

# CVRP Implementation Status Update

CVRP Long-Term Planning Workshop

8 December 2015, Sacramento CA

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



Center for  
Sustainable Energy™

# 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



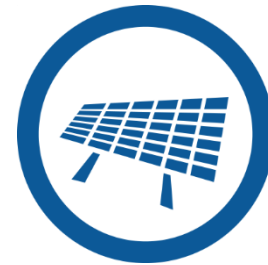
Distributed  
Generation



Energy  
Efficiency



Energy  
Storage



Renewable  
Energy



# 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



**Plug-in Electric Vehicle Benefits**

Eligibility for CVRP:

- 1 Individual, business, nonprofit or government entity based in California or has a California-based affiliate
- 2 Purchase or lease a NEW eligible vehicle
- 3 Own/lease the vehicle for at least 30 consecutive months (including CA DMV registration)
- 4 Apply for rebate within 18 months of vehicle purchase or lease date

## Consumer & Dealer Outreach



California Environmental Protection Agency  
**Air Resources Board**

**CALIFORNIA**  
PLUG-IN ELECTRIC VEHICLE COLLABORATIVE

## Stakeholder Engagement

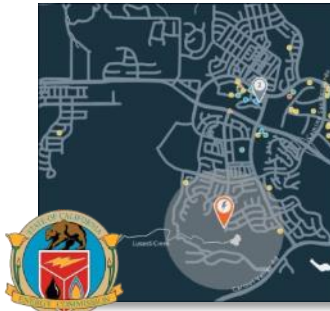


**GREEN FLEET ACTION PLAN**  
A-F-0613

INTEGRATION  
COUNTY OF SAN DIEGO  
DEPARTMENT OF GENERAL SERVICES

MARKET ASSESSMENT FOR ALTERNATIVE FUEL VEHICLE TRAINING IN CALIFORNIA  
November 2011

## Fleet Assistance & Clean Cities



UNIVERSITY OF CALIFORNIA

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



Secondary Use Applications of Plug-in Electric Vehicle Lithium-Ion Batteries

## 2<sup>nd</sup> Life Battery Research & Vehicle-Grid Integration

# 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** <sup>SM</sup>

## 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





# **CVRP Implementation Overview**





# Rebate Processing



# Application: Simplicity is Key

**Step 1**

Go to [cleanvehiclerebate.org](http://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



Administered by CSE for the  
California Air Resources Board

[Español](#)

[Get Started](#) [Tools and Resources](#) [Help](#)

[Log In](#)

## Drive clean and save

California residents get up to \$5,000 for the purchase or lease of a new, eligible zero-emission or plug-in hybrid light-duty vehicle.

New to CVRP?

Existing applicant?

[Apply for a rebate](#)

[Check status](#)

California Environmental Protection Agency  
**Air Resources Board**

## Vehicles and eligibility

Apply within 18 months of purchase/lease of an eligible vehicle and before rebate funds are exhausted.

See [complete eligibility guidelines](#).



Tesla Roadster



smart electric fortwo  
cabriolet



GEM e2



Toyota Prius Plug-In Hybrid



Mitsubishi i-MiEV

# Project Website: Accessibility



Administrado por CSE en nombre de la Junta de Recursos del Aire de California

English

Dónde Empezar

Herramientas y Recursos

Ayuda

Iniciar sesión

## Maneje limpio y ahorre

Los residentes de California pueden recibir hasta \$5000 para la compra o el alquiler de un vehículo nuevo elegible, que puede ser un vehículo de cero emisiones o un vehículo híbrido enchufable liviano.

¿Es su primera vez en el CVRP?

Solicite un reembolso

¿Ya hizo una solicitud?

Ver el estado de su solicitud

California Environmental Protection Agency  
 Air Resources Board

## Vehículos y elegibilidad

Presente su solicitud dentro de los 18 meses posteriores a la compra o el alquiler de un vehículo elegible y antes de que se agoten los fondos para reembolsos. Consulte [los lineamientos de elegibilidad completos](#).



Vantage EVX1000



Chevrolet Spark EV



GEM e2



Hyundai Sonata Plug-in Hybrid



Tesla Roadster

# Application: Simplicity is Key

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

## Apply for a rebate

Administered by CSE for the California Air Resources Board, the Clean Vehicle Rebate Project (CVRP) offers up to \$5,000 in electric vehicle rebates for the purchase or lease of new, eligible zero-emissions and plug-in hybrid light-duty vehicles.

1. Choose vehicle 2. Accept terms 3. Fill out application 4. Upload documents

### Submit CVRP application



Hyundai Tucson Fuel Cell  
2015-2016  
\$5,000.00

#### APPLICANT INFORMATION

Applicant Type \*

- Select a value -

First Name \*

Last Name \*

Phone \*

Applicant Email \*

Re-enter Email \*

All notifications about your rebate will be delivered to this email address.

Password \*

Confirm password \*

Please create a password to log back into your CVRP account.

Street Address \*

City \*

State \*

California

Zip Code \*

Mailing Address  
Check if different.

#### VEHICLE INFORMATION

VIN \*

Vehicle Year \*

- Select a year -

Date of purchase or lease start date \*

Date



# Application: Simplicity is Key

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

When you are finished uploading your documents, click Submit Documents at the bottom of the page. You must submit your supporting documents by March 3, 2015 or your application will be cancelled.

Document	Status
Signed Application Form <a href="#">?</a>	Not Uploaded
<input type="button" value="Choose File"/> No file chosen <input type="button" value="Upload"/>	
Purchase/Lease Agreement <a href="#">?</a>	Not Uploaded
<input type="button" value="Choose File"/> No file chosen <input type="button" value="Upload"/>	
Proof of Vehicle Registration <a href="#">?</a>	Not Uploaded
<input type="button" value="Choose File"/> No file chosen <input type="button" value="Upload"/>	
Proof of California Residency <a href="#">?</a>	Not Uploaded
<input type="button" value="Choose File"/> No file chosen <input type="button" value="Upload"/>	

**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


# Processing: Automation is Key

**REBATE INFORMATION**

CVRP application number A-146861	Applicant name Testy Tester	Applicant email jennifer.rey@
Vehicle model Kia Soul EV	Requested rebate amount \$2500.00	

**SPECIAL ELECTRICITY RATES FROM YOUR UTILITY**


[Click here to find out more information and ways to save when you charge](#)    [Click here to access lower electricity rates to fuel your car at home »](#)



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

Subject: Re: Check Sent - Clean Vehicle Rebate Project

We are pleased to inform you that we mailed your Clean Vehicle Rebate Project (CVRP) check via USPS on 4/14/2015 to the address on your application. This is what the envelope with the check looks like:



If you do not receive your check within 30 days, please contact us to confirm your mailing address.

Now that your rebate is approved, will you help us by answering a few questions about your experience purchasing or leasing your EV?

[Click Here To Start Survey](#)

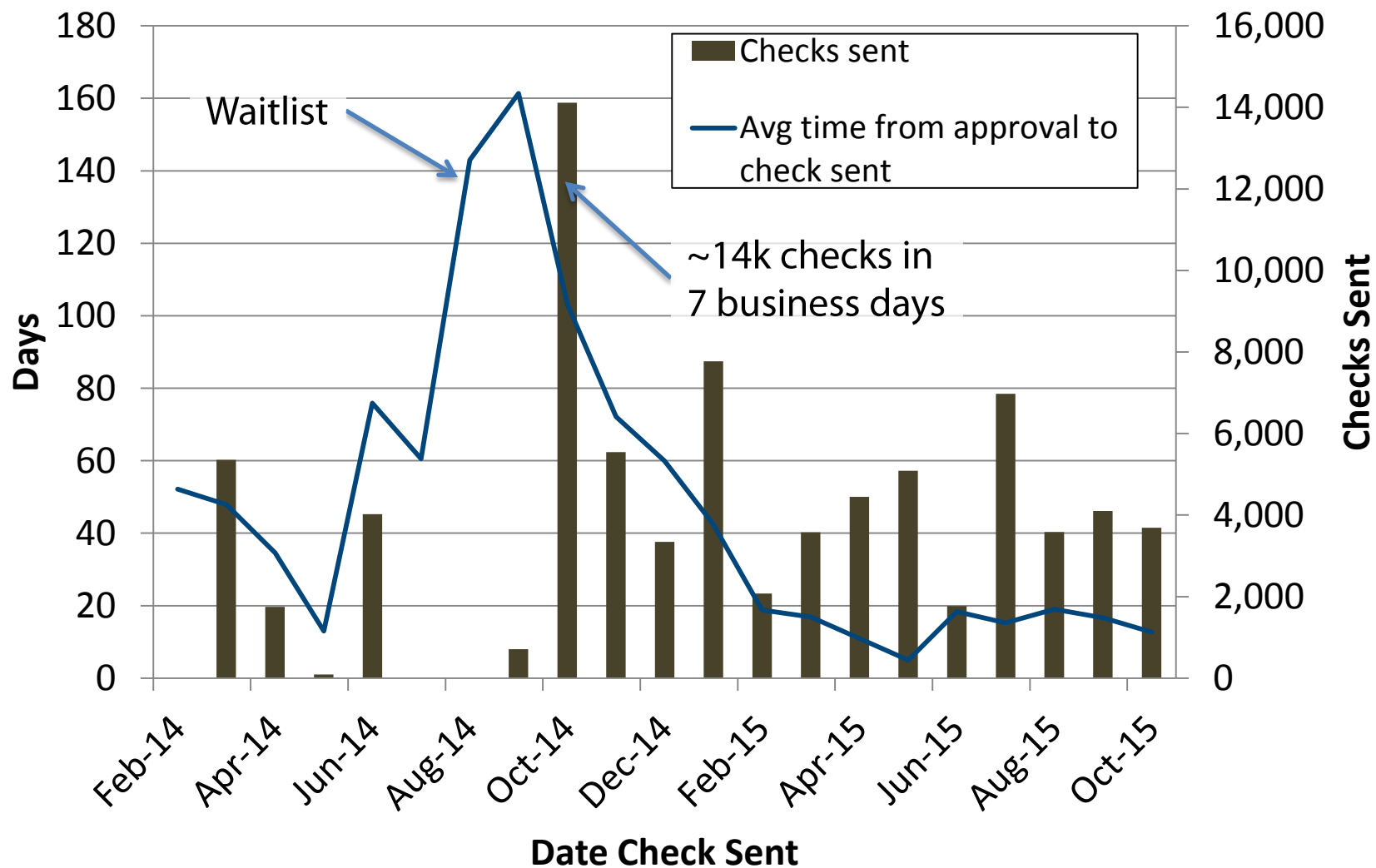
The survey should only take about 20 minutes to complete. It is voluntary and all reported results are anonymous. CVRP is part of a broader effort to expand the adoption of clean vehicles. Your answers to this survey will help us meet these goals.

To find out if your check has been mailed, go to [www.energycenter.org/cvrpstatus](http://www.energycenter.org/cvrpstatus) and use your application number (A-123947) to check the status of your application at any time. In the meantime, please let us know if you have any questions or concerns.

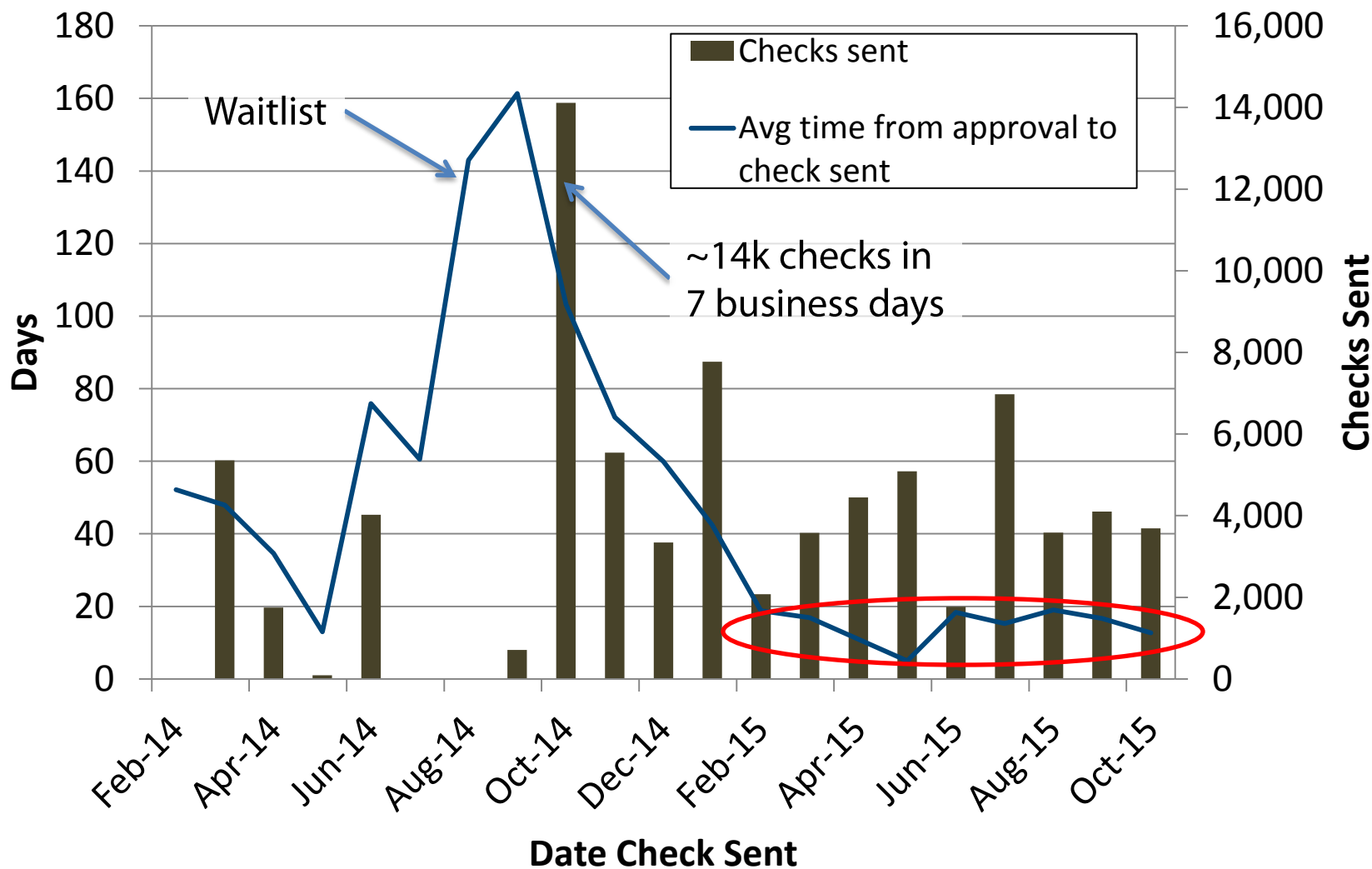
Sincerely,

**Applications approved in  
~5 days from submittal**

# Check Sent Timeline



# Check Sent Timeline







# 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



# 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





# 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





# 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 through 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

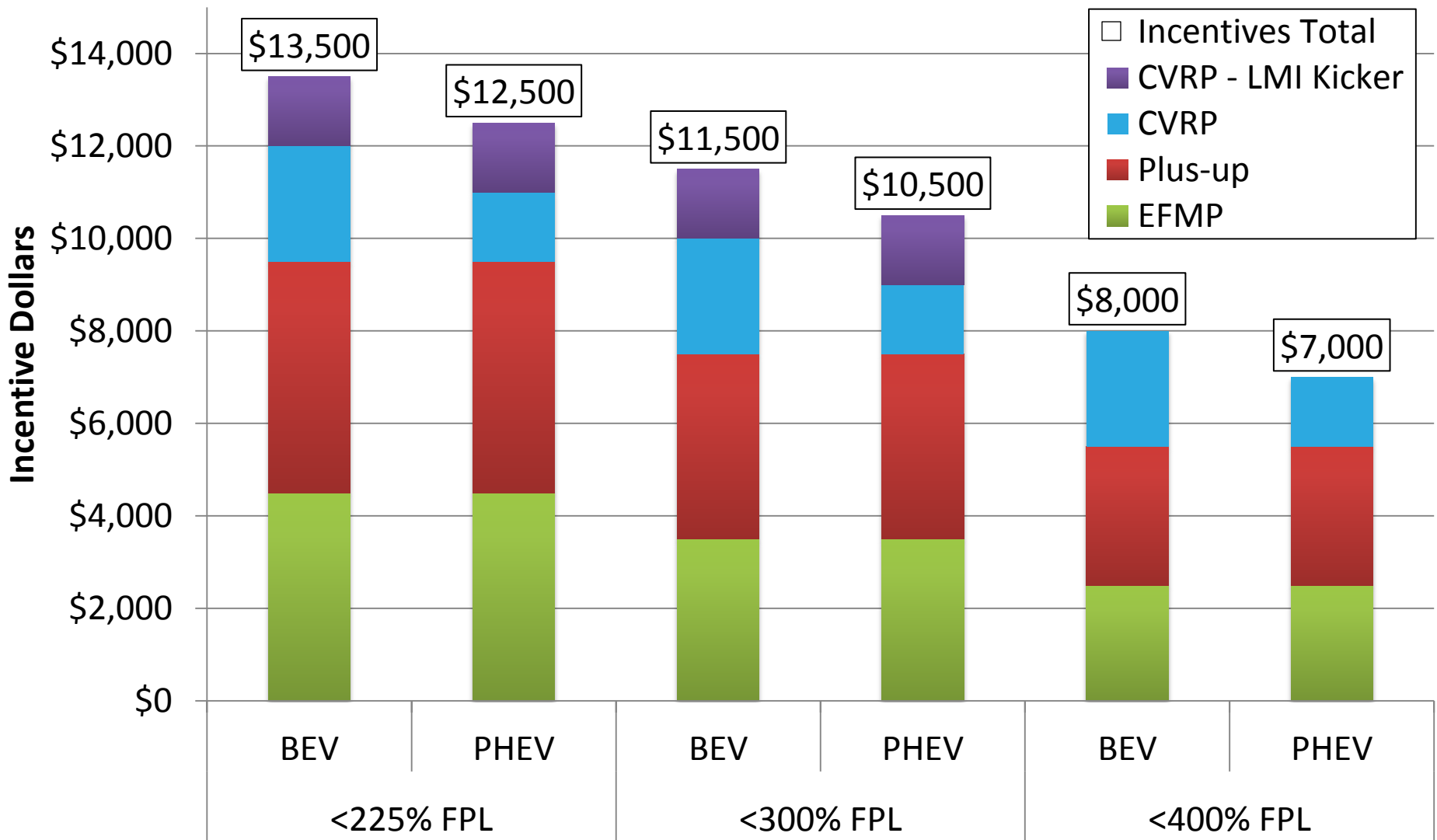


# Stacked Incentives: LMI Increased Incentive

		CVRP	CVRP-LMI ( $\leq 300\%$ FPL)
	<b>Hydrogen Fuel-Cell Electric Vehicles</b>	\$5,000	\$6,500
	<b>Battery Electric Vehicles (&amp; i3 REx)</b>	\$2,500	\$4,000
	<b>Plug-in Hybrid Electric Vehicles</b>	\$1,500	\$3,000
	<b>Neighborhood Electric Vehicles</b>	\$900	
	<b>Zero-Emission Motorcycles</b>	\$900	



# Stacked Incentives: South Coast and San Joaquin



# 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

It matters *when* you charge your electric car.

San Diego Gas & Electric's electric vehicle (EV) rates will help you pay the lowest price for your EV fuel, when charging from midnight to 5 a.m.

Sign up for an EV time-of-use rate and program your car to charge when electric rates are at their lowest – during the "off-peak" and "super off-peak" hours.



## Plug-in Electric Vehicle Benefits

*Incentives available*  
*Fun driving experience*  
*Low fuel and maintenance costs*  
*Minimal environmental impacts*  
*Reduced dependence on oil*  
*Different sizes and ranges to meet your needs*

Learn more about the advantages of driving electric:  
[sdclearcities.org/ev](http://sdclearcities.org/ev)

an EV, by visiting:

LECTRIC.



DRIVE CLEAN & SAVE! TEN THOUSAND DOLLARS

Receive Up To **\$10,000** In Incentives

Check out the savings today!  
[energycenter.org/Nissan](http://energycenter.org/Nissan)

California Environmental Protection Agency  
**Air Resources Board**

Center for Sustainable Energy™

NOT REDEEMABLE FOR CASH INCENTIVES AVAILABLE DRIVE CLEAN & SAVE!



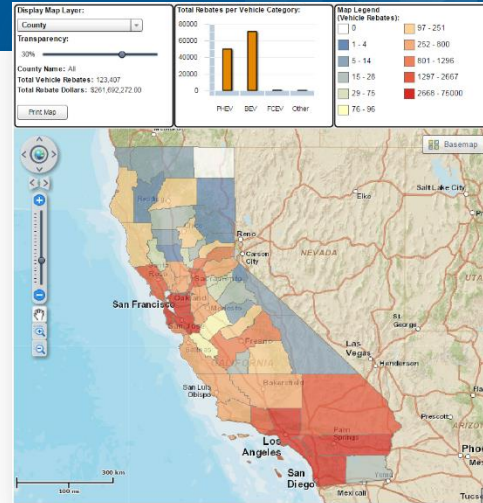
The background of the slide is an abstract composition of vibrant, blurred light streaks in shades of gold, yellow, and orange, creating a sense of motion and energy. A solid white horizontal band runs across the middle of the image, serving as a backdrop for the main text.

# 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

CVRP Funds (FY 2015-2016)

Remaining \$39,934,497 Issued & Reserved \$13,975,503



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 Statistics Dashboard \*Notes and Citation

**Filter by:**

**Consumer Type**  
(All)

**Vehicle Category\***  
(All)

**Make**  
(All)

**Air District**  
(All)

**Electric Utility**  
(All)

**County**  
(All)

**Disadvantaged Community\***  
(All)

**California Senate District\***  
(All)

**California Assembly District\***  
(All)

**Funding Source\***  
(All)

**Funding Period\***  
(All)

**CVRP Rebates by Month**

**Filter by Application Date**  
March 18, 2010 to November 20, 2015

**Vehicle Category**

- BEV
- PHEV
- FCEV
- Other

**Rebates Issued & Approved to Date**

BEV	58.3%
PHEV	41.2%
FCEV	0.1%
Other	0.4%

**Rebates & Rebate Funding Issued & Approved to Date - Life of Project**

	Rebates	Funding
BEV	74,094	189,067,931
PHEV	52,329	78,445,193
FCEV	118	512,500
Other	567	1,489,950
<b>Grand Total</b>	<b>127,108</b>	<b>269,515,574</b>

**Rebates & Rebate Funding Issued & Approved to Date - Filtered**

	Rebates	Funding
BEV	74,094	\$189,067,931
PHEV	52,329	\$78,445,193
FCEV	118	\$512,500
Other	567	\$1,489,950
<b>Filtered Total</b>	<b>127,108</b>	<b>\$269,515,574</b>

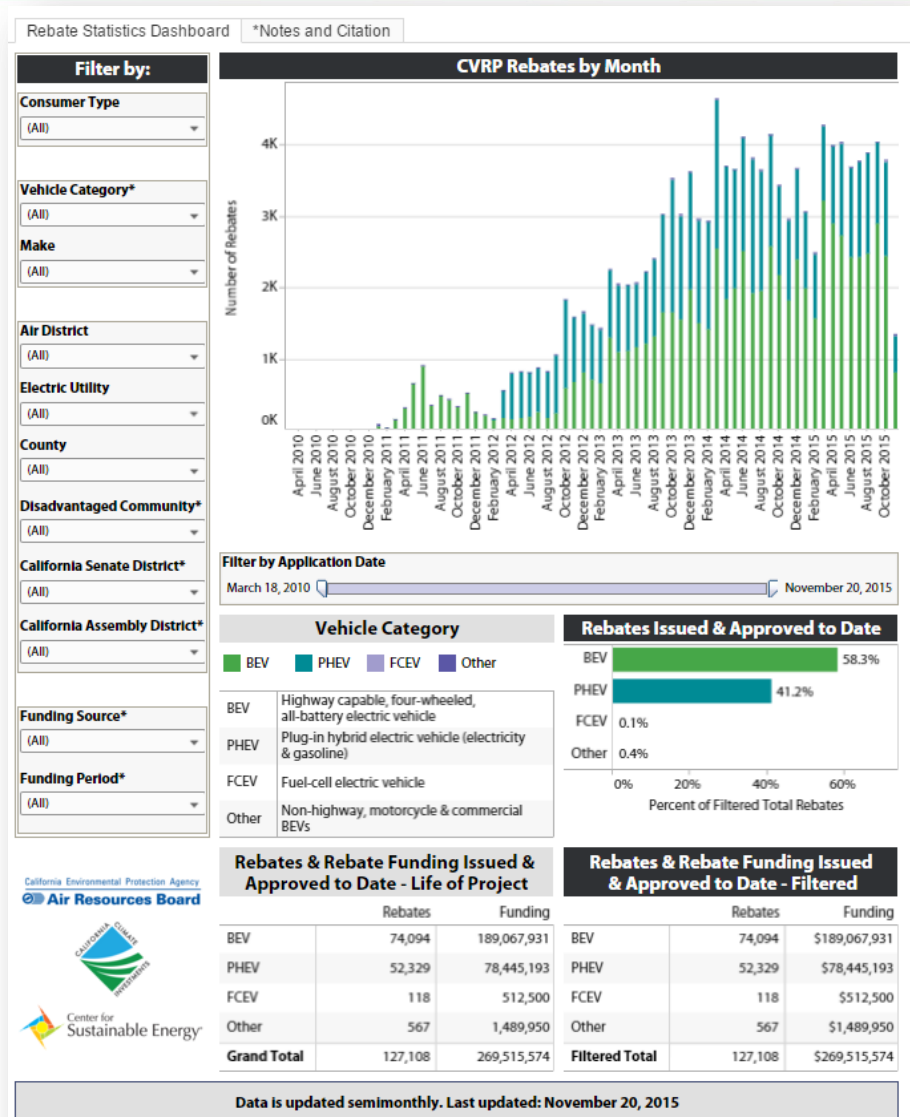
**Data is updated semimonthly. Last updated: November 20, 2015**

Please cite use of these data and images: Center for Sustainable Energy (2015). California Air Resources Board Clean Vehicle Rebate Project, Rebate Statistics. Data last updated November 20, 2015. Retrieved [insert date retrieved] from <https://cleanvehiclerebate.org/rebate-statistics>

# 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)

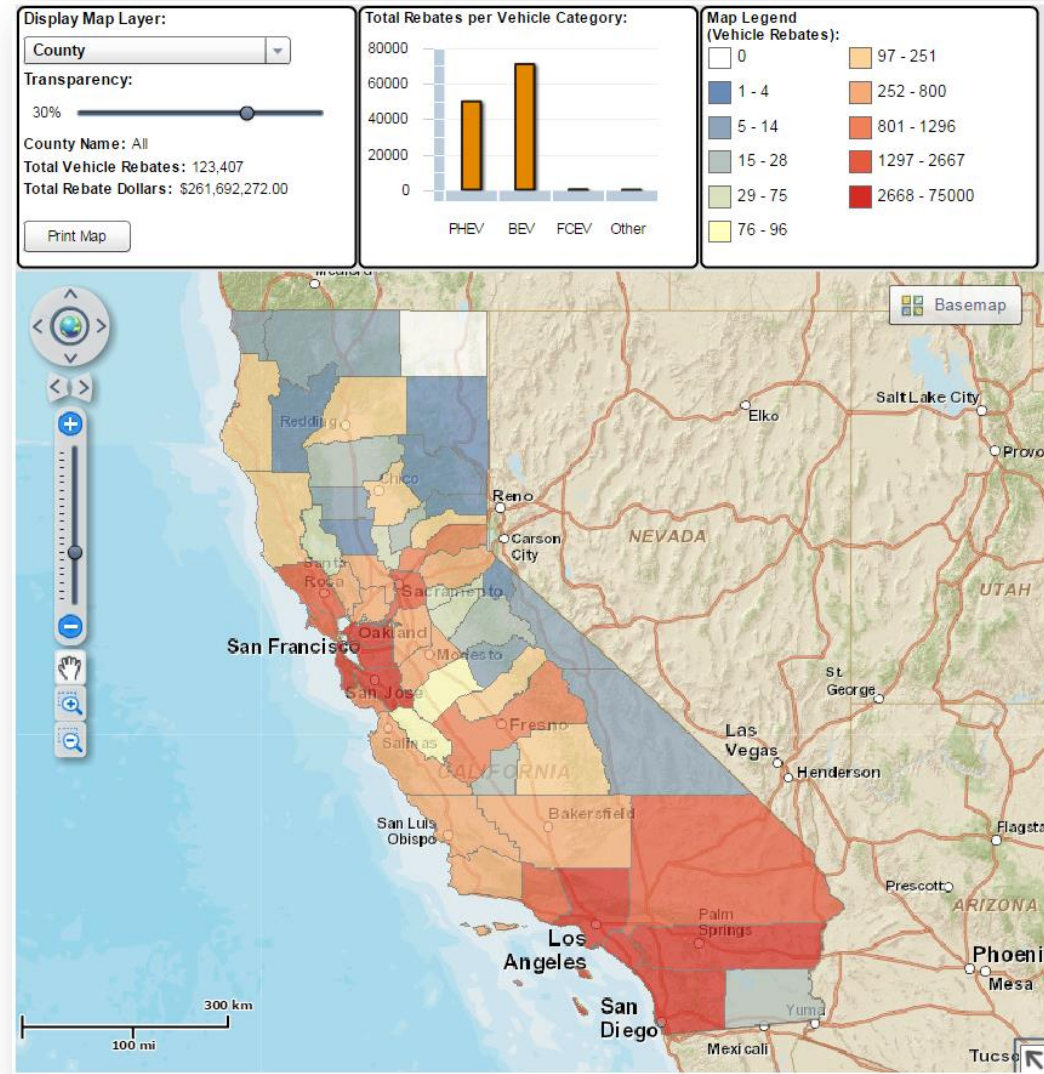


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# Rebate Map

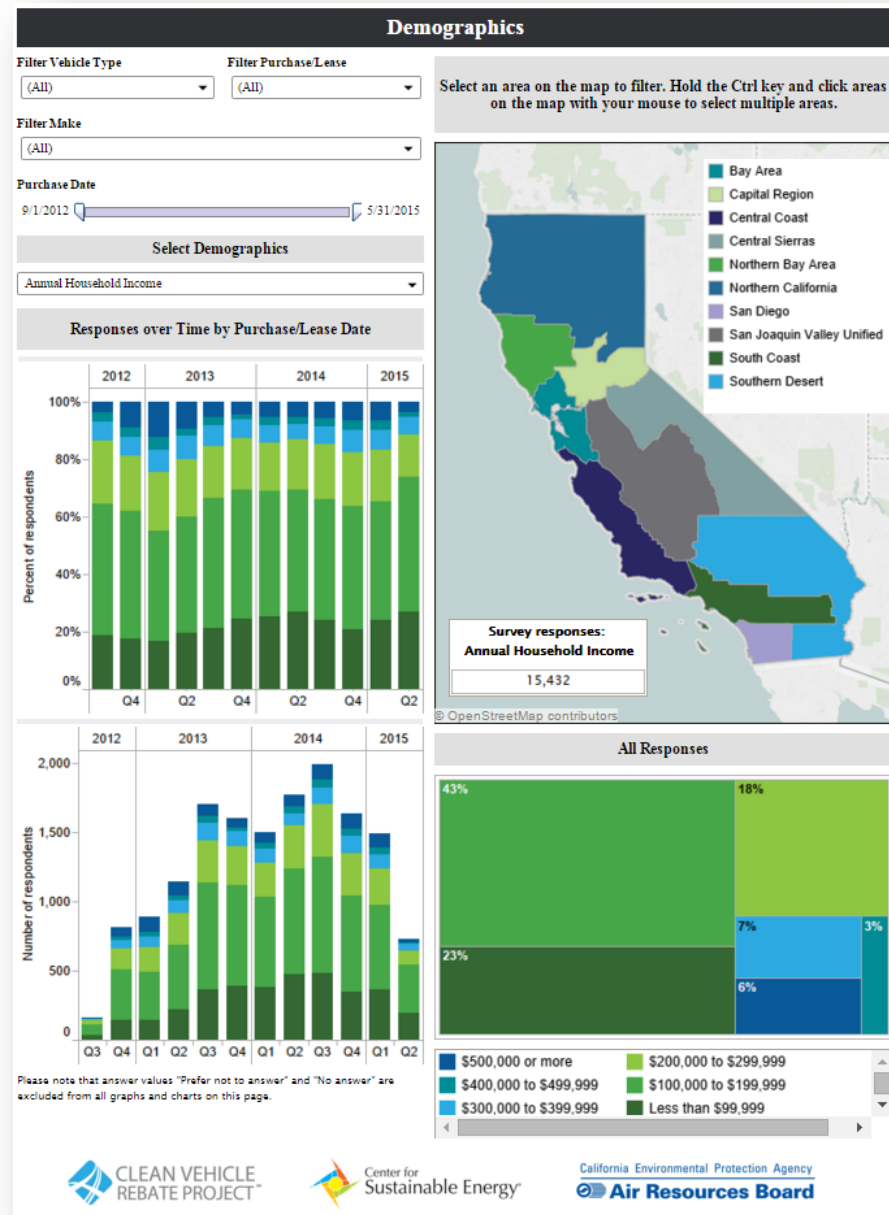
- Rebated vehicles and funds over the life of the project by:
  - County
  - Utility
  - Air District
  - Zip Code (census tract coming soon)
  - State Assembly District
  - State Senate District
- PDF image download





# 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

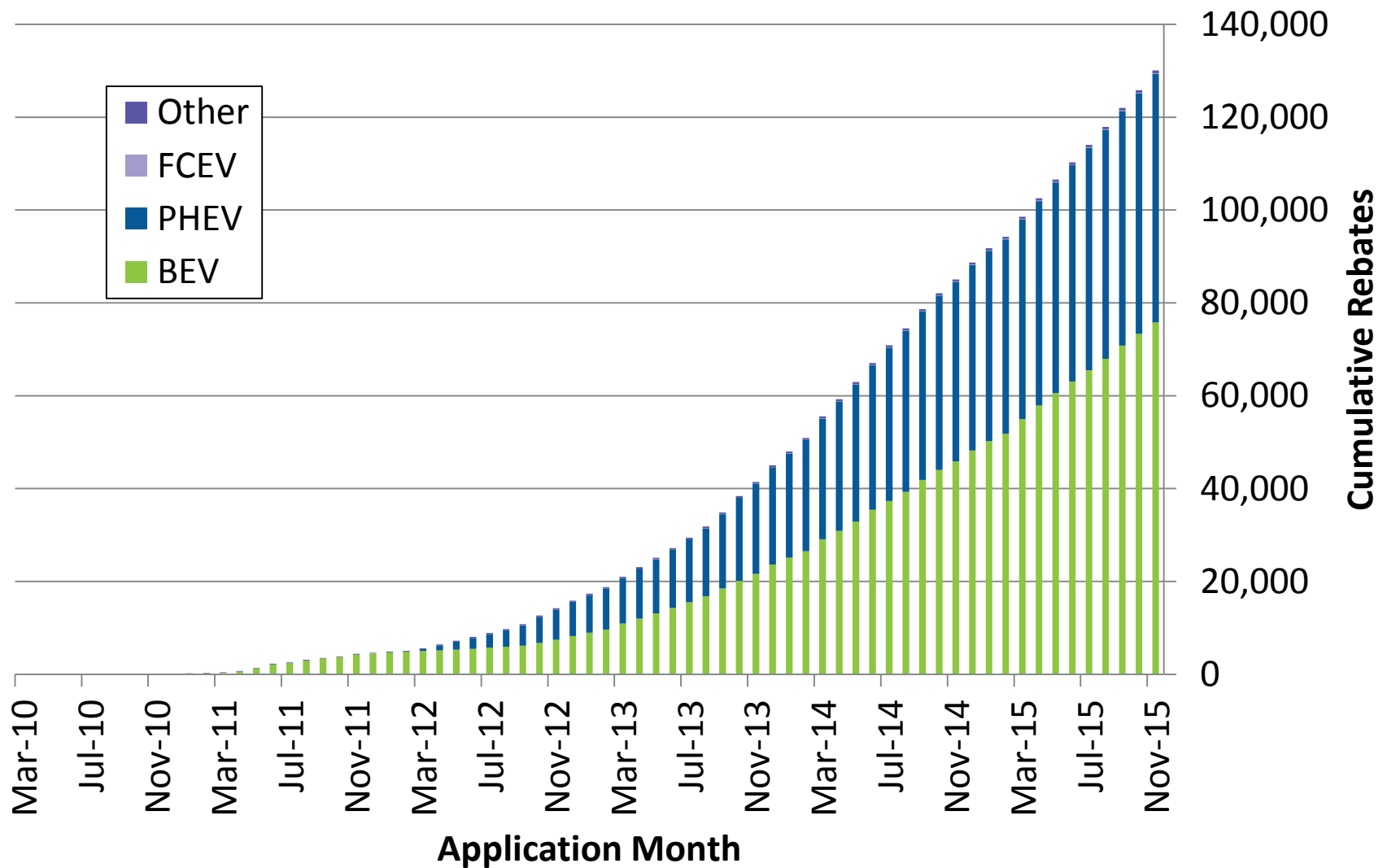


# **How many? What type?**

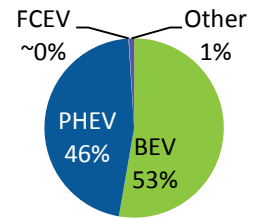
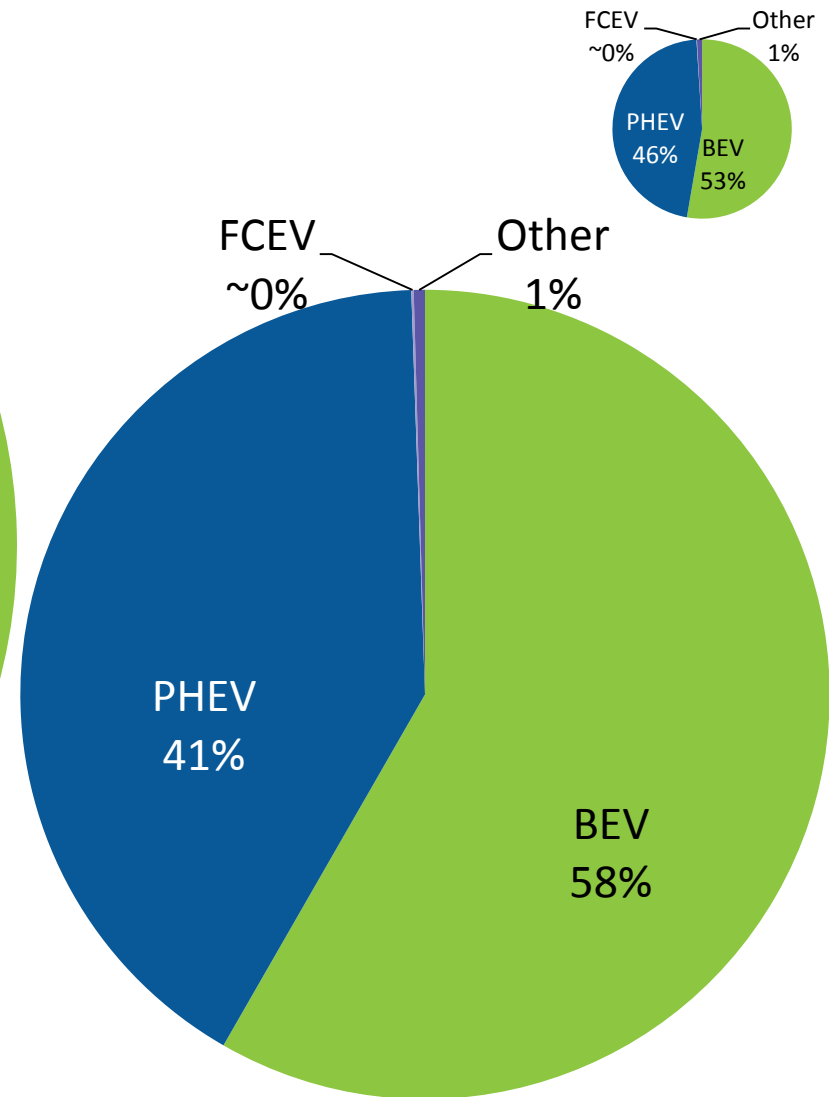
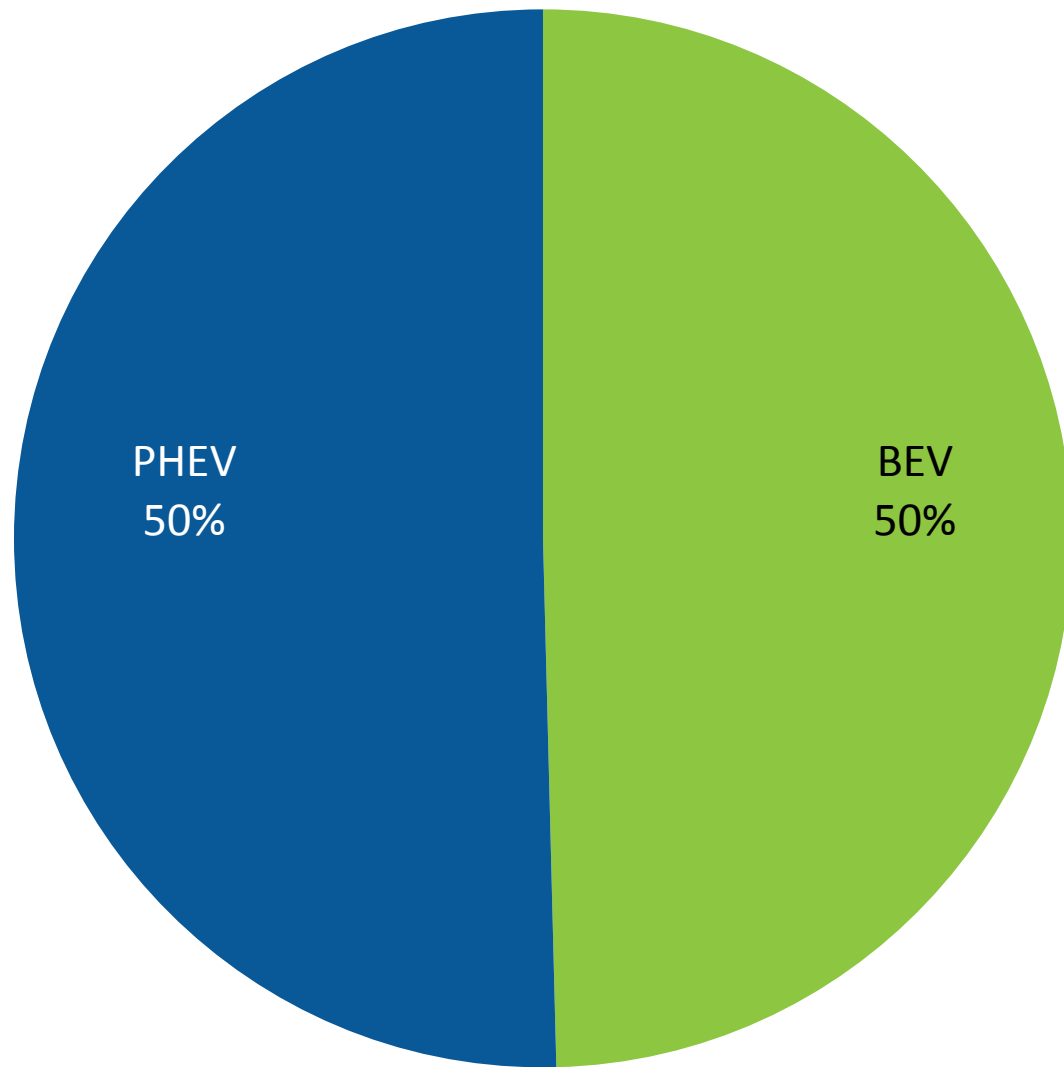
Rebated Vehicles



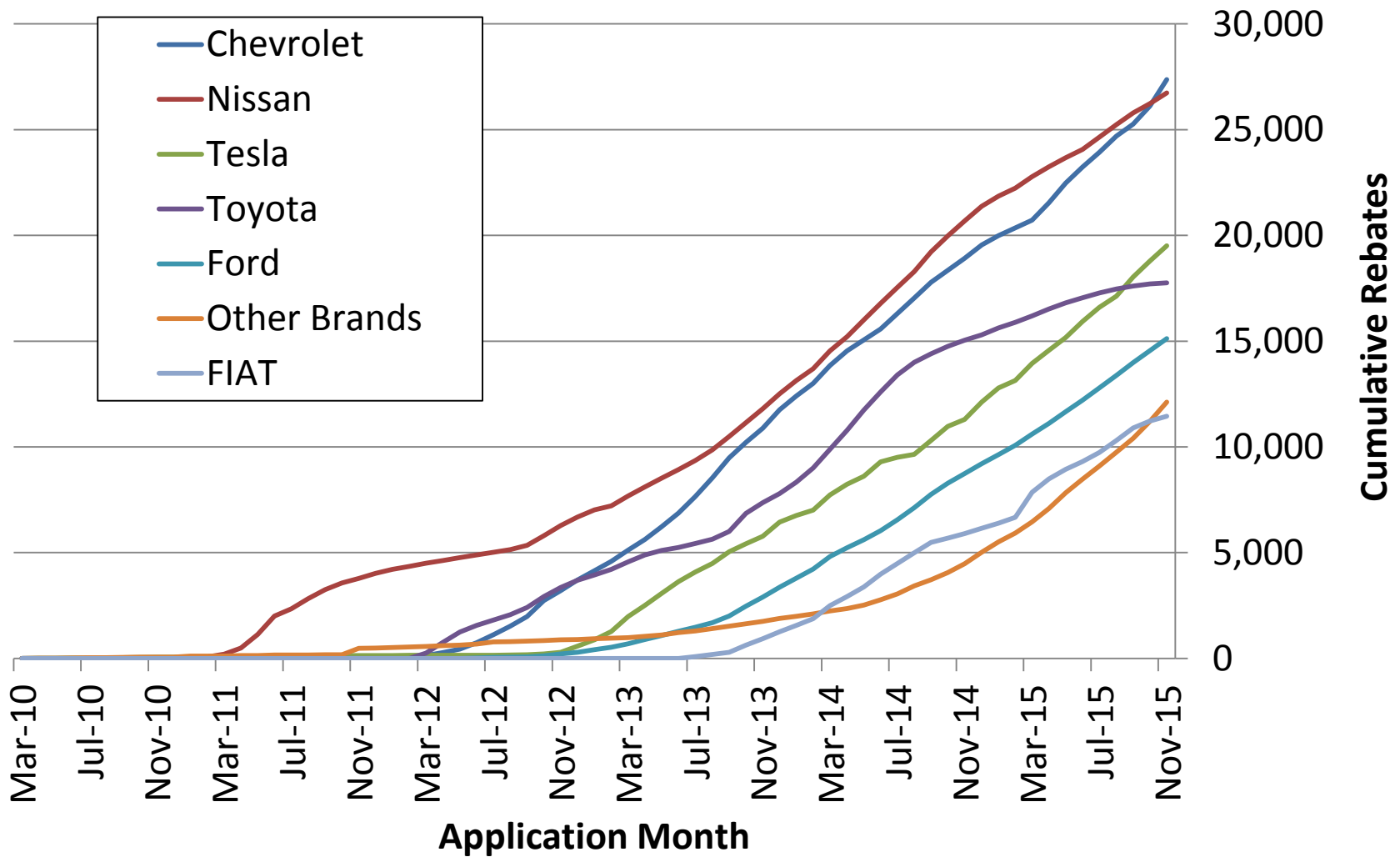
# Cumulative CVRP Rebates by Vehicle Category



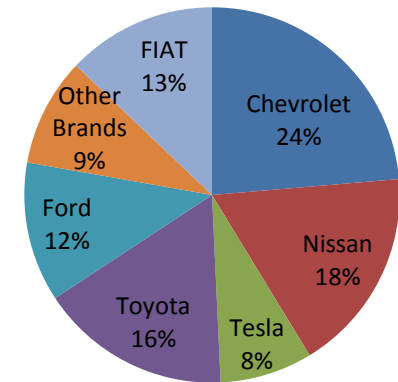
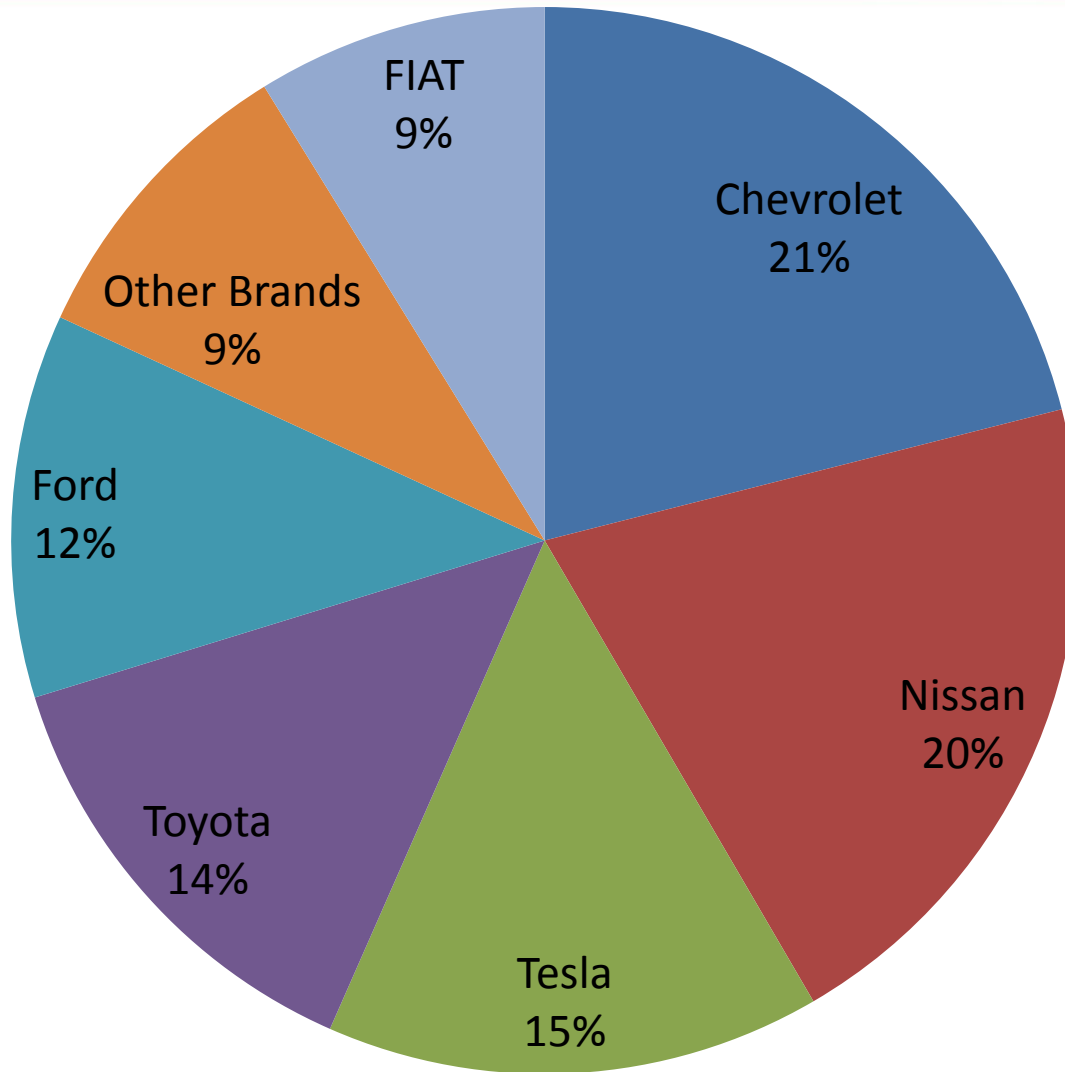
# Share by Vehicle Category: All PEVs, Rebates, DAC Rebates



# Cumulative Rebates by Major Brand

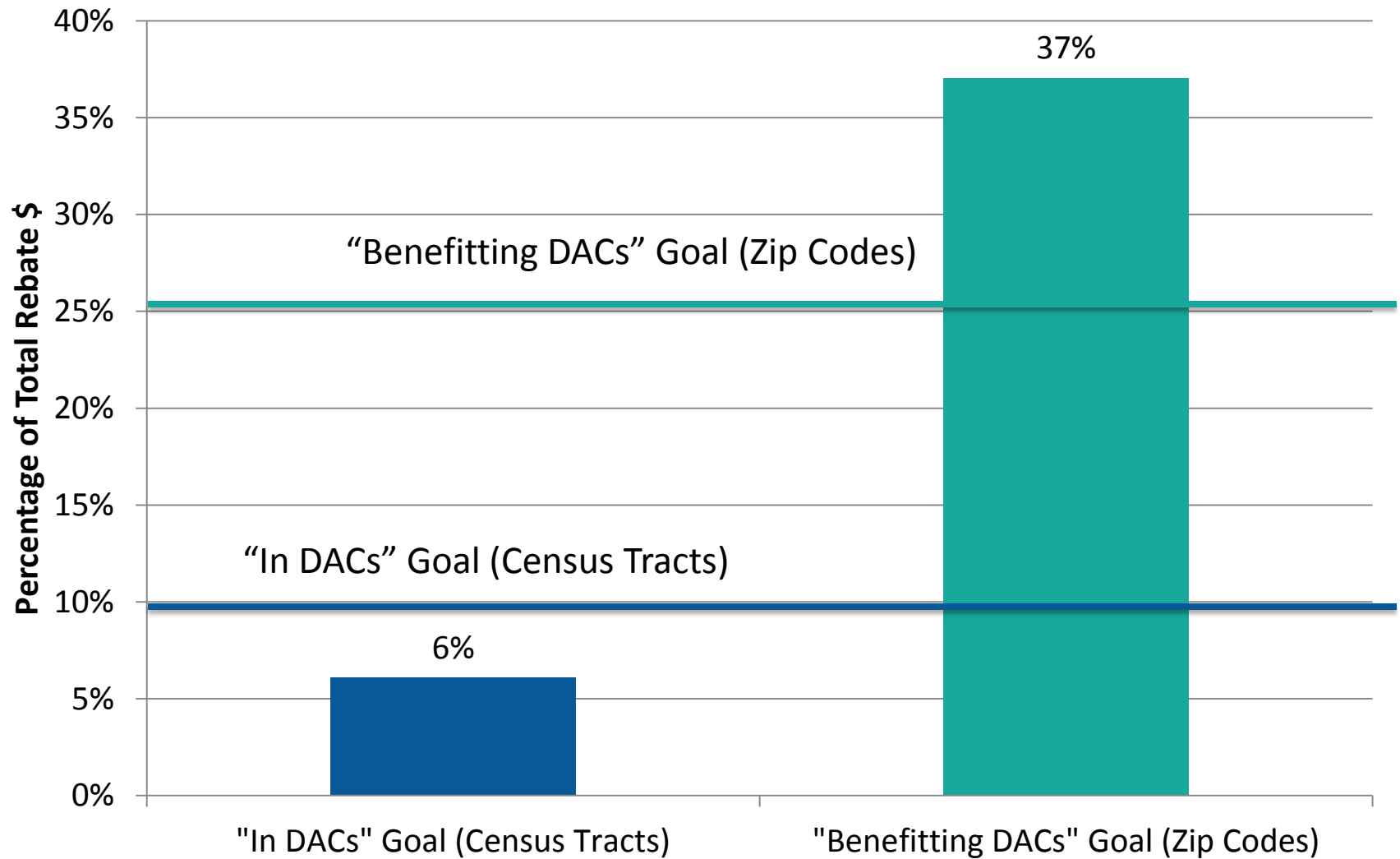


# Rebate Share by Major Brand: CA & DACs

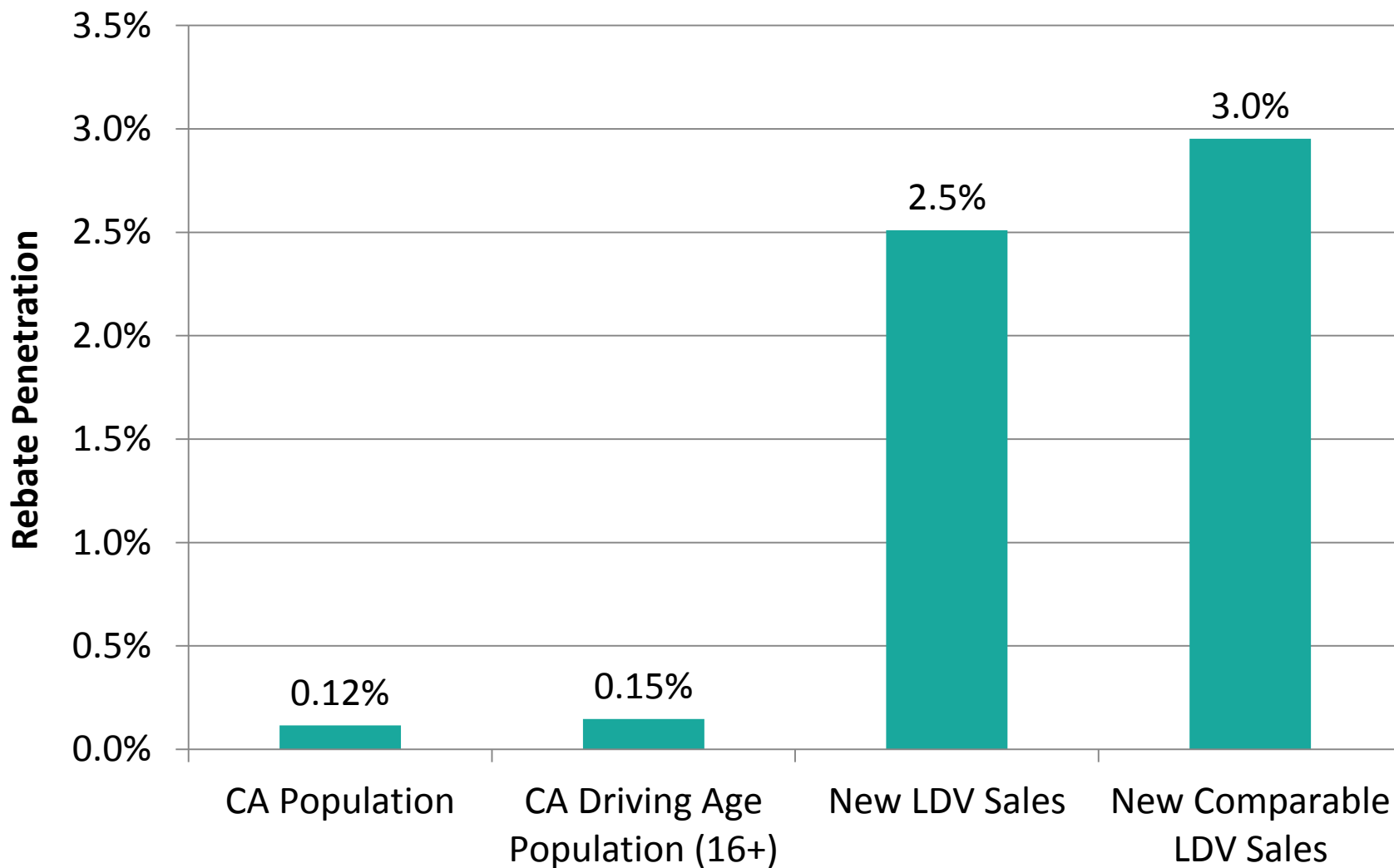




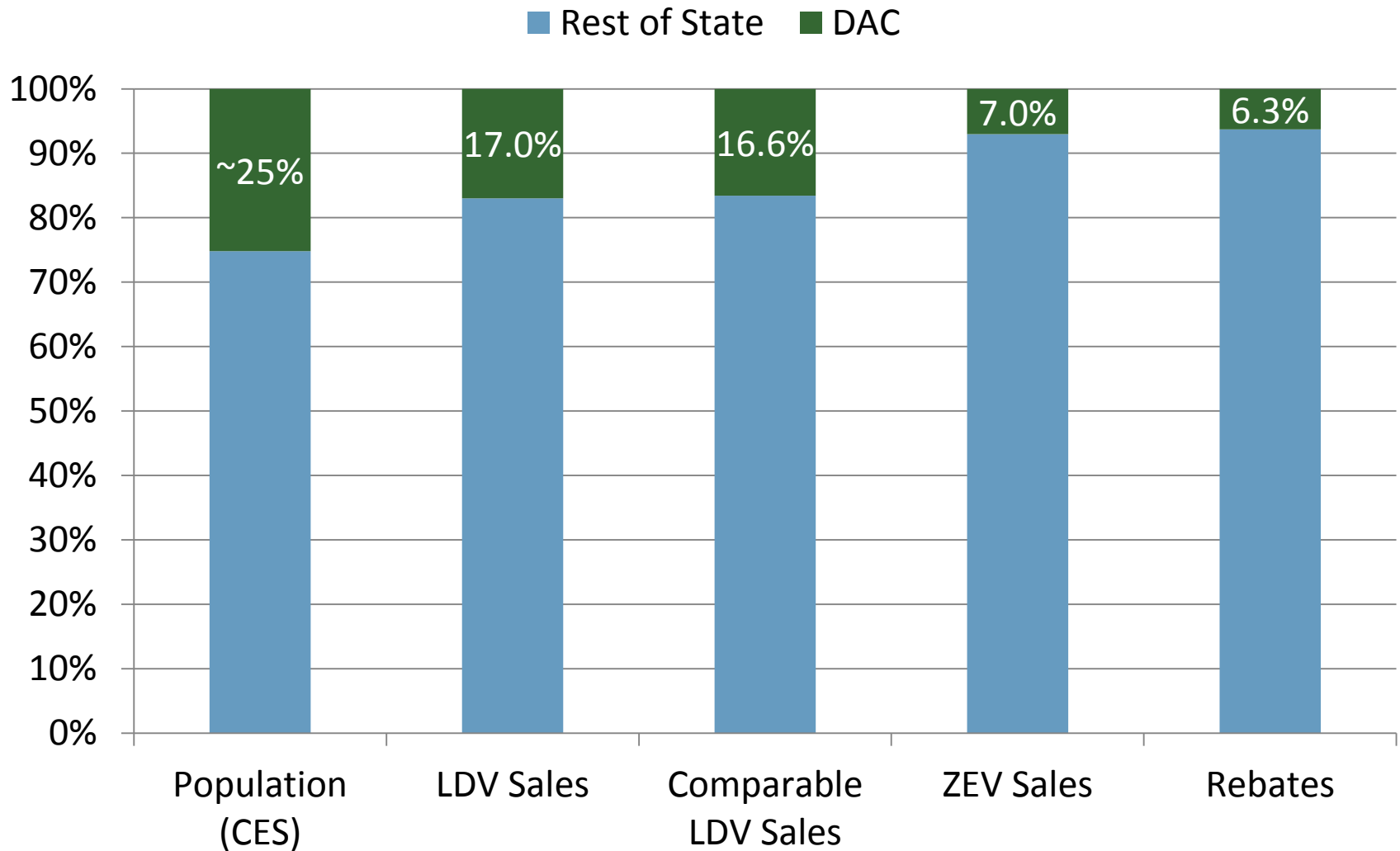
# Rebate Dollars to Disadvantaged Communities



# Context Is Important (2014)

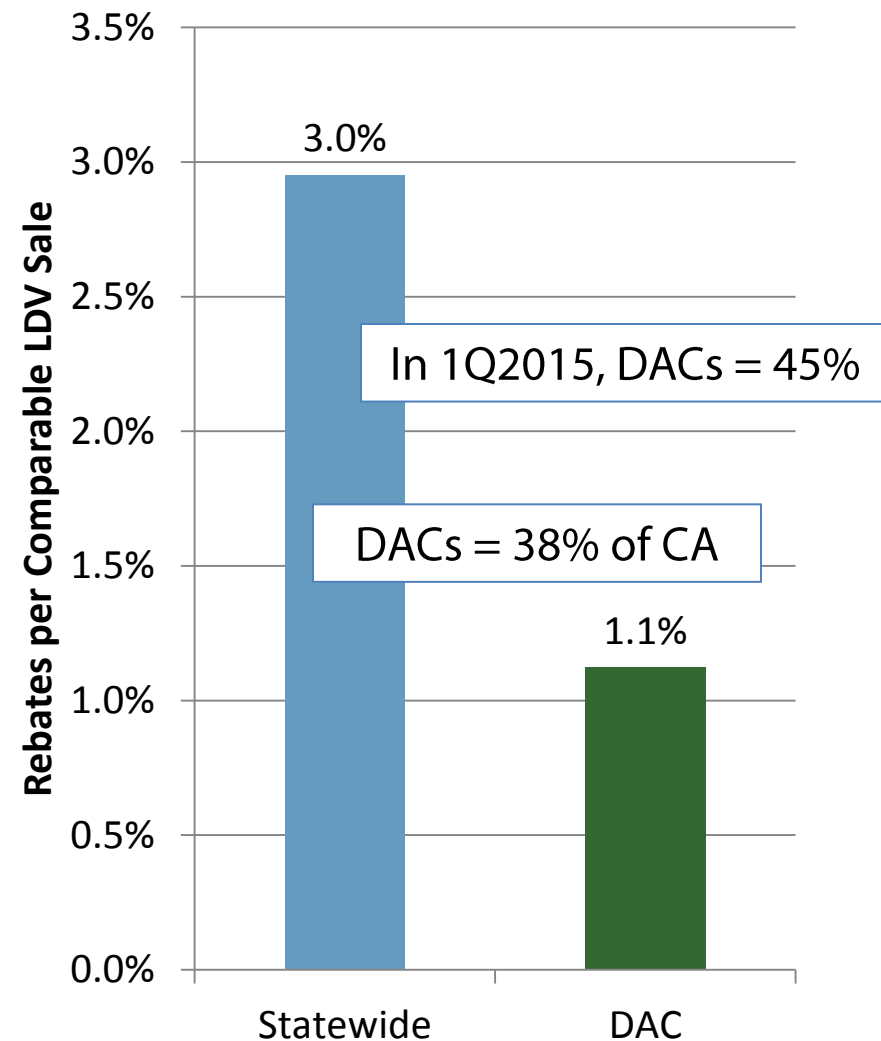
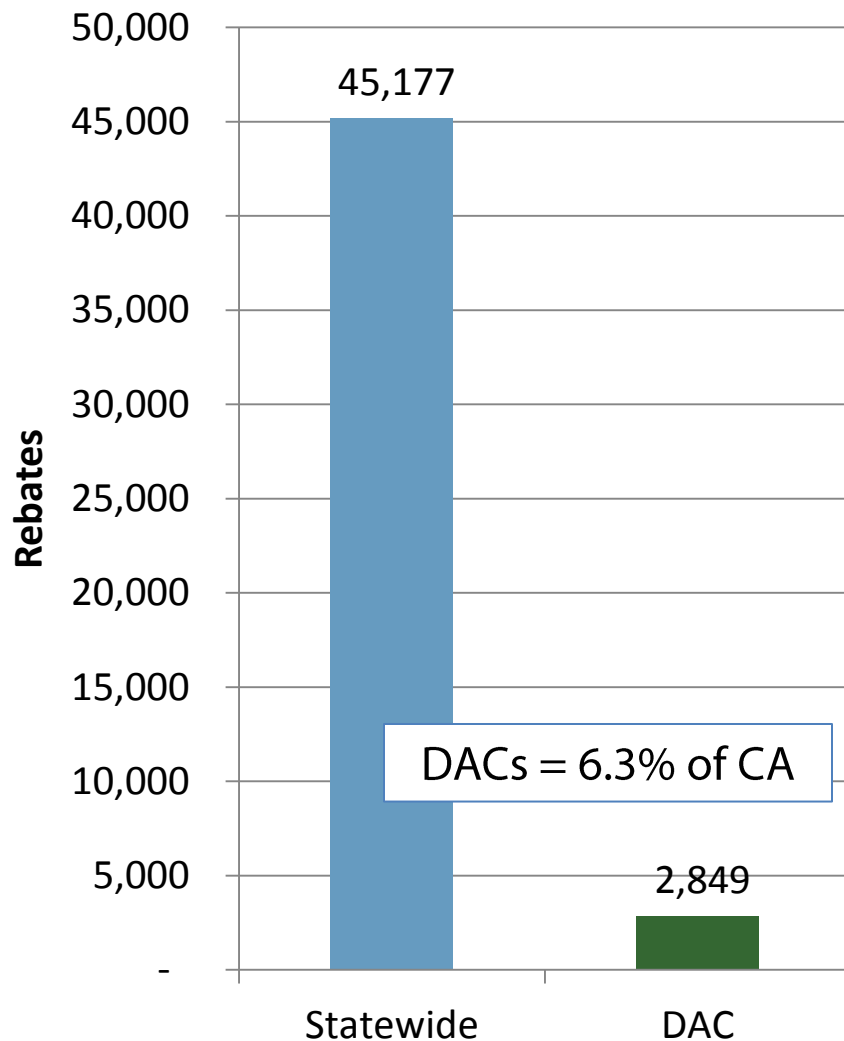


# DACs as a Percentage of Entire State (2014)



# Rebates as a % of Comparable New Car Sales

(2014 calendar year)



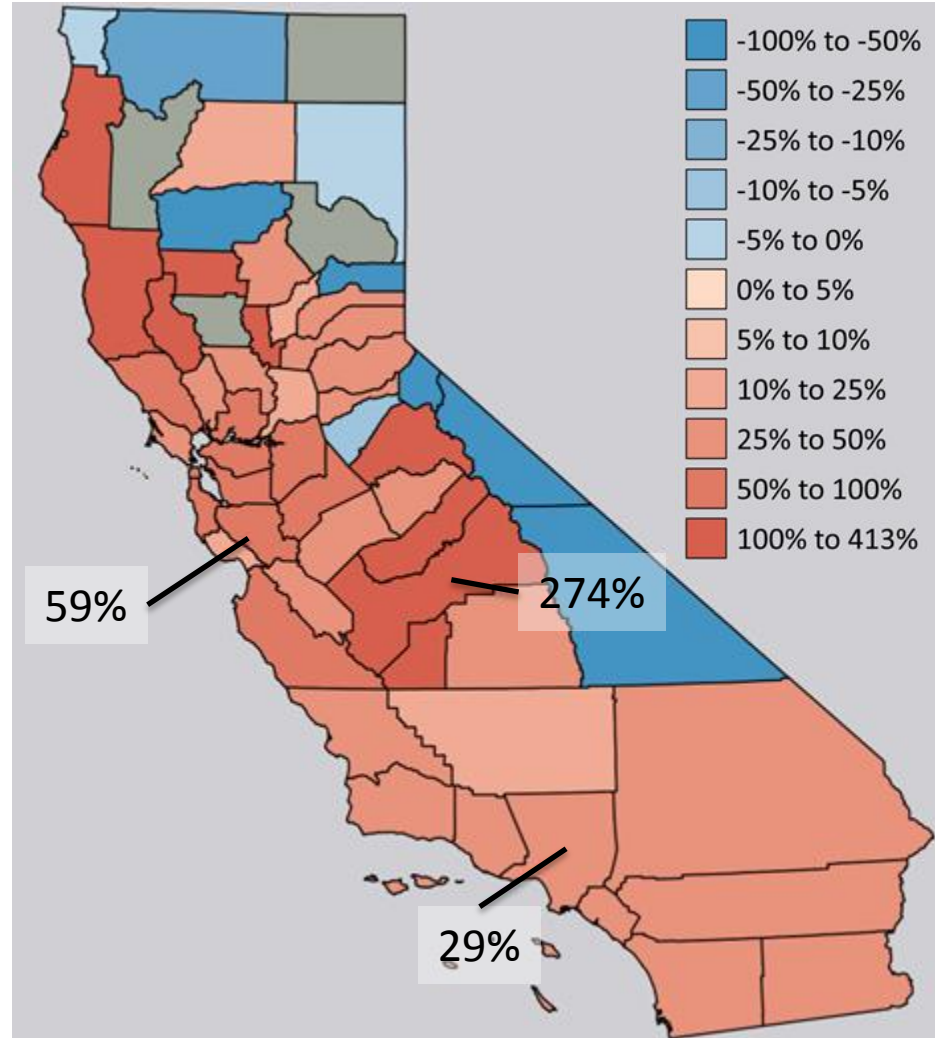
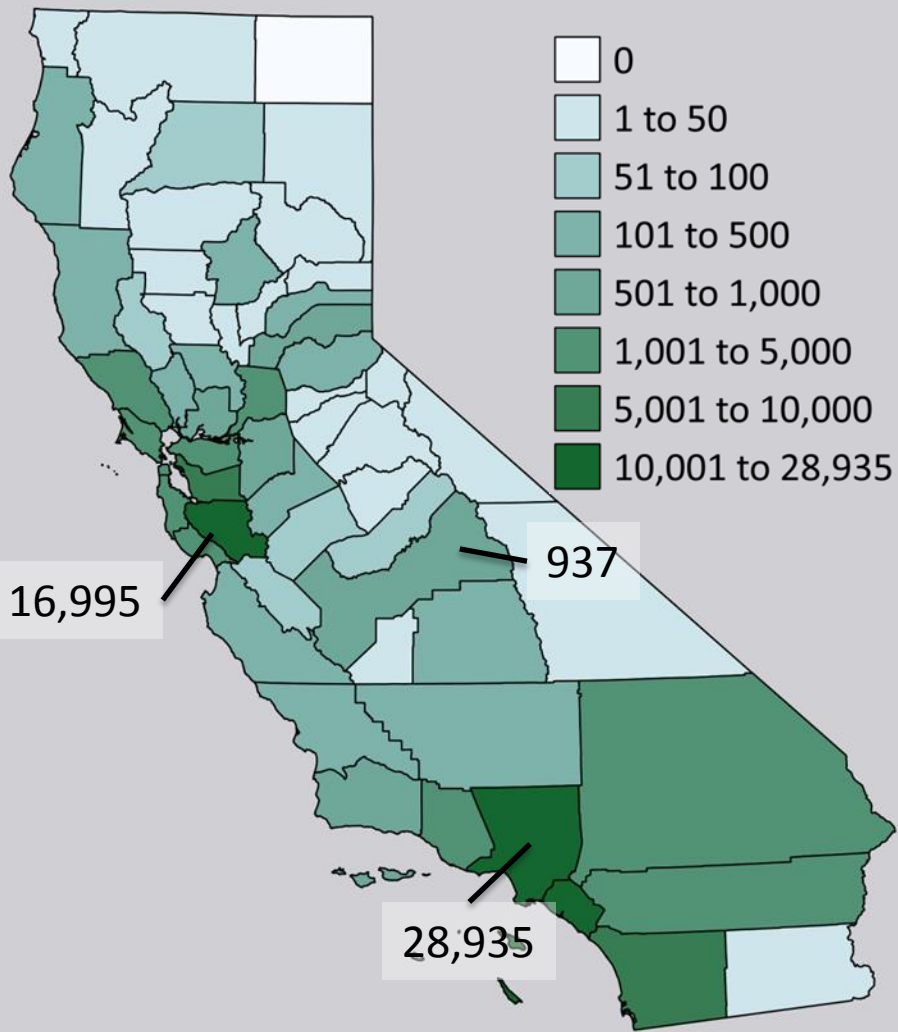




# Where?

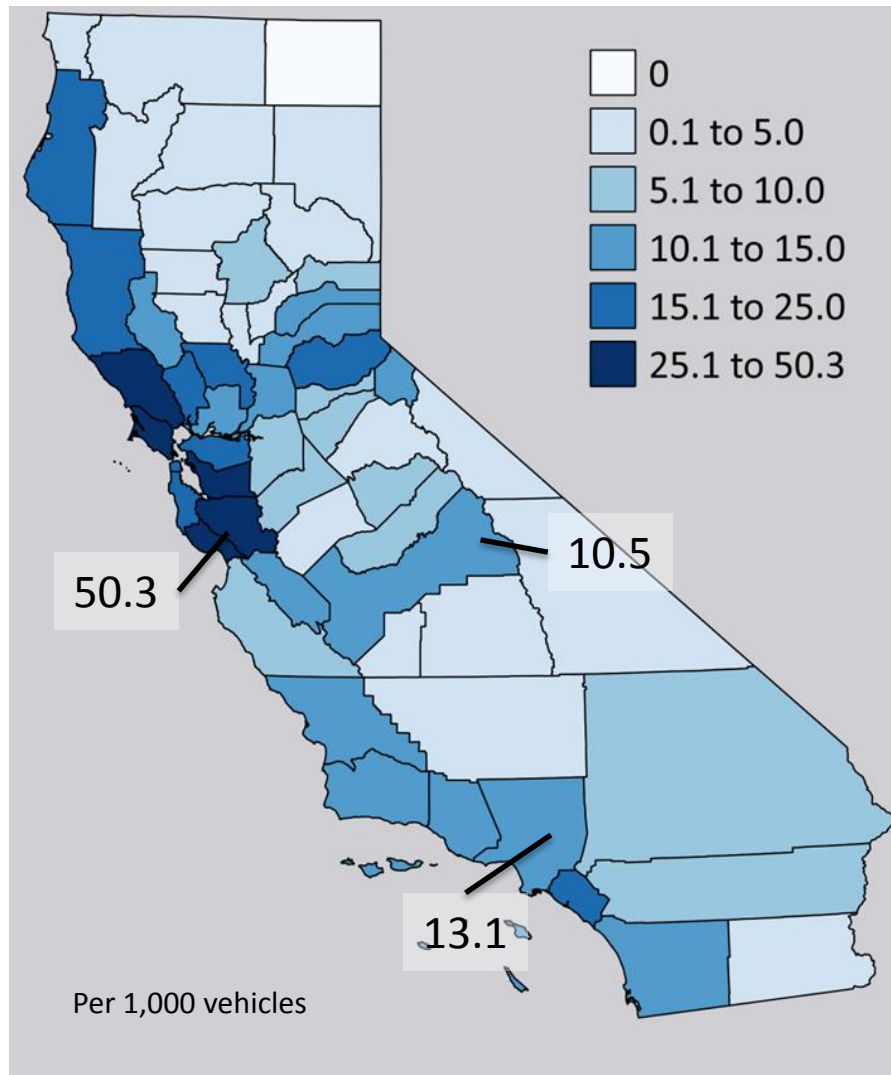
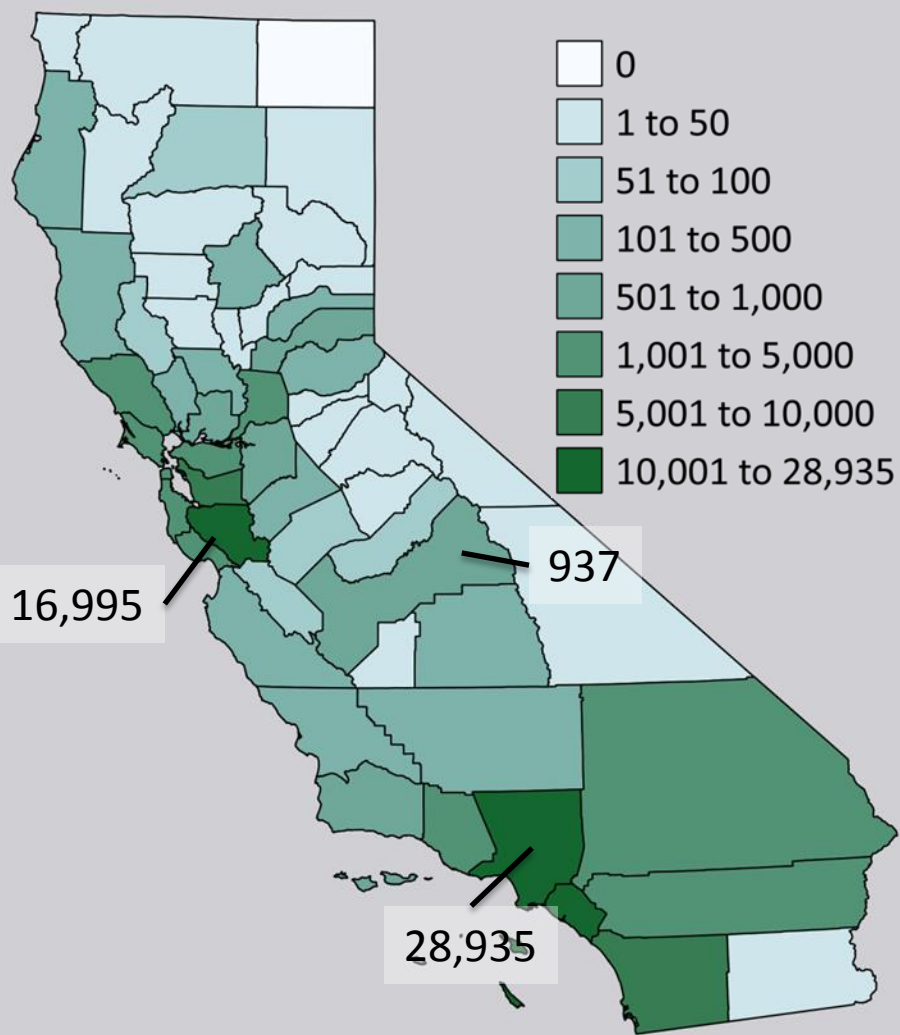
Rebated Vehicles

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



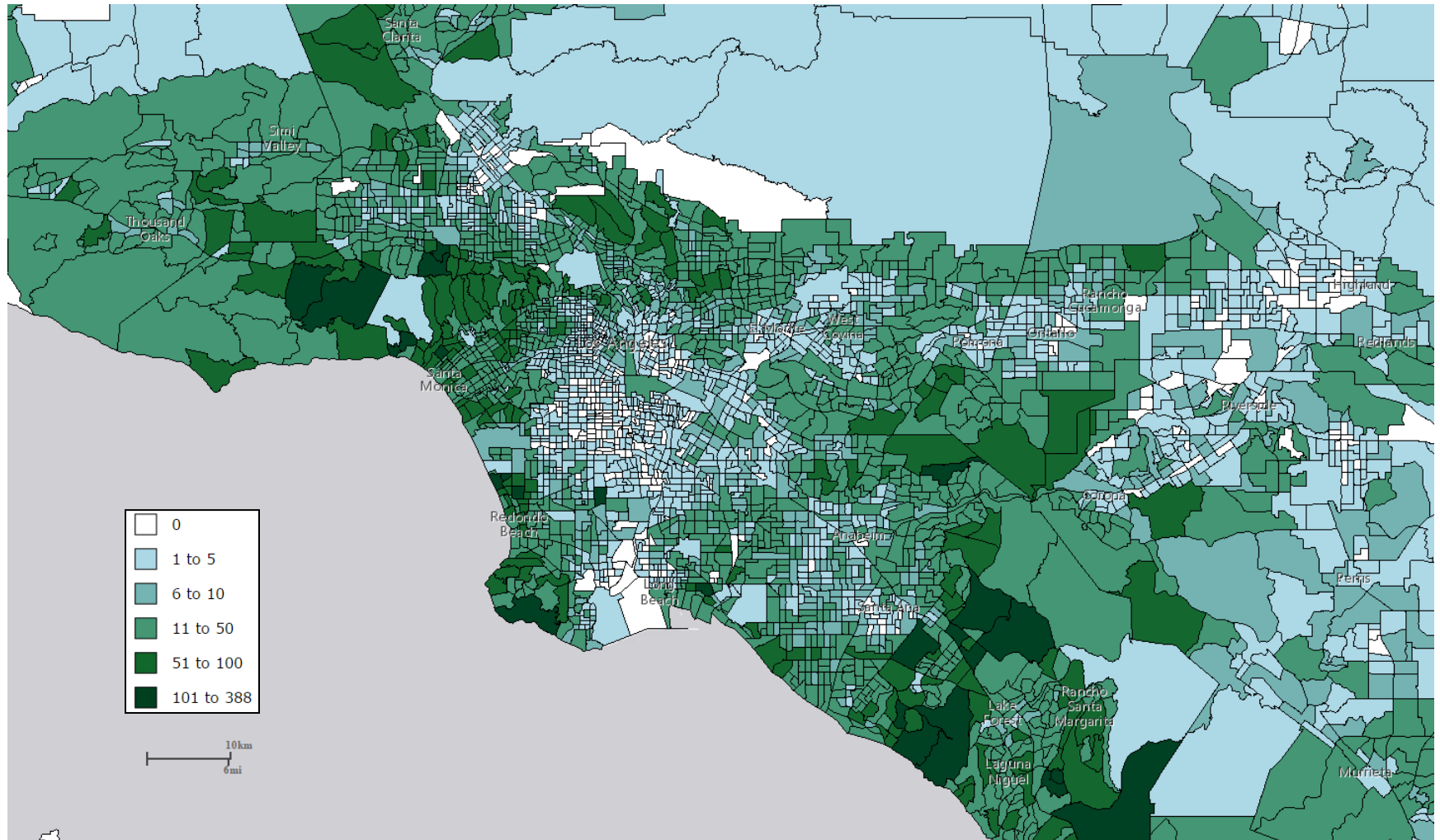
# Rebates by County & Normalized to Comparable Sales

(thru May 2015)





# Rebates by Census Tract: Los Angeles Region



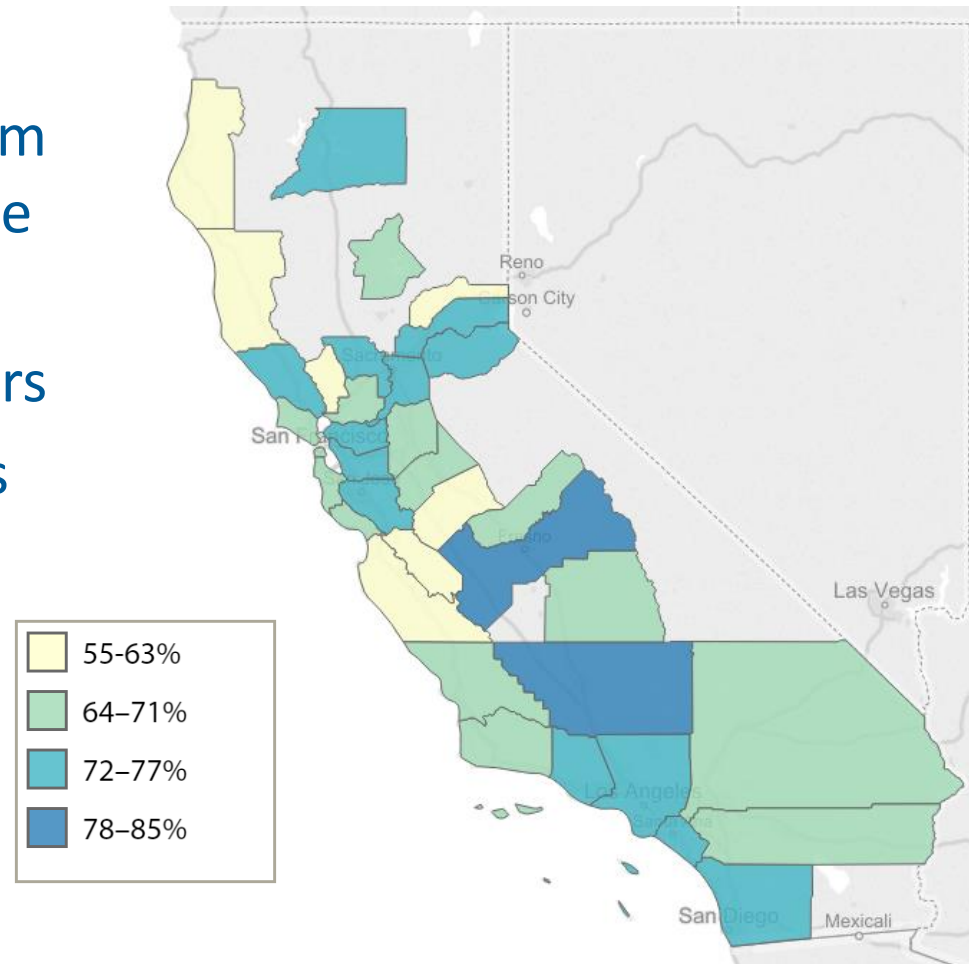


# Rebated at what rate?

Rebated Vehicles / Eligible Vehicles

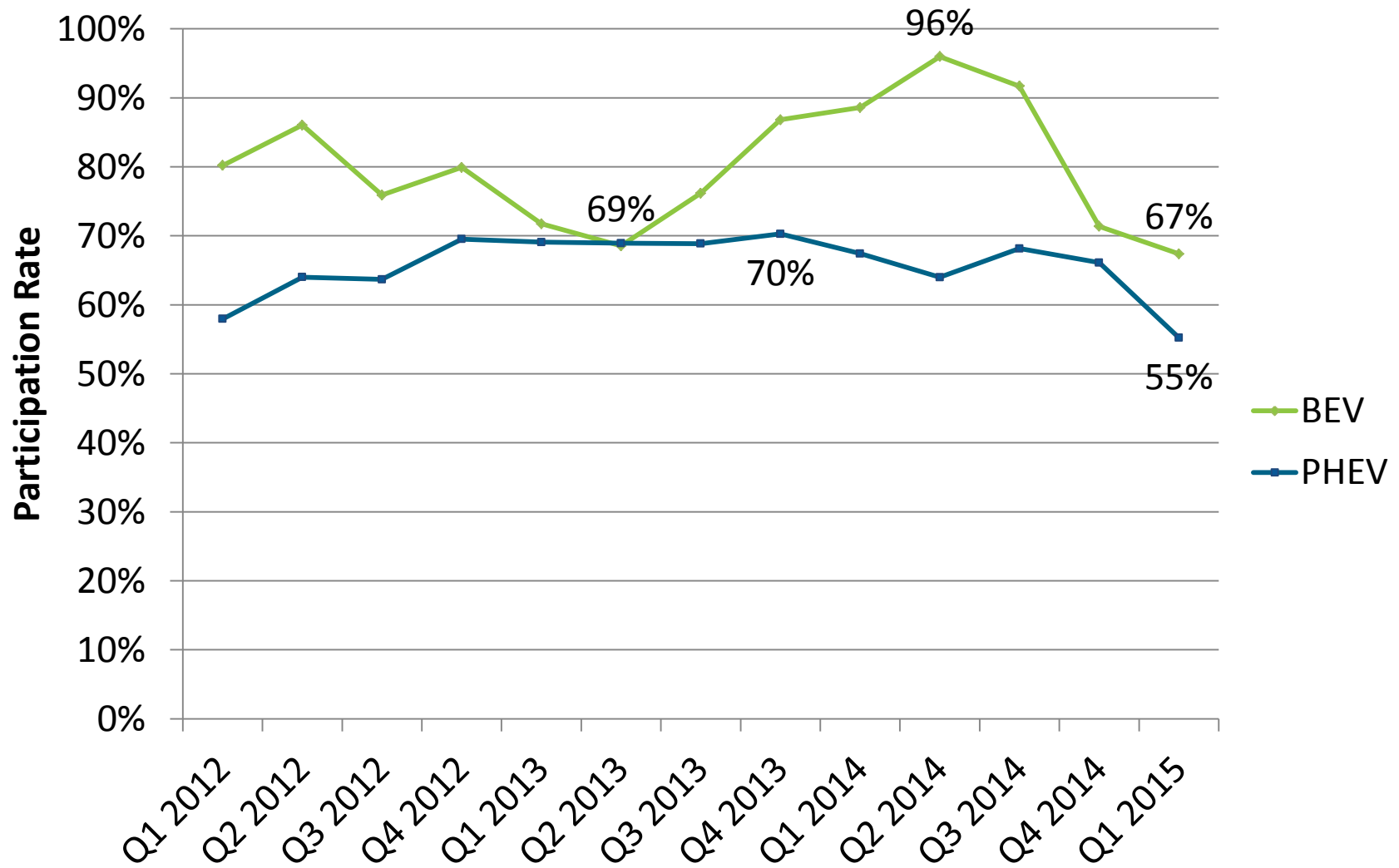
# CVRP Participation (March 2010–March 2015)\*

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

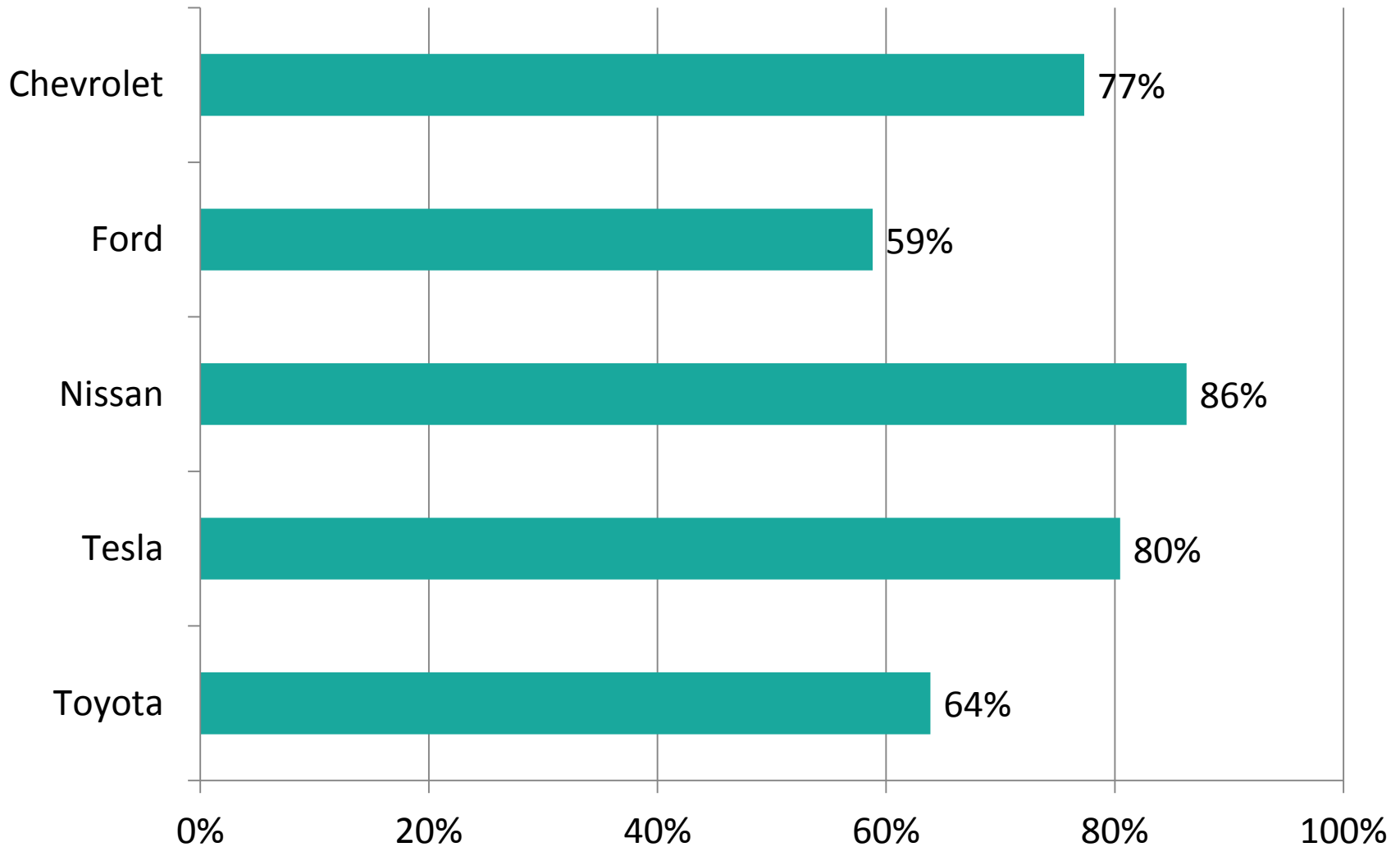


\*Topic brief available for download from the Program Reports page at <https://cleanvehiclerebate.org>

# CVRP Participation by Major Vehicle Category



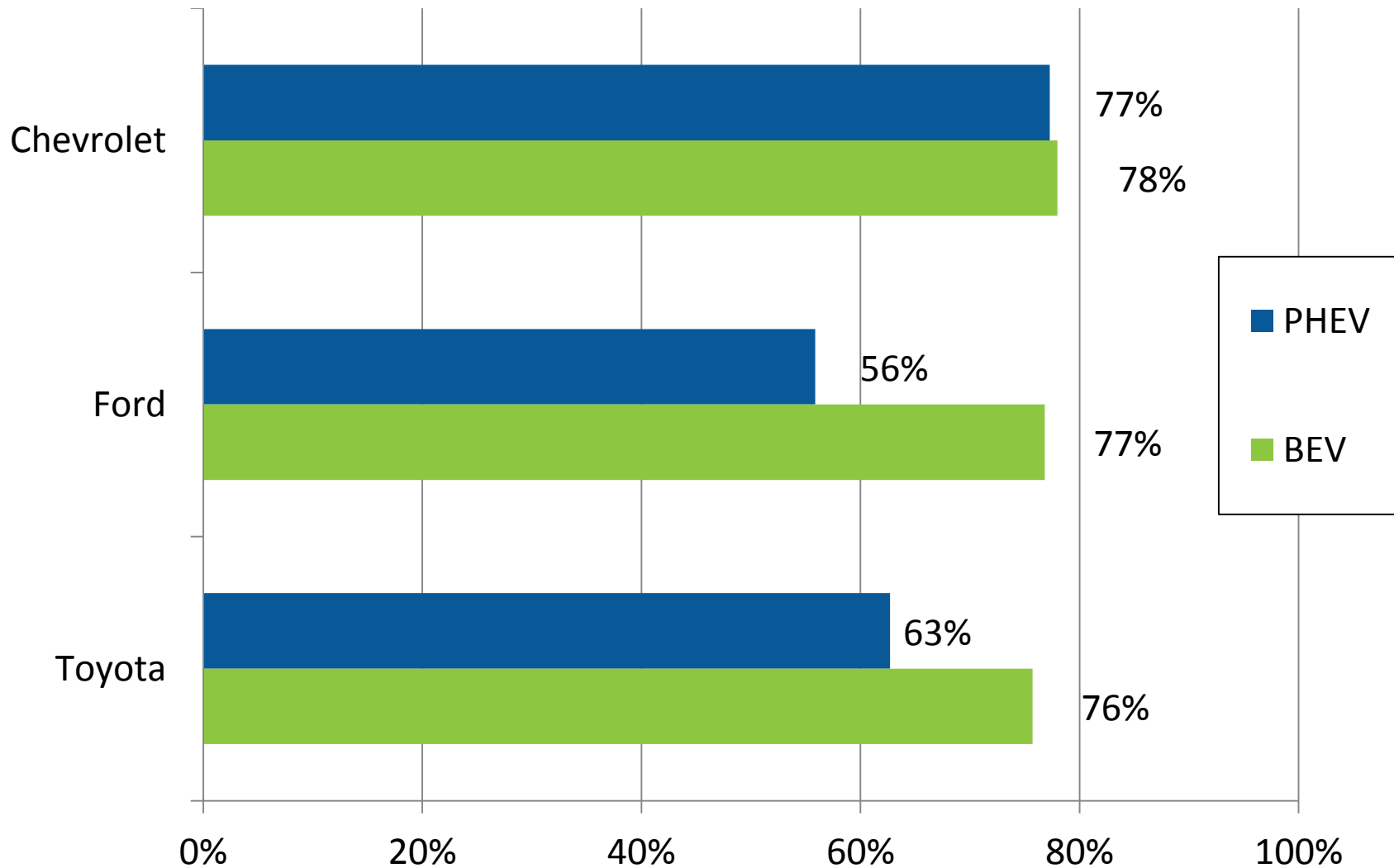
# CVRP Participation by Major Vehicle Brand





# CVRP Participation by Vehicle Category

(for major brands offering multiple categories)



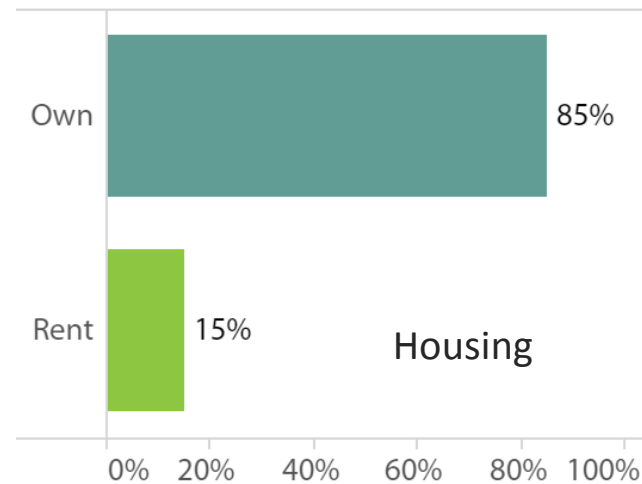
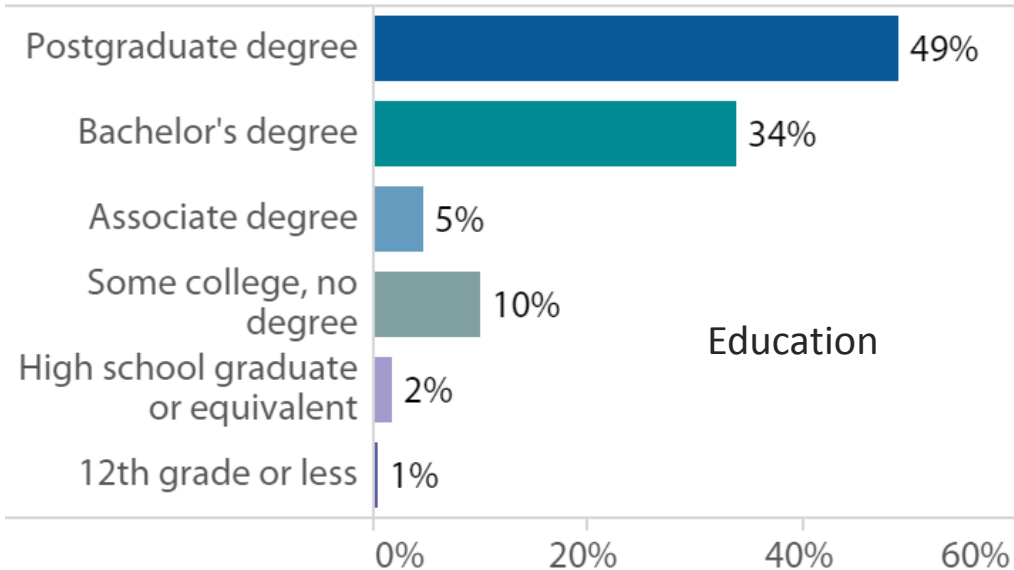
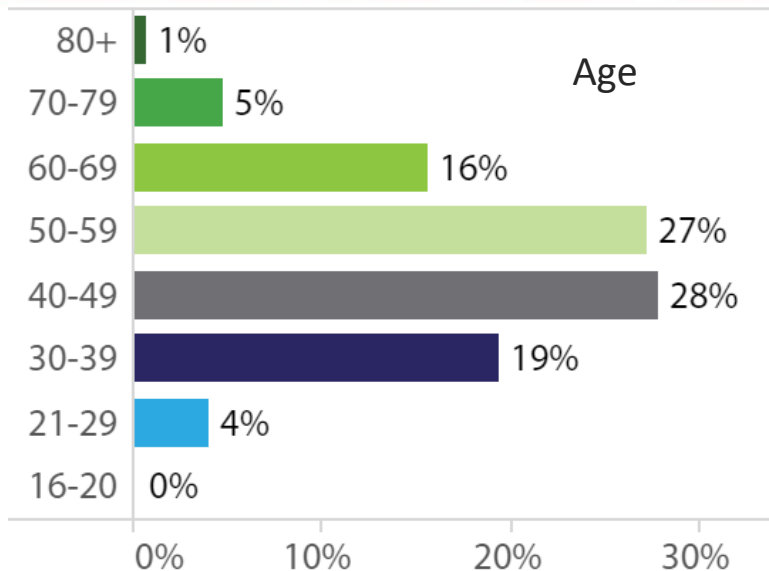
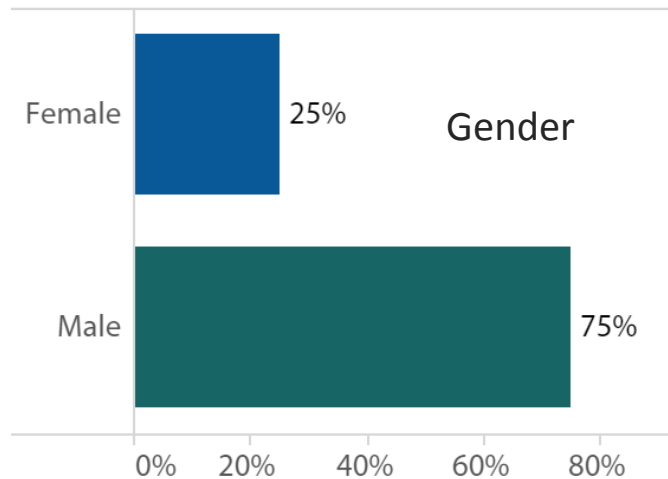




# Who is participating?

Rebated Consumers

# Rebated Consumer Characteristics





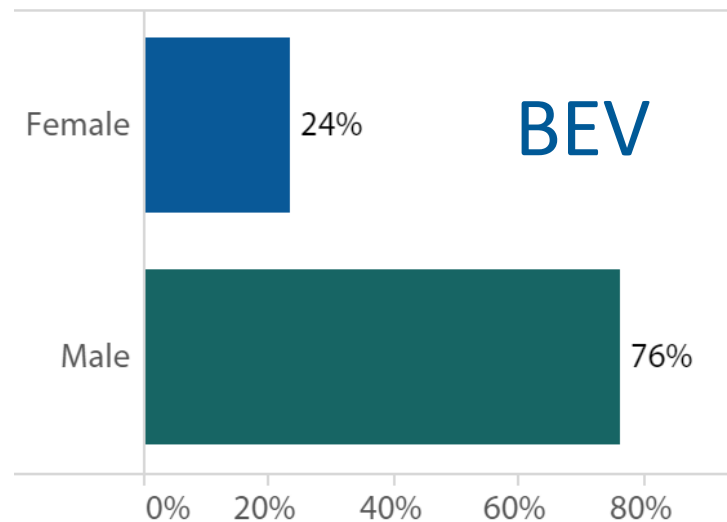
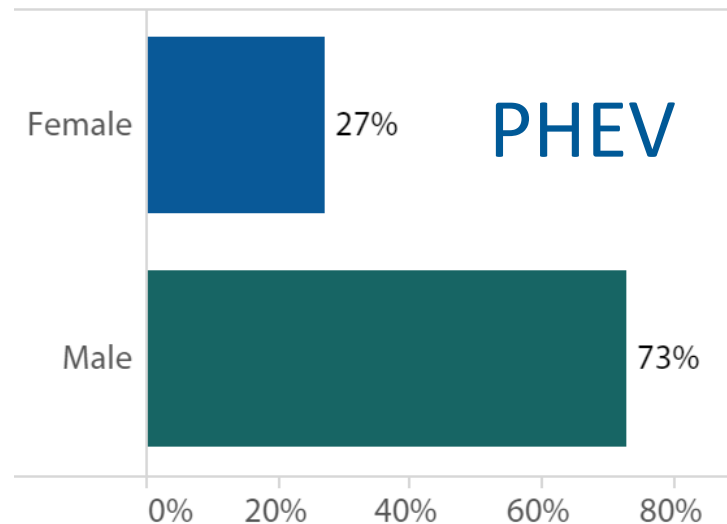
# Majority Characteristics of CVRP Consumers

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

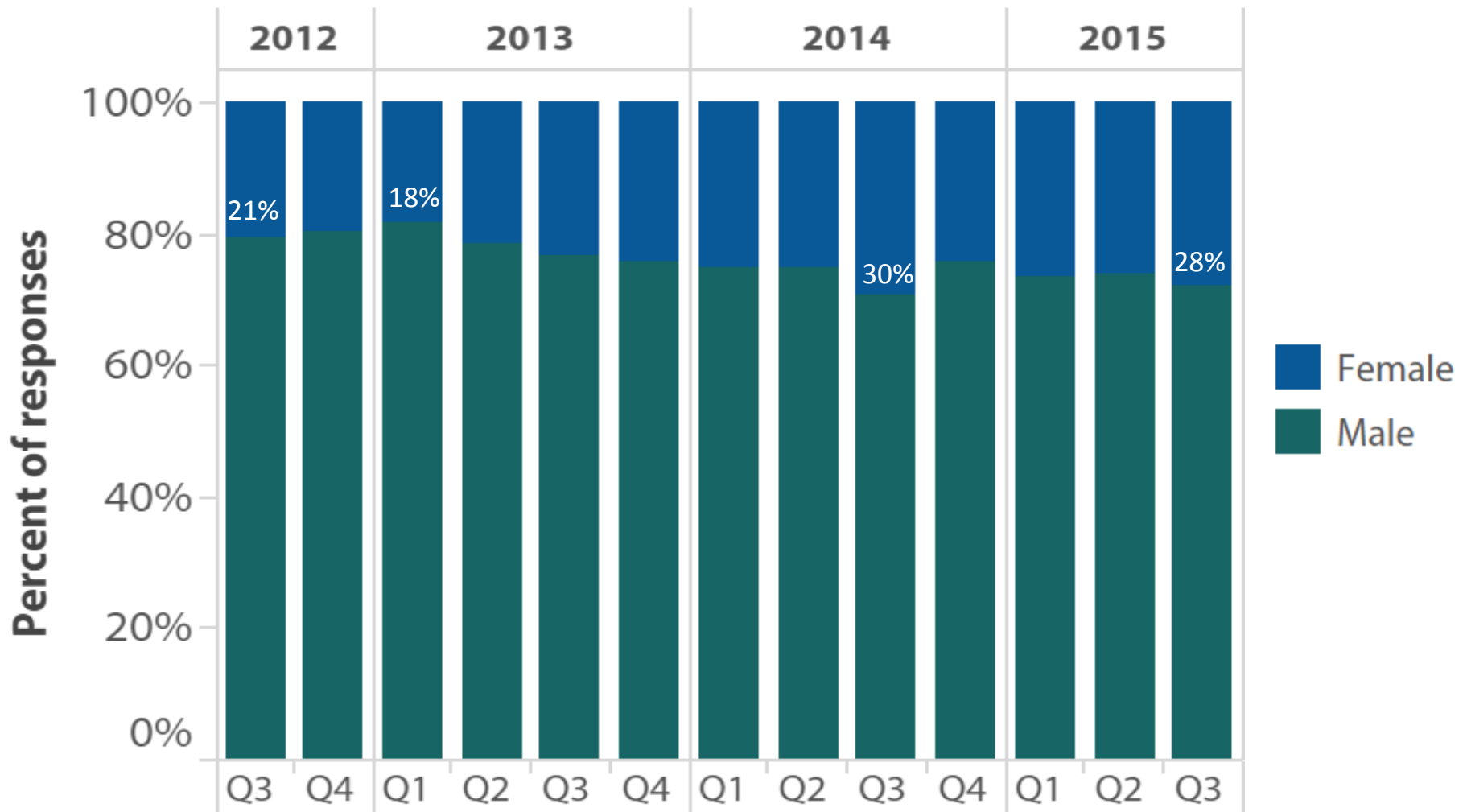
# By Product Type

PHEV consumers tend to more often be:

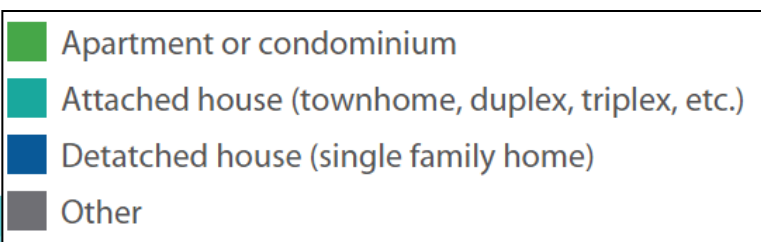
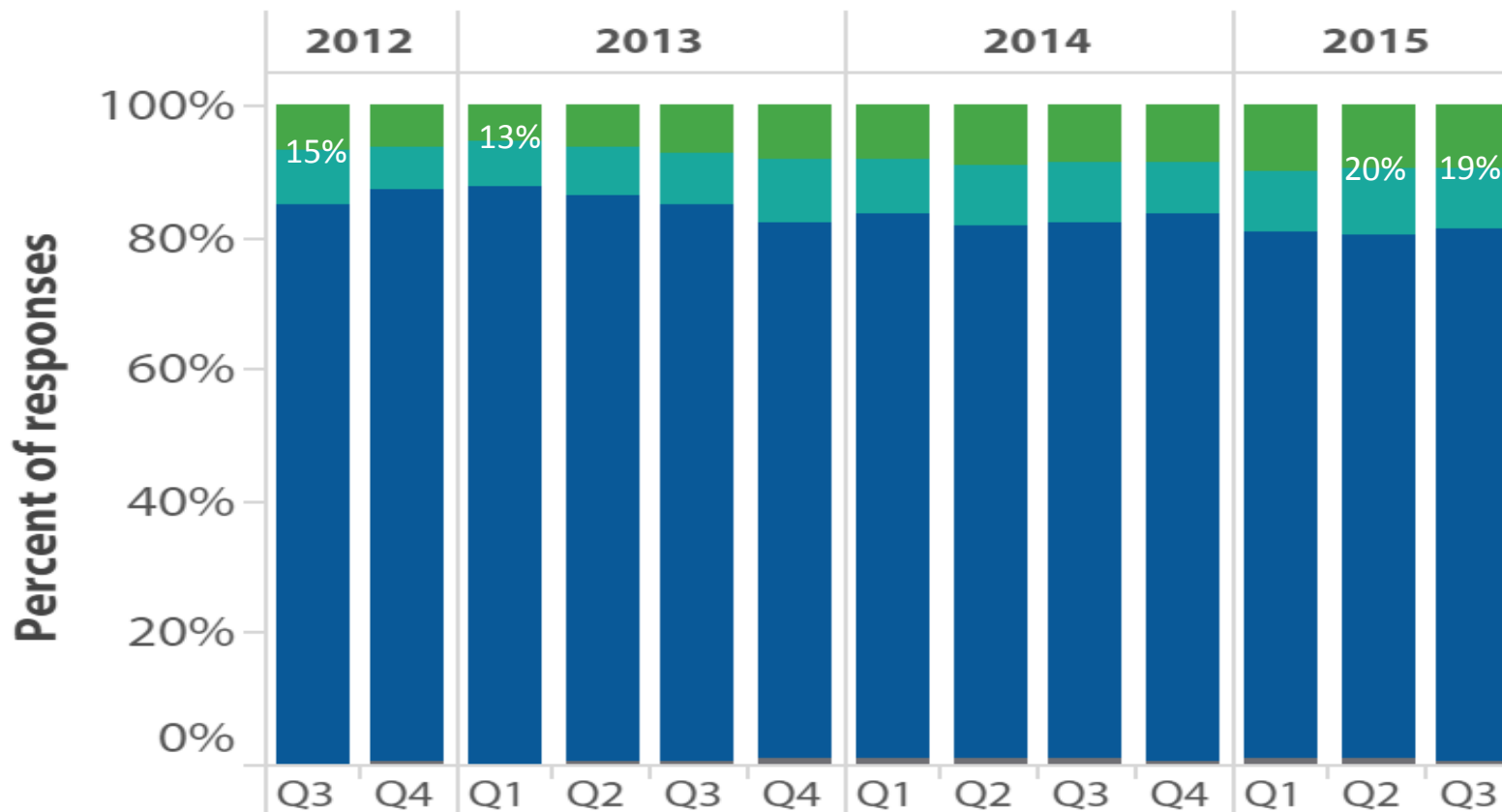
- Older
- Female
- Renters
- Multi-unit dwellers
- 1-vehicle households
- Lower income



# Over Time: Gender



# Rebate Recipients Over Time: Housing Type

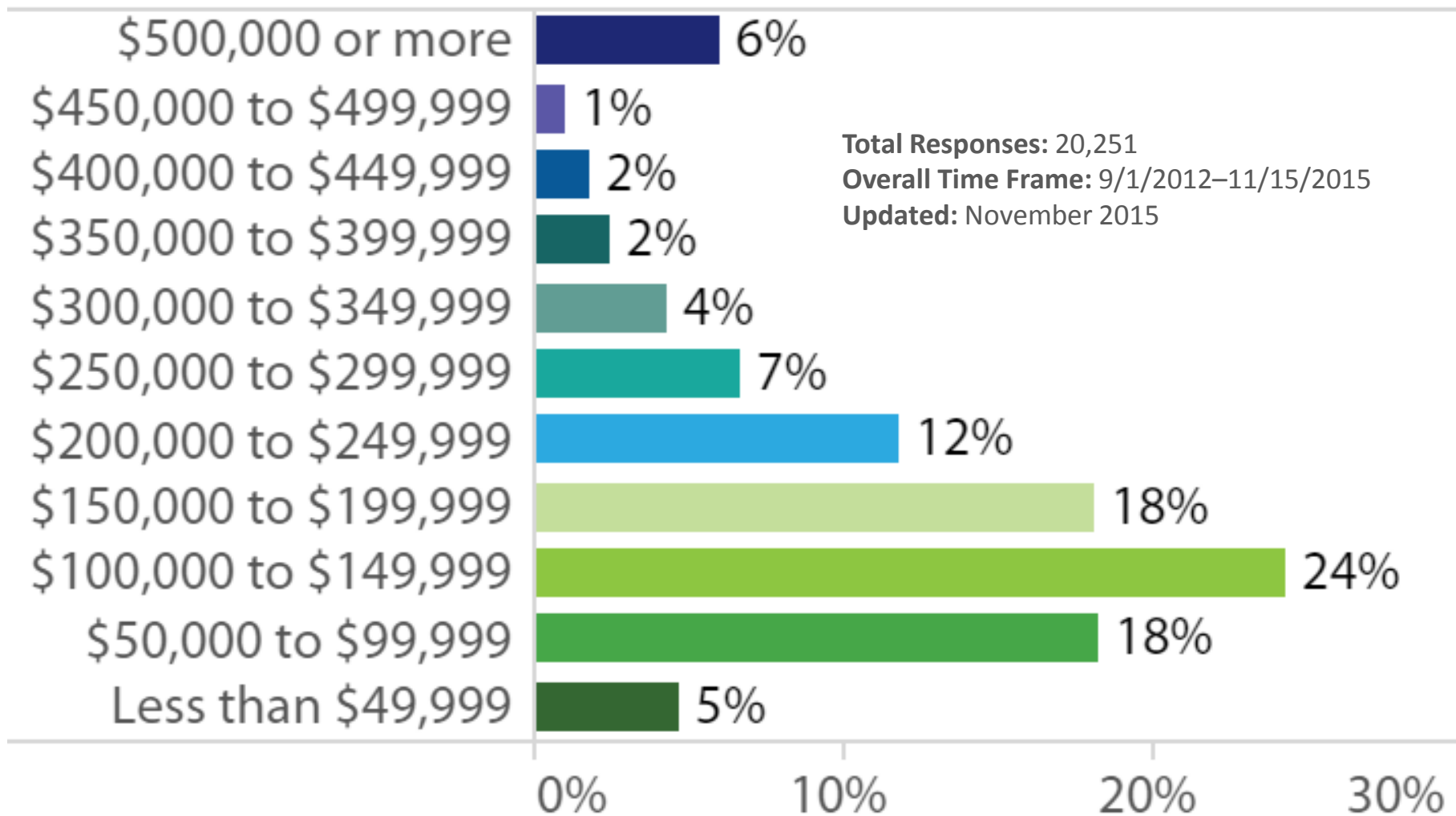




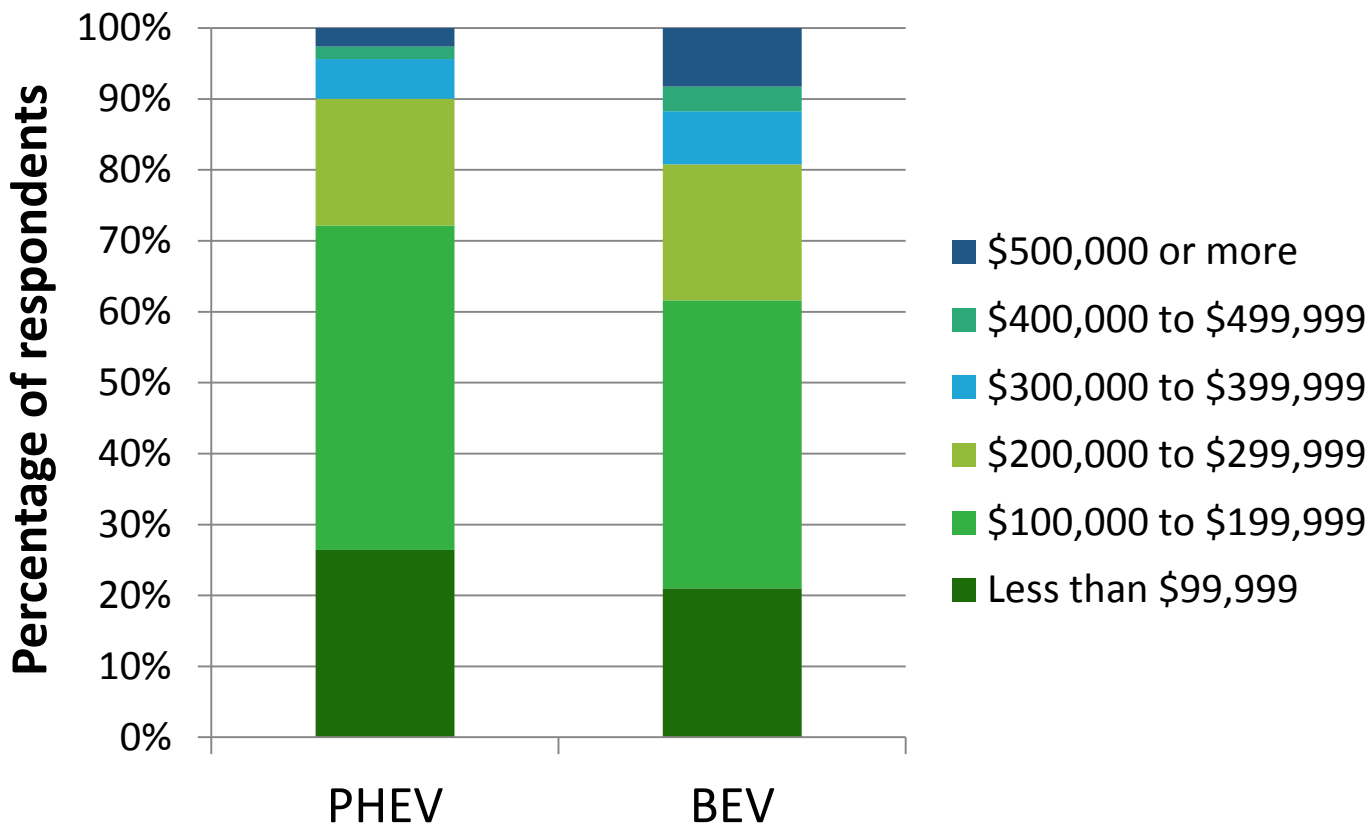


# Spotlight: Income Comparisons

# Rebate Recipient Household Income Distribution



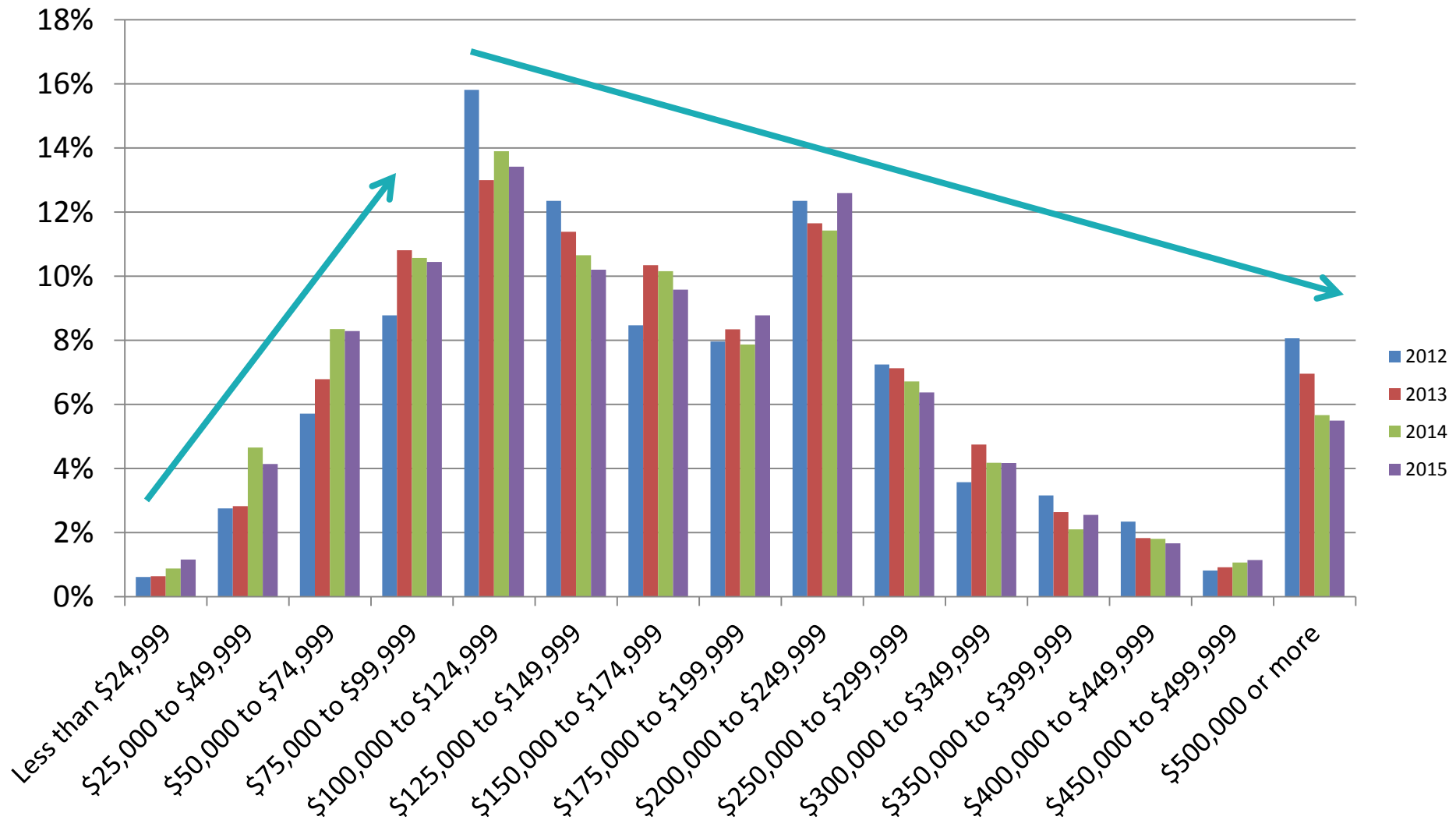
# Rebate Recipient Household Income by Product Type



Total Responses: 20,251

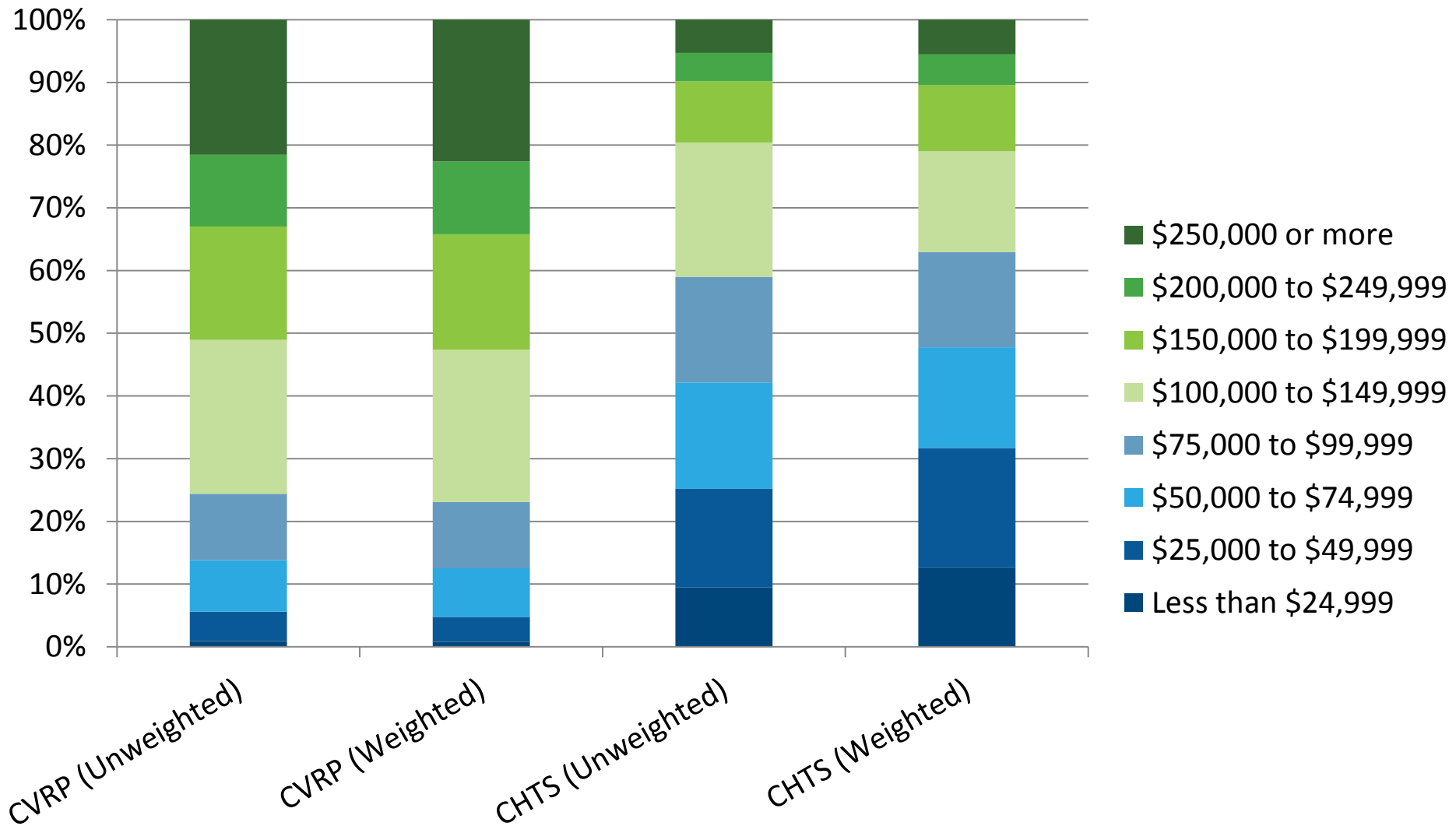
Overall Time Frame: 9/1/2012–11/15/2015

# CVRP Income Dist. Through Time





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



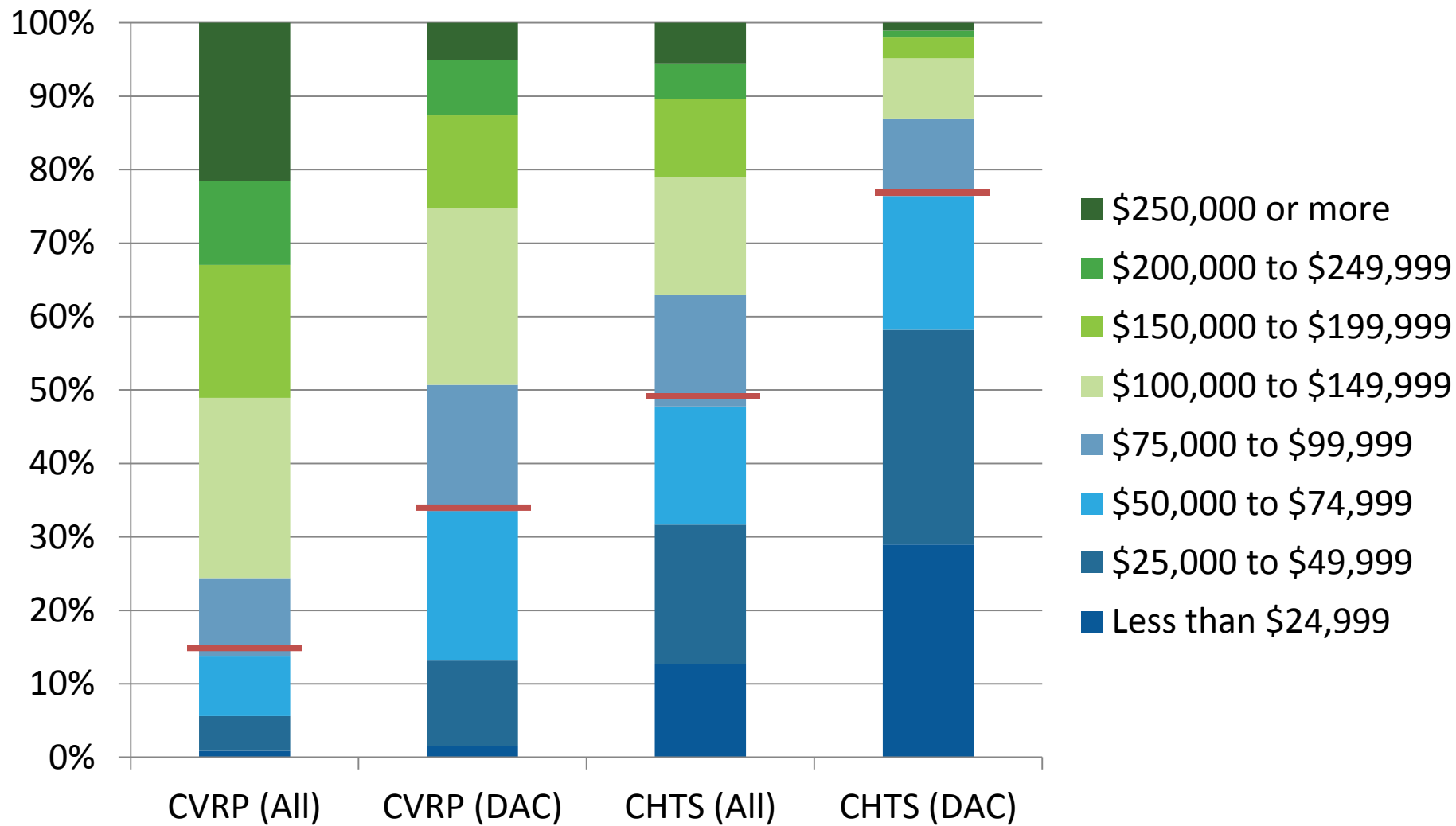
# California Median Household (HH) Incomes

<b>California population (Census 2014)</b>	<b>New-vehicle “intenders” (CHTS 2012)</b>	<b>CVRP rebate recipients (CVRP 2014)</b>
~\$61,500	\$75,000-\$99,999	\$150,000-\$174,999

# CA Median HH Incomes: All vs. DAC

	<b>New-vehicle “intenders” (CHTS 2012)</b>	<b>CVRP rebate recipients (CVRP 2014)</b>
<b>All:</b>	\$75,000-\$99,999	\$150,000-\$174,999
<b>DAC:</b>	\$25,000-\$49,999	\$75,000-\$99,999
<b>DAC/All</b>	25-67%	43-67%

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





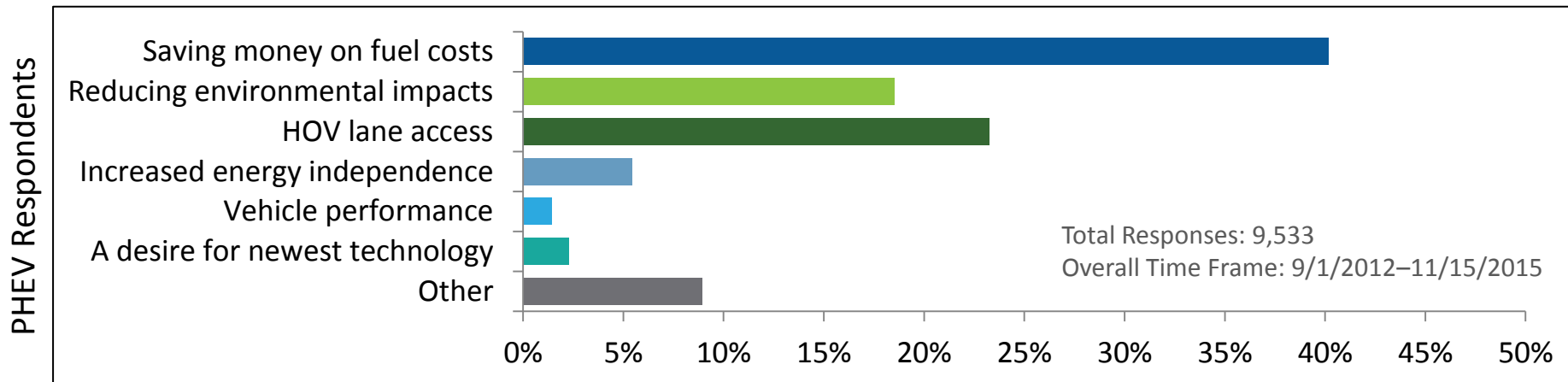
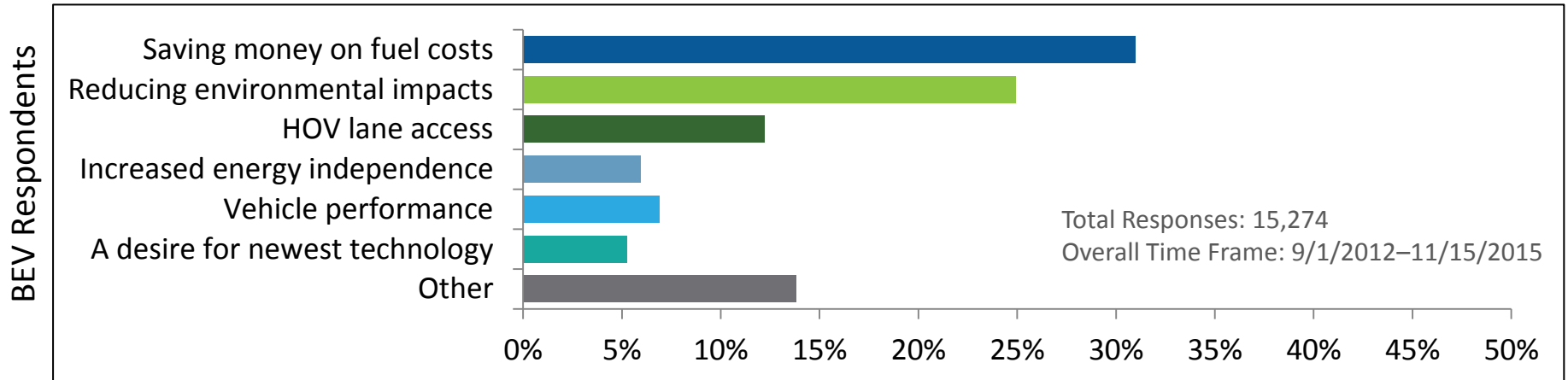
# Rebate Recipients and New-vehicle “intenders” with Low-to-Moderate Income

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

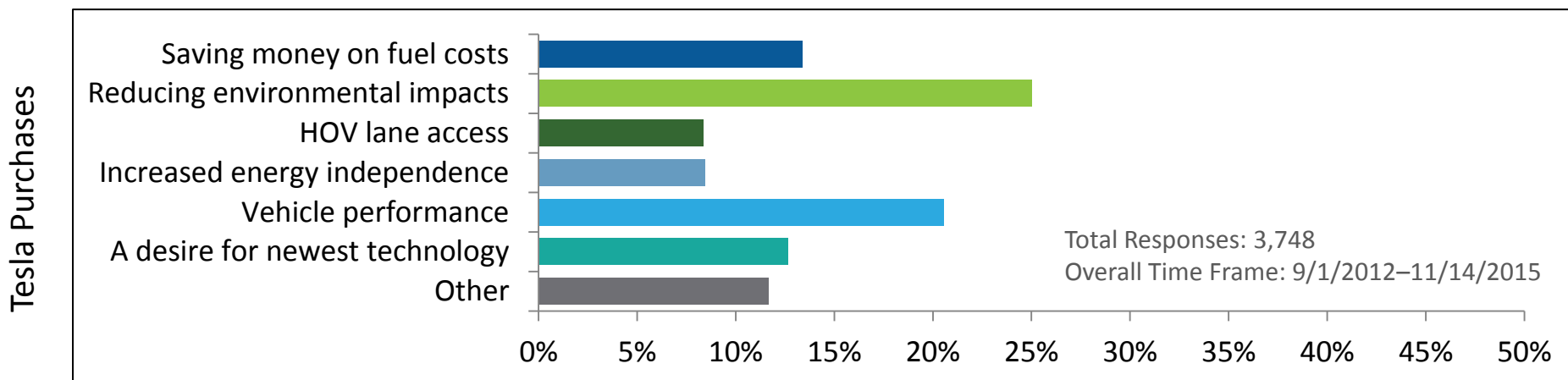
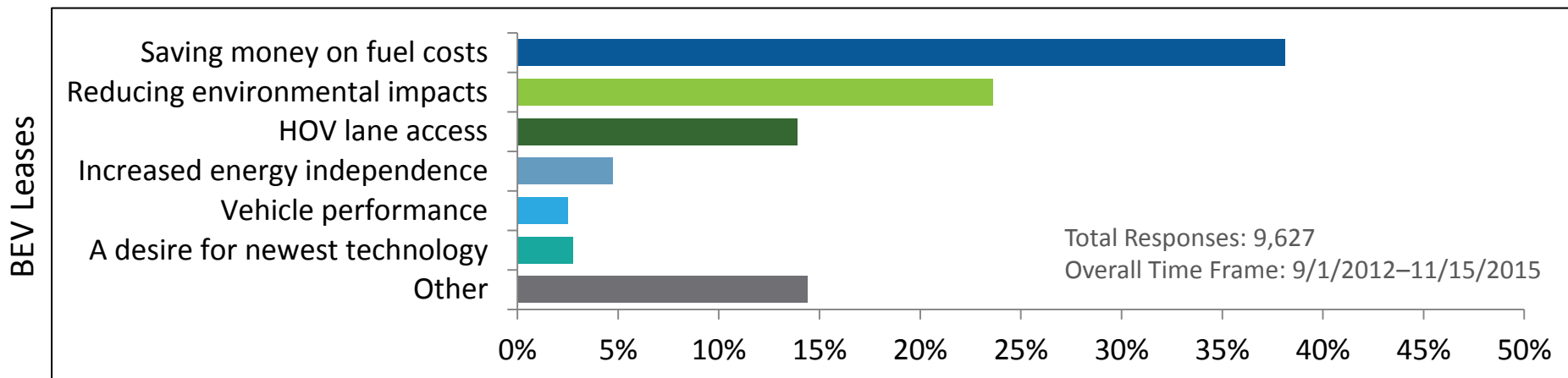
# **Why are they purchasing/leasing?**

Rebated Consumers

# Primary Purchase Motivations: BEV vs. PHEV



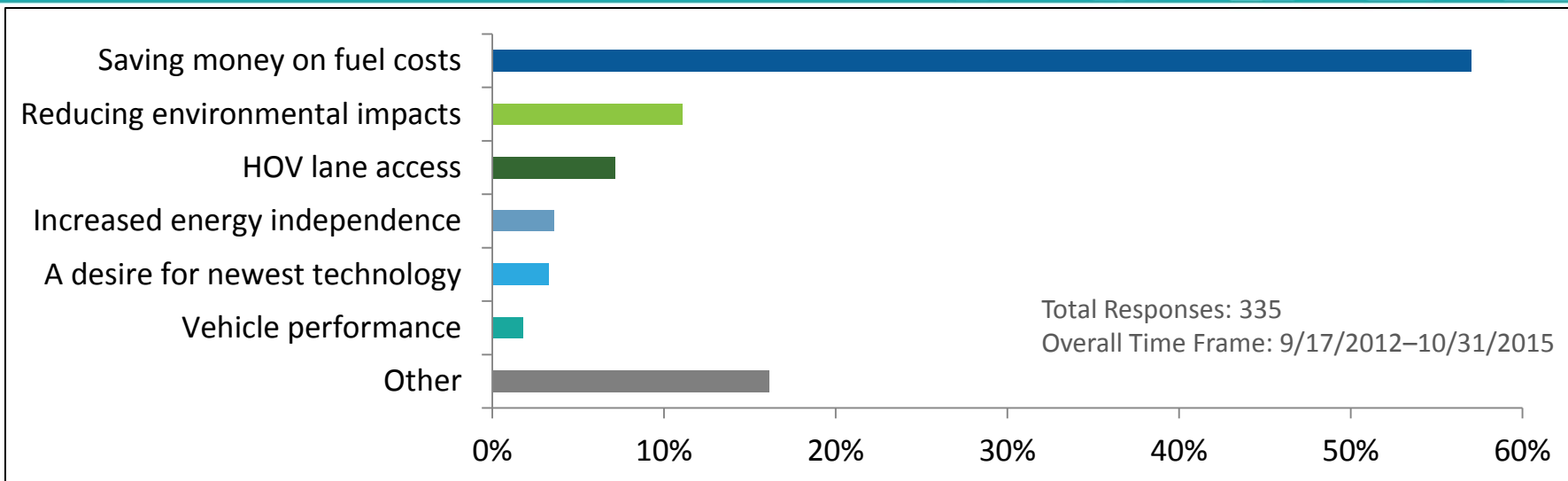
# Primary Purchase Motivations: Non-Tesla vs. Tesla BEV



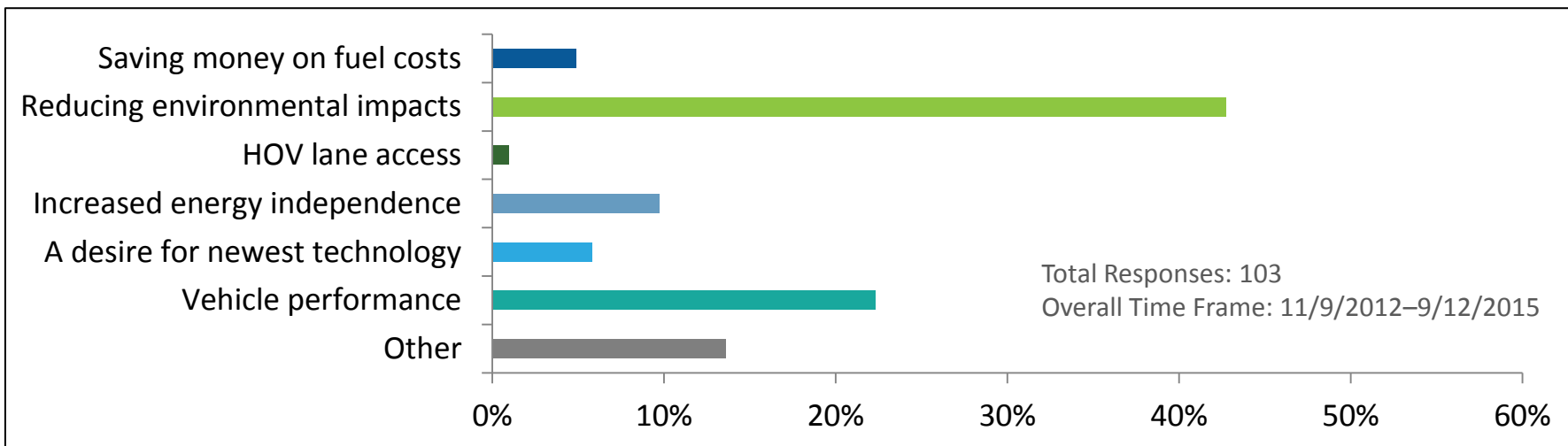


# Primary Purchase Motivations: Non-Tesla vs. Tesla BEV

San Bernardino/Riverside  
BEV Leases

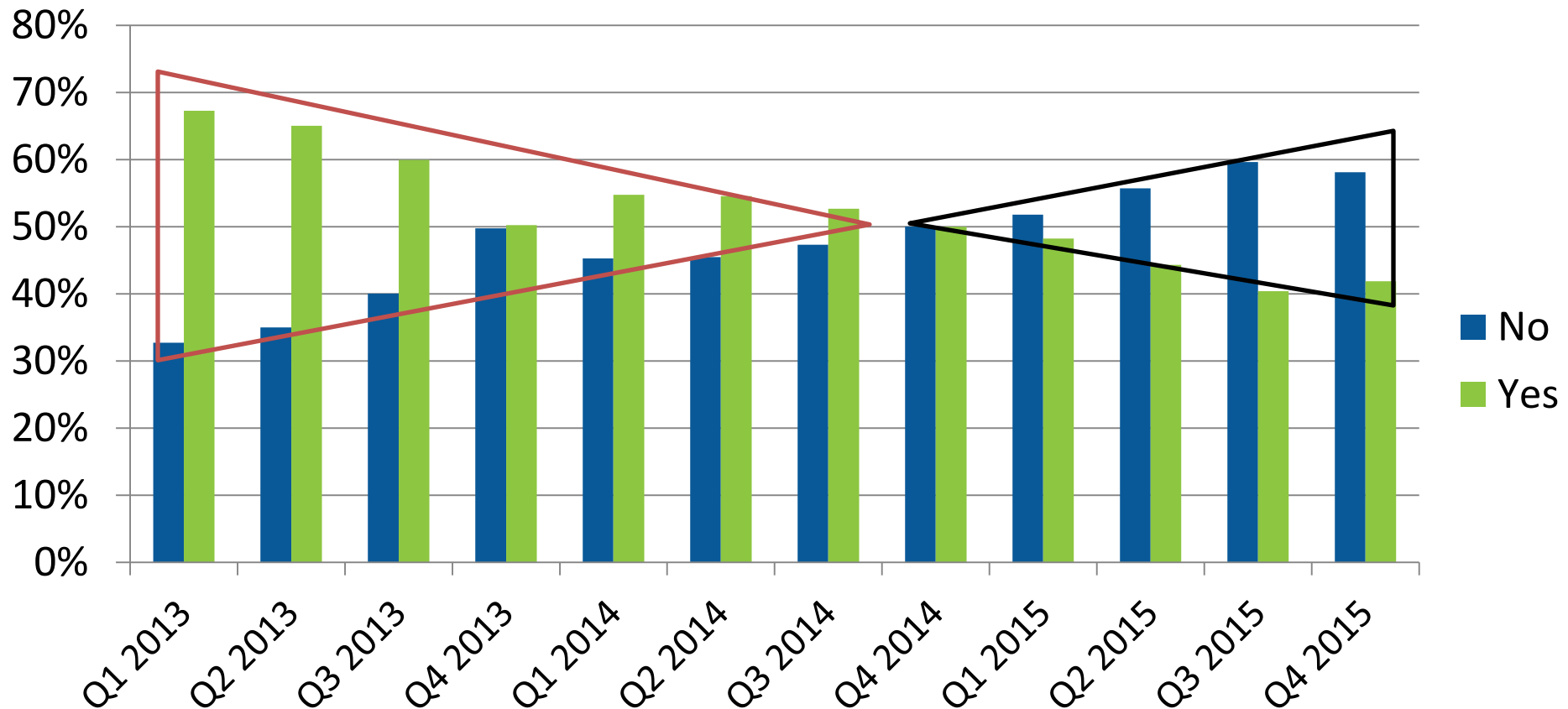


Marin Tesla Purchases



# CVRP Impact on Purchase/Lease

**Would you have purchased or leased your vehicle without the state vehicle (CVRP) rebate?**

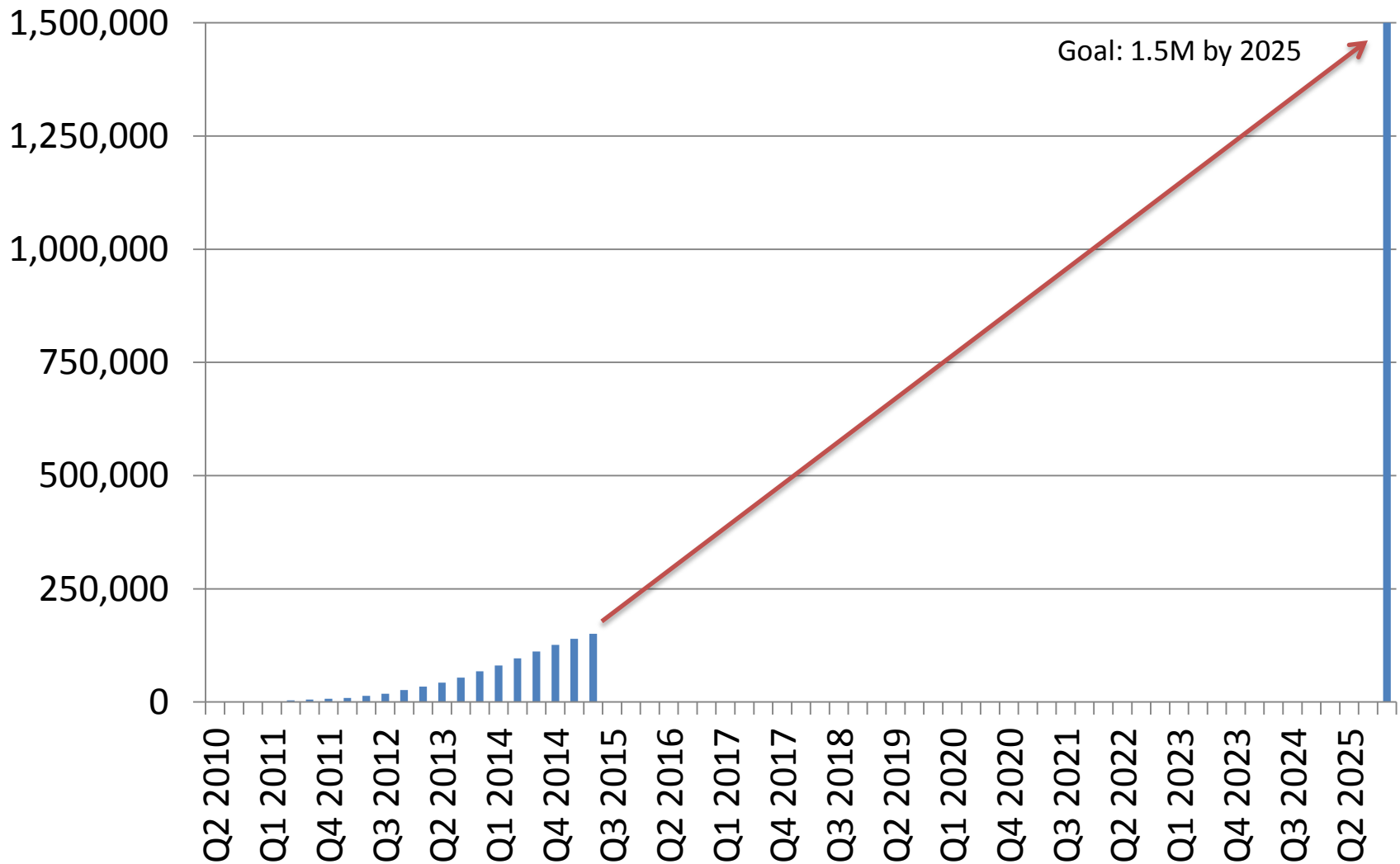




# Parting Thoughts



# 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.*



# 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