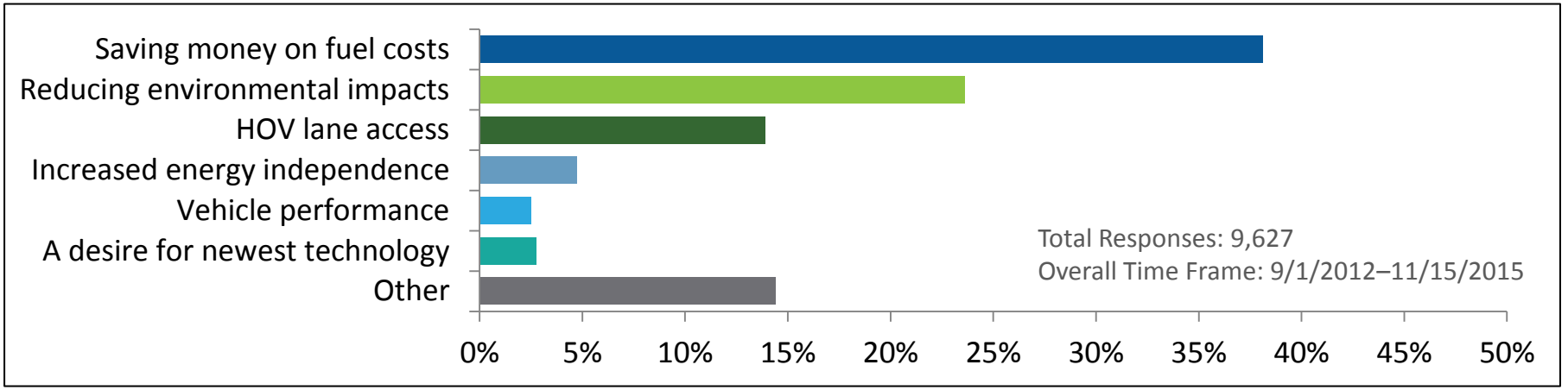
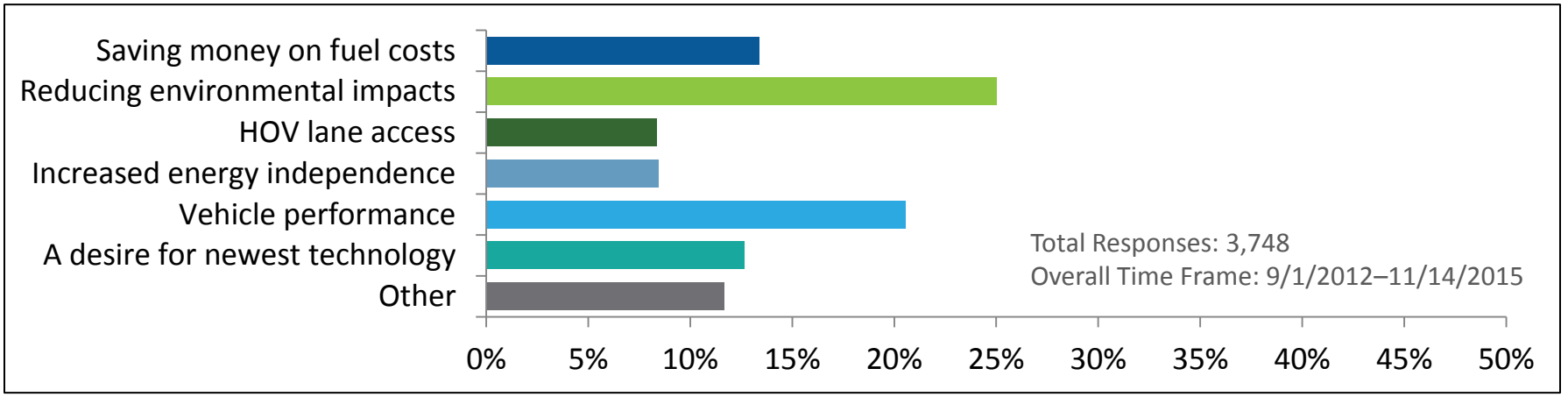
Primary Purchase Motivations: Non-Tesla vs. Tesla BEV

BEV Leases



Tesla Purchases



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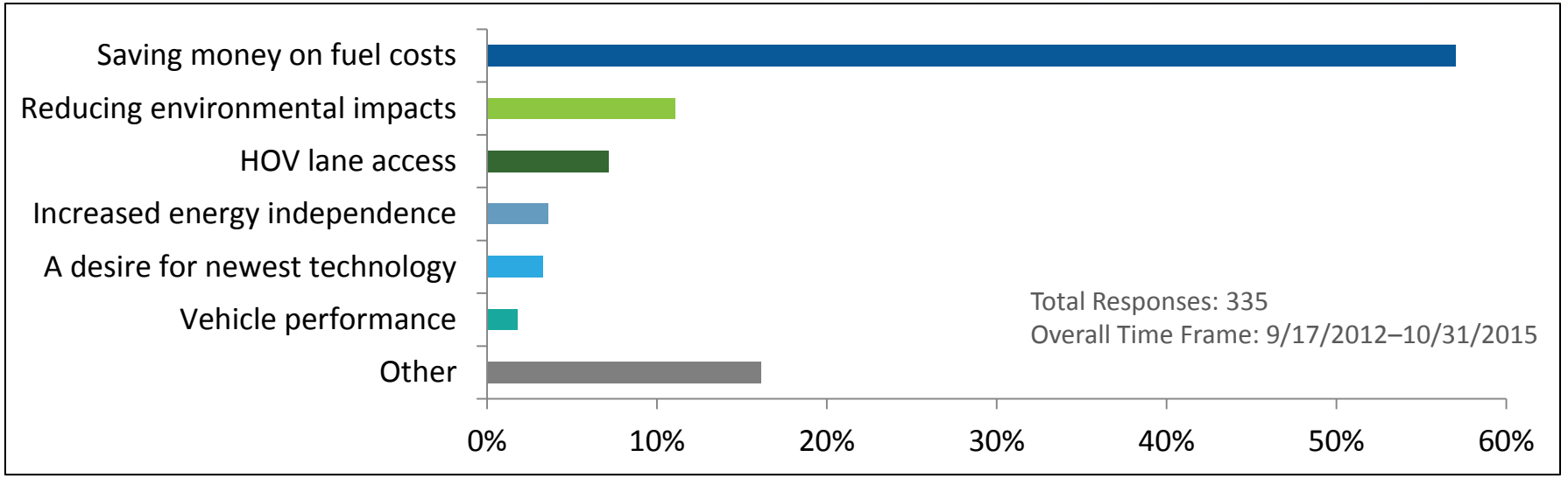
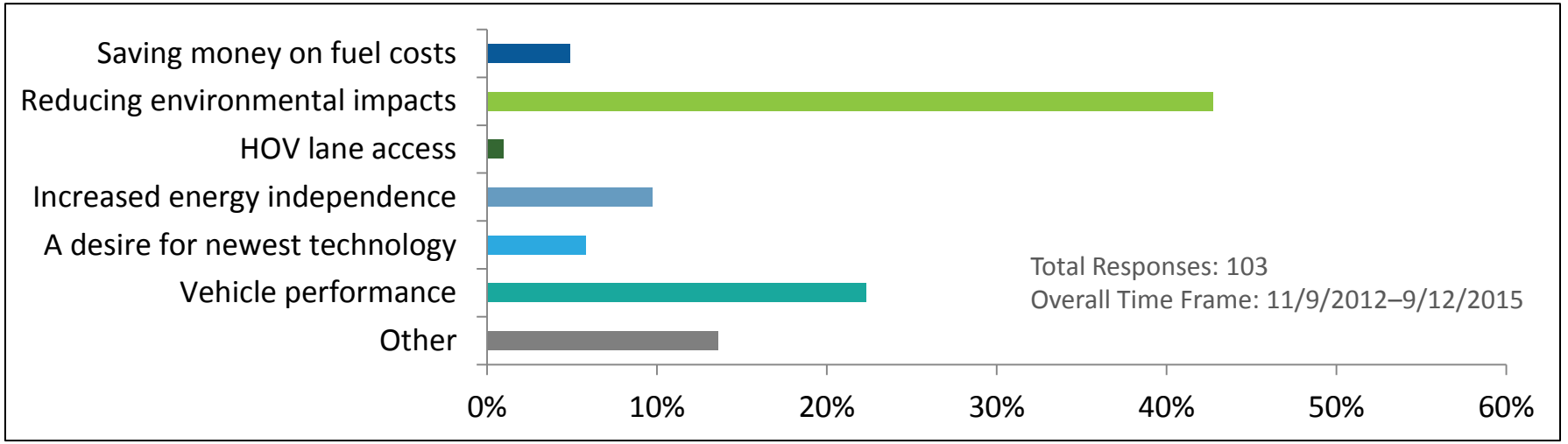
Primary Purchase Motivations: Non-Tesla vs. Tesla BEV

San Bernardino/Riverside BEV Leases



Marin Tesla Purchases



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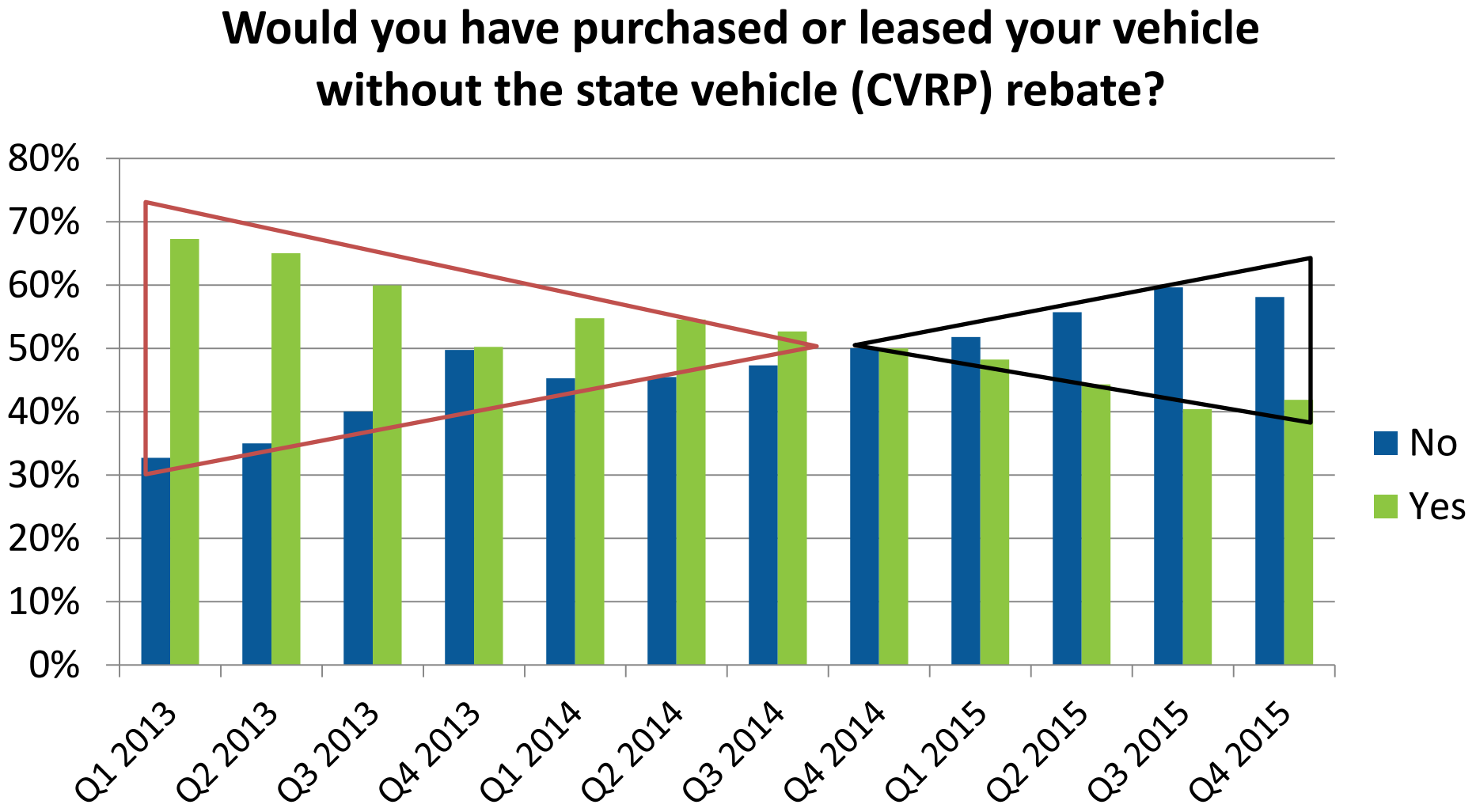
CVRP Impact on Purchase/Lease



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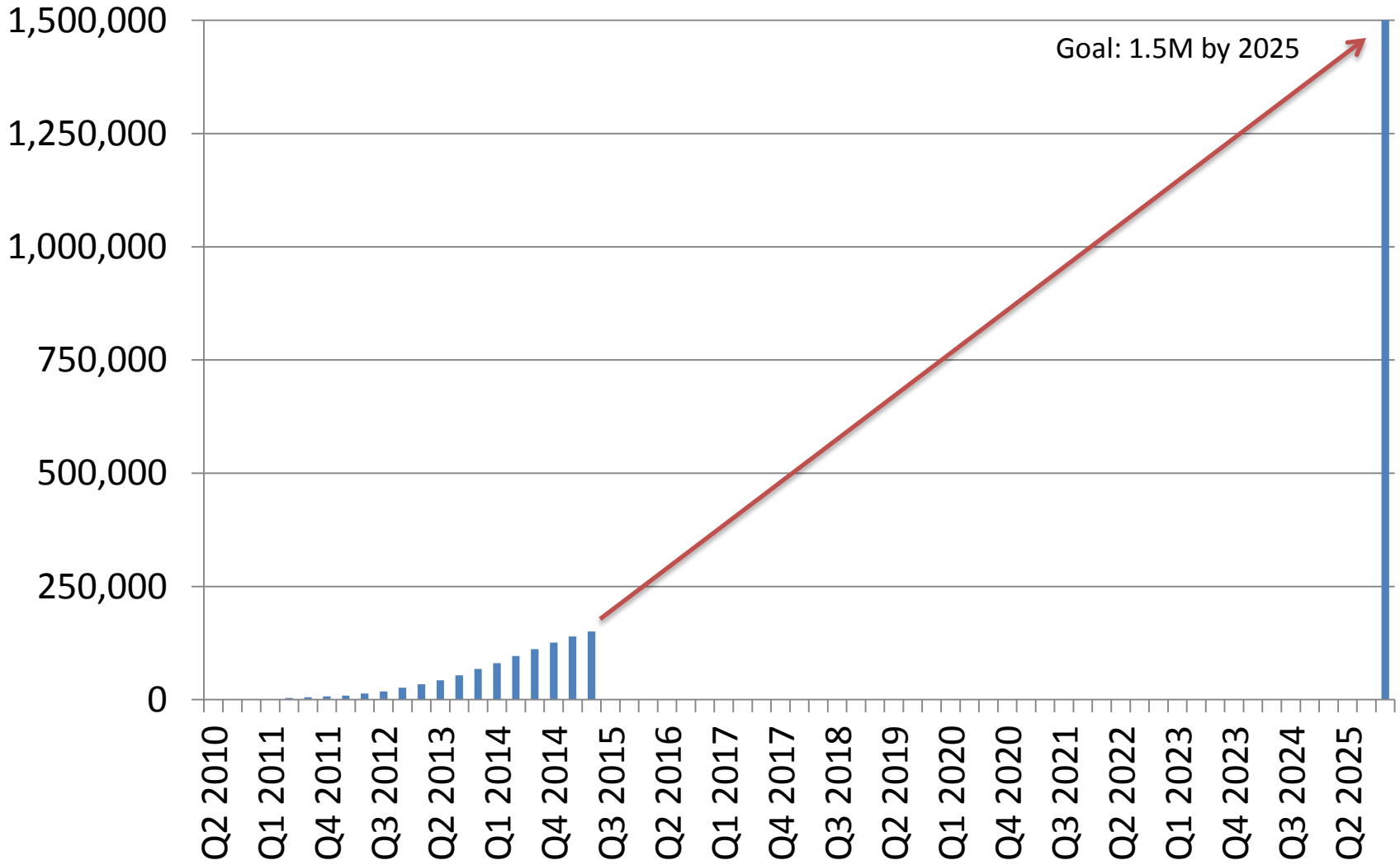
Parting Thoughts

Cumulative CA Zero Tailpipe Emission Vehicles (ZEVs)



Most recent quarter partial (data thru May 2015).

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Thank You

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

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Comparison Groups & Data sources

- **General population**:
  - U.S. Census Bureau, 2009-2013 5-Year American Community Survey
- **Population intending to buy a new vehicle within 5 years**:
  - Caltrans, 2012 California Household Travel Survey (CHTS)
  - Note: CHTS was drawn from a representative sample, but how well do new-vehicle "intenders" represent state's new-vehicle buyers?
- **Clean Vehicle Rebate Project (CVRP)** :
  - Consumers:
    - CSE, California Air Resources Board CVRP "EV Consumer Survey," 2014 data or "EV Consumer Survey" and "Clean Vehicle Consumer Survey," 2012–2015 data
  - Vehicles:
    - CSE, California Air Resources Board CVRP rebate application data, March 2010–November 2015 (or appropriate subset)
- **Overall vehicle markets:**
  - Polk registration data March 2010–May 2015