

# EV Marketability in the CA

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# Project Proposal

- Analysis of Electric Vehicle Sales In California

**1. Why are the most EVs sold in the top 3 counties?**

**2. The bottom 3 counties with the least number of EVs sold.**

**3. The most popular EV types are all-electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs).**

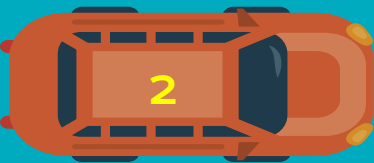
1. Why are most EVs sold in the top 3 counties?



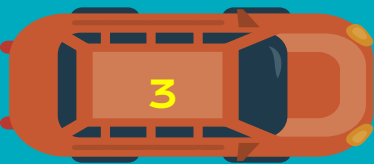
# Top 3 Counties



Los Angeles



Orange



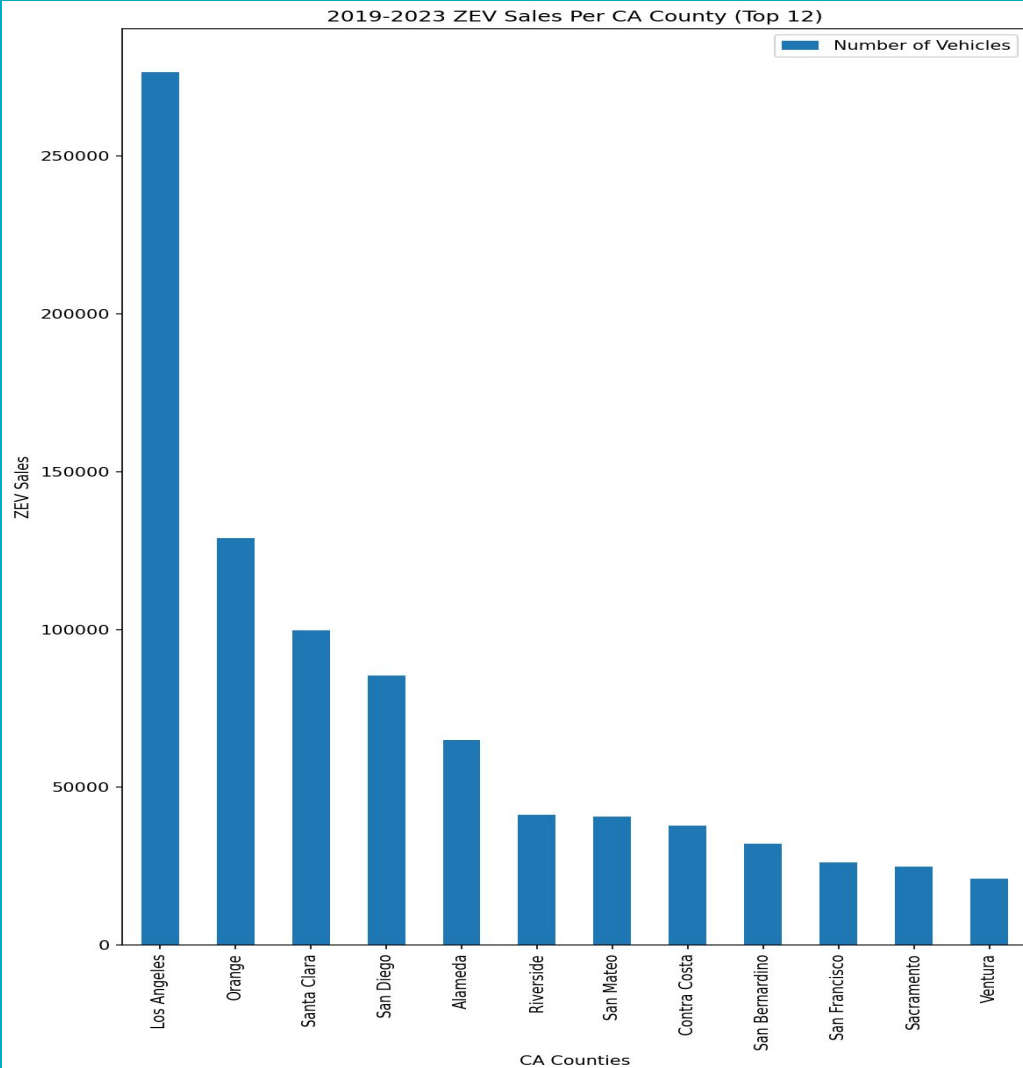
Santa Clara

EV profile  
characteristics:

Gas Prices

Income Levels

Government Incentives

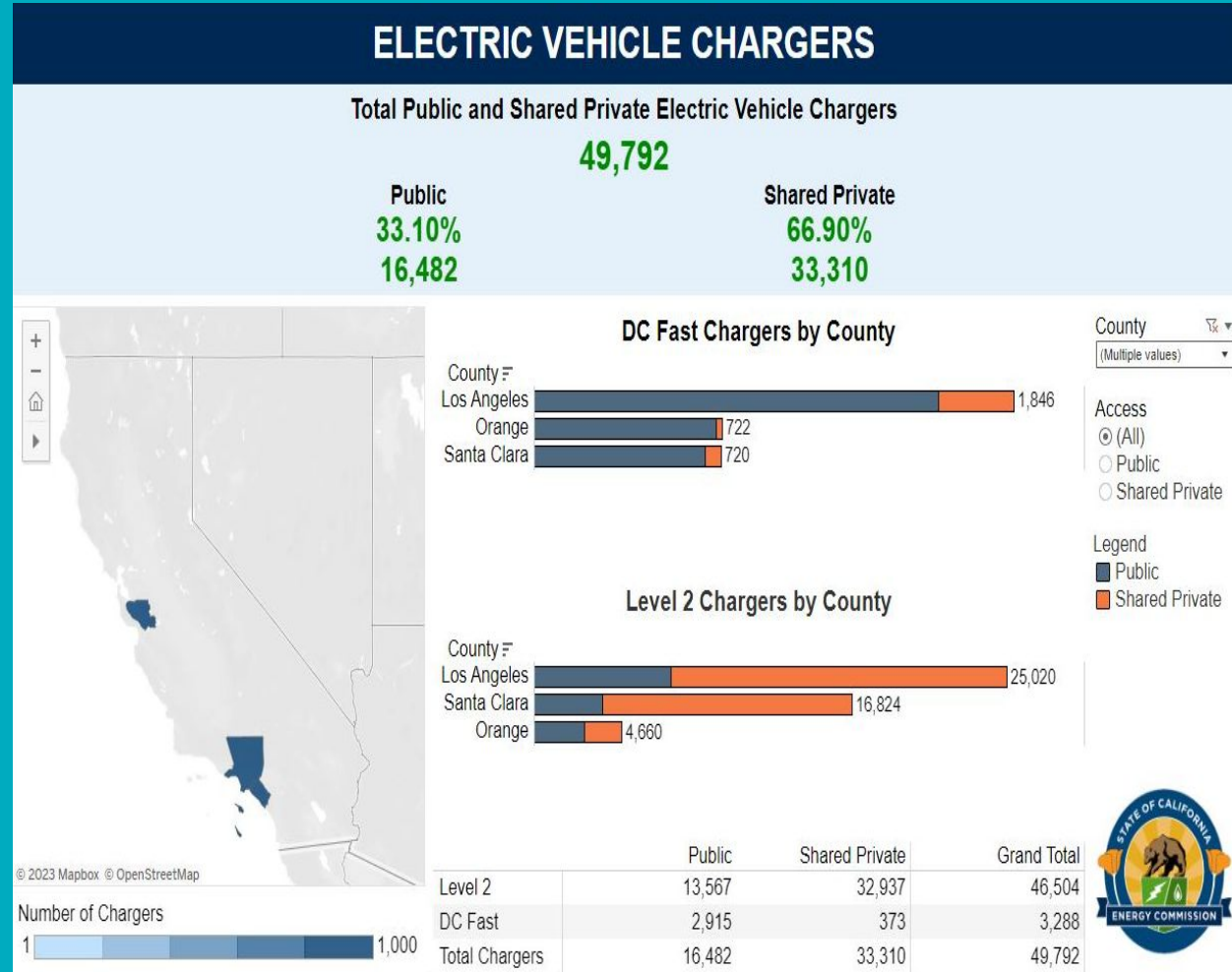


# Top 3 counties profile similarities:

High Population Densities

Developed Charging Infrastructure

Social preference for EV's



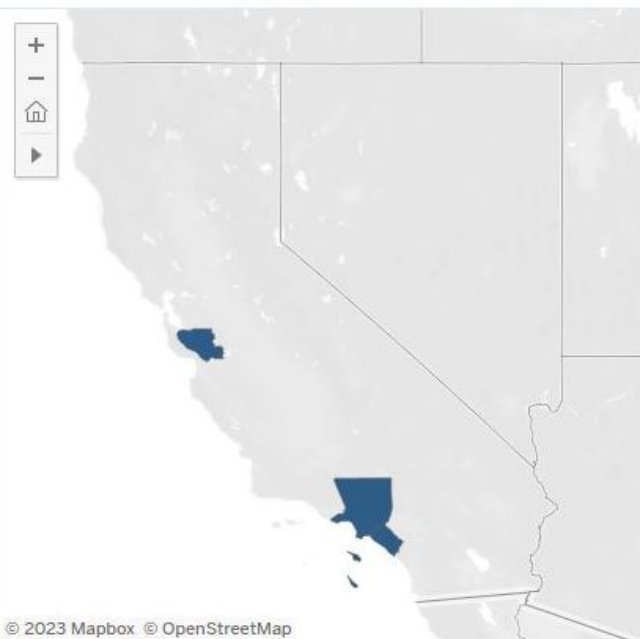
# ELECTRIC VEHICLE CHARGERS

## Total Public and Shared Private Electric Vehicle Chargers

**49,792**

**Public**  
**33.10%**  
**16,482**

**Shared Private**  
**66.90%**  
**33,310**

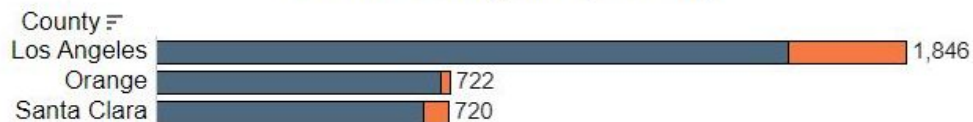


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Number of Chargers

1 1,000

### DC Fast Chargers by County



County

(Multiple values)

Access

☒ (All)

☐ Public

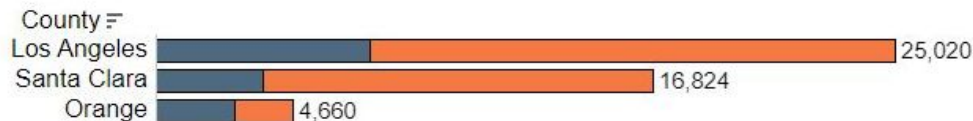
☐ Shared Private

Legend

☒ Public

☒ Shared Private

### Level 2 Chargers by County



	Public	Shared Private	Grand Total
Level 2	13,567	32,937	46,504
DC Fast	2,915	373	3,288
Total Chargers	16,482	33,310	49,792



## Conclusion - Top 3 Counties

**In conclusion to gain comprehensive insights into the factors driving the high EV sales in the top 3 counties of California, data on consumer preferences, specific EV models, MSRP price points, gas prices, income levels, and infrastructure development are needed. Analyzing this data will provide a clearer understanding of the underlying reasons for the popularity of electric vehicles in these regions and will assist policymakers and industry stakeholders in developing effective strategies to promote sustainable transportation across the state.**

Question 2: Why do the bottom 3 counties have the least amount of evs sold? (Alpine, Sierra, Modoc)





## BOTTOM 3 Counties:



Modoc



Sierra



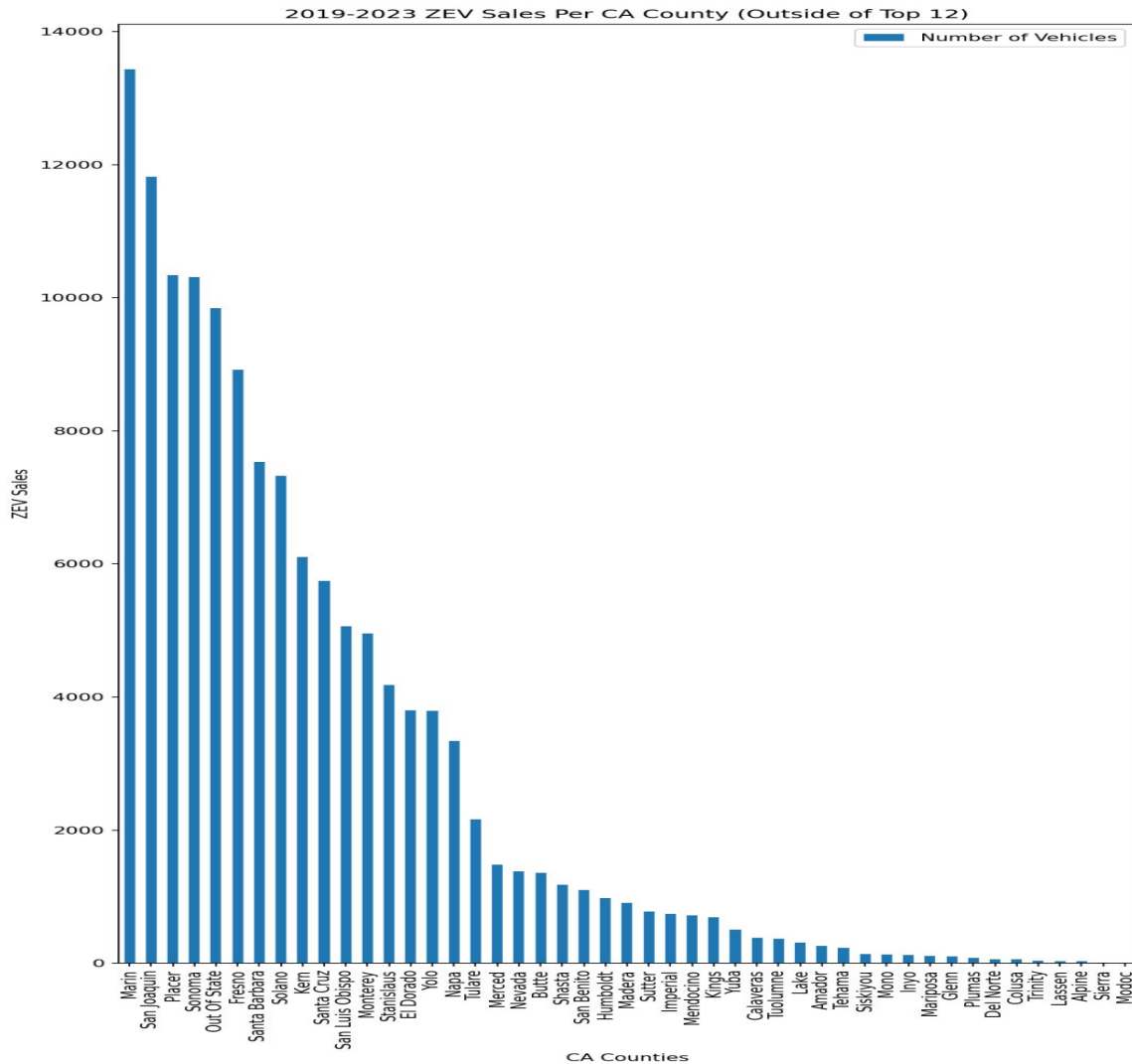
Alpine

Vehicle preferences:

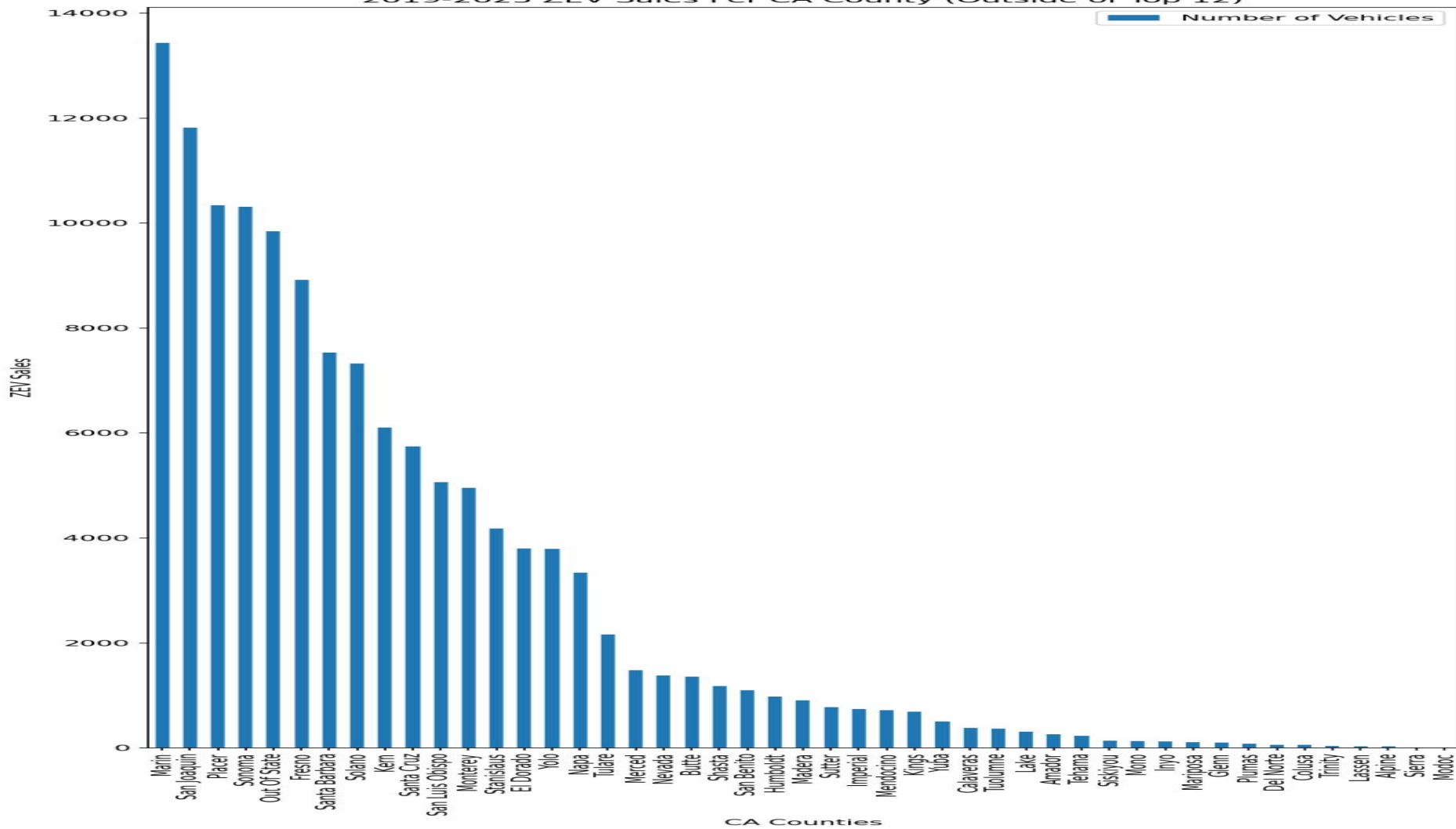
Terrain adaptability

Income Levels

Car Utility



2019-2023 ZEV Sales Per CA County (Outside of Top 12)



# Top 3 counties profile similarities:

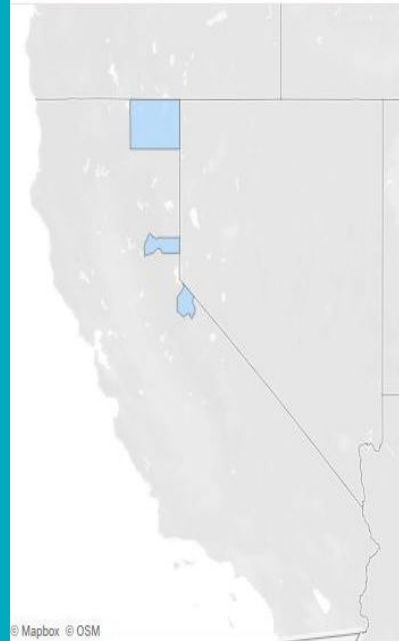
Low Population  
Densities

Under Developed  
Charging  
Infrastructure

Local preference for  
Utility vehicles

## ELECTRIC VEHICLE CHARGERS

### Total Public and Shared Private Electric Vehicle Chargers



© Mapbox © OSM

Number of Chargers



### DC Fast Chargers by County



County  
(Multiple values)

Access

☒ (All)

☐ Public

☐ Shared Private

Legend

☒ Public

☐ Shared Private

### Level 2 Chargers by County



	Public	Shared Private	Grand Total
Level 2	11	0	11
DC Fast	8	0	8
Total Chargers	19	0	19



# ELECTRIC VEHICLE CHARGERS

## Total Public and Shared Private Electric Vehicle Chargers

19

Public  
100.0%  
19

Shared Private  
0.0%  
0



© Mapbox © OSM

Number of Chargers



### DC Fast Chargers by County



County

(Multiple values)

Access

- ☒ (All)  
☐ Public  
☐ Shared Private

Legend

- ☒ Public  
☐ Shared Private

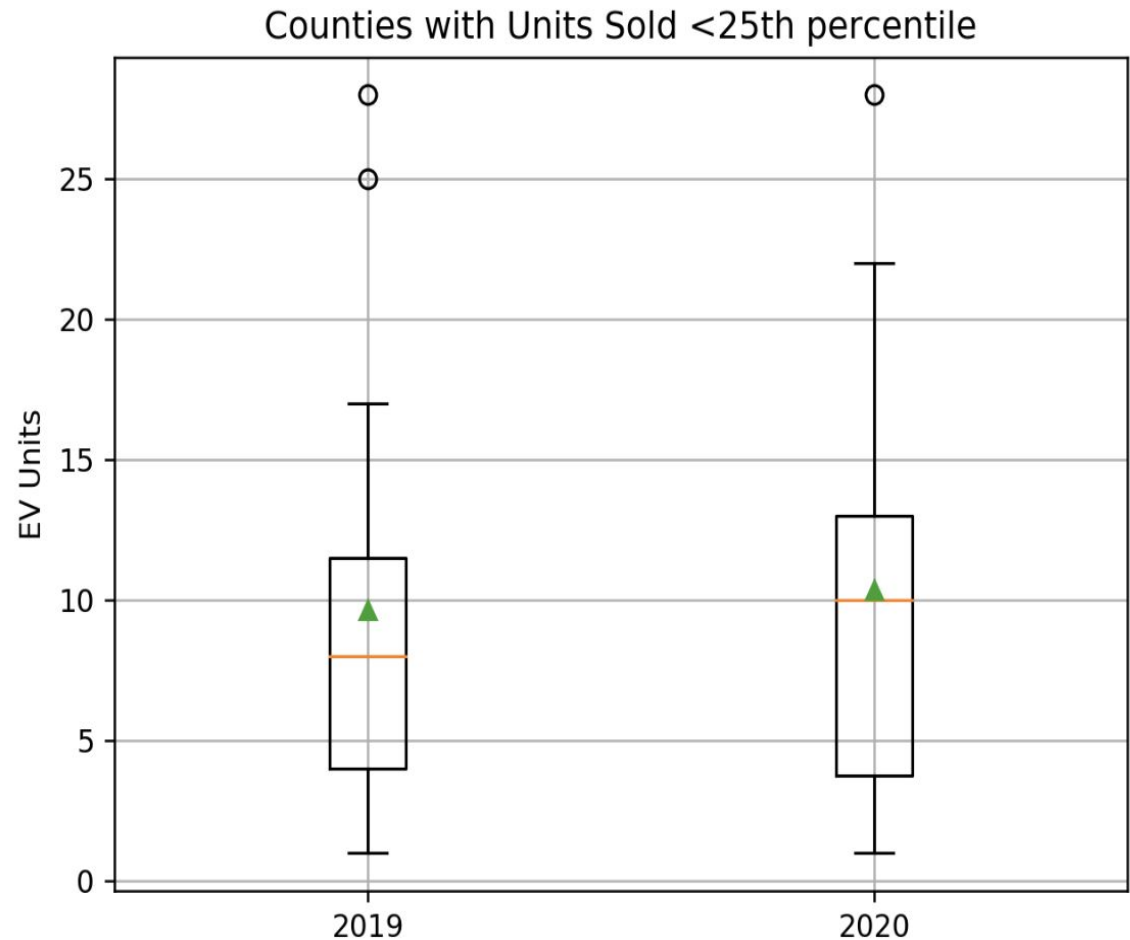
### Level 2 Chargers by County



	Public	Shared Private	Grand Total
Level 2	11	0	11
DC Fast	8	0	8
Total Chargers	19	0	19



**Rural Geography:** The rural nature of some of these counties can also play a role in the low EV adoption. Long distances between destinations might raise concerns about the range and accessibility of charging points for EV owners.

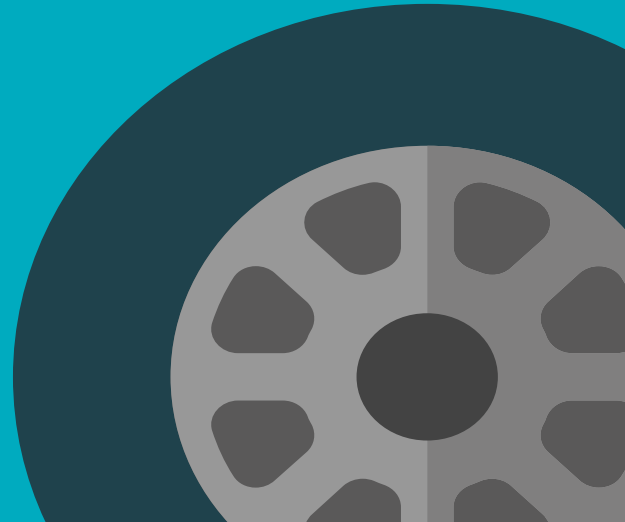


# Conclusion

The limited adoption of electric vehicles in the bottom 3 counties (Alpine, Sierra, and Modoc) can be attributed to various factors, with lower income levels being a primary driver. To promote EV adoption in these regions, targeted efforts should focus on providing financial incentives, expanding charging infrastructure, conducting awareness campaigns, and addressing specific challenges related to rural geography and transportation options. Policymakers and stakeholders should work collaboratively to create a more conducive environment for EV adoption in these counties and promote sustainable transportation choices.



3. The most popular EV types are all-electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs).



## Top 3 Ev Models Sold



1. Model 3 - BASE MSRP \$39,990  
Quantity sold-287332



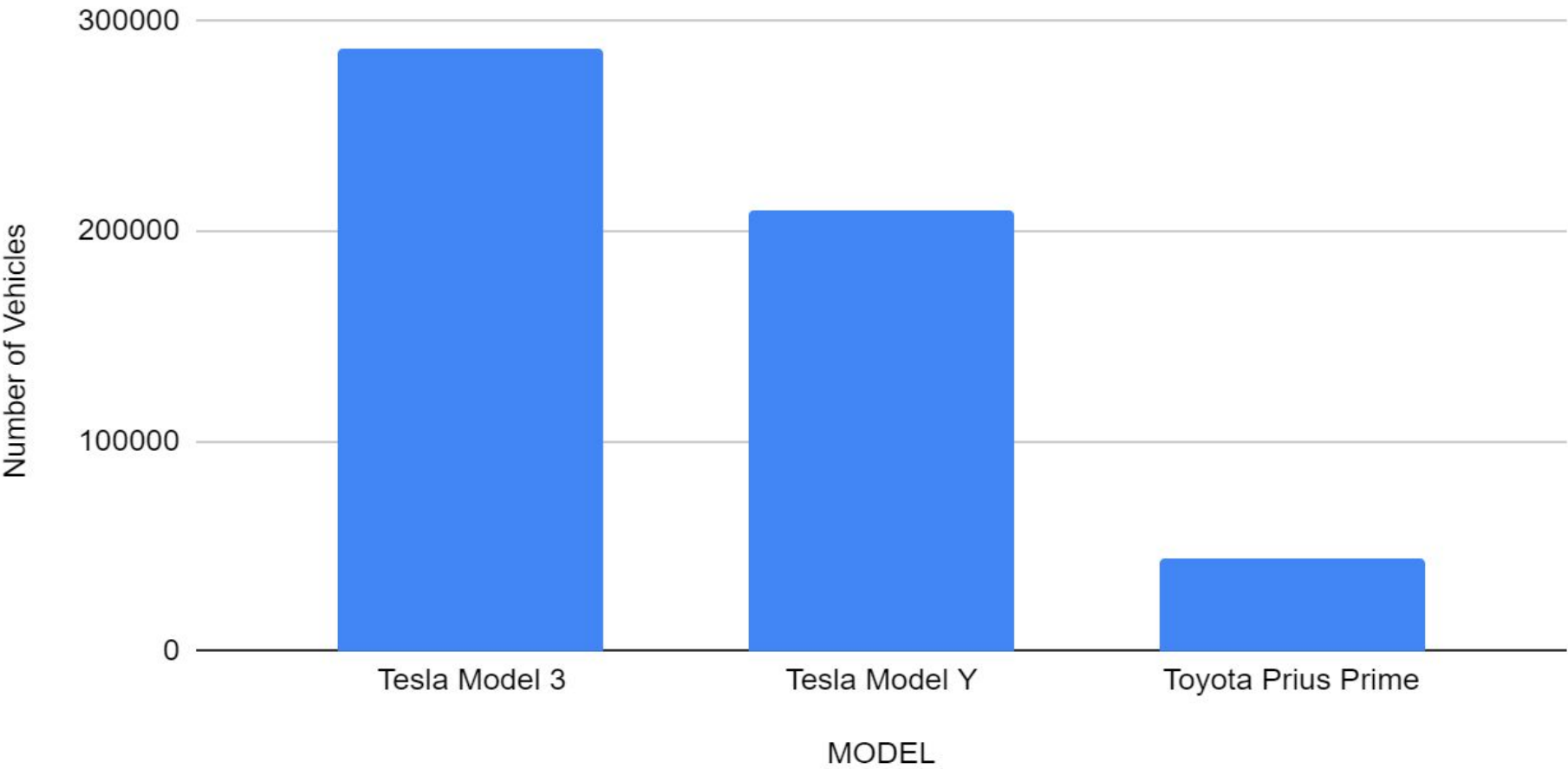
2. Model Y - BASE MSRP \$46,990  
Quantity sold-209,478



3. Prius Prime - BASE MSRP  
\$32,350  
Quantity sold-43,980

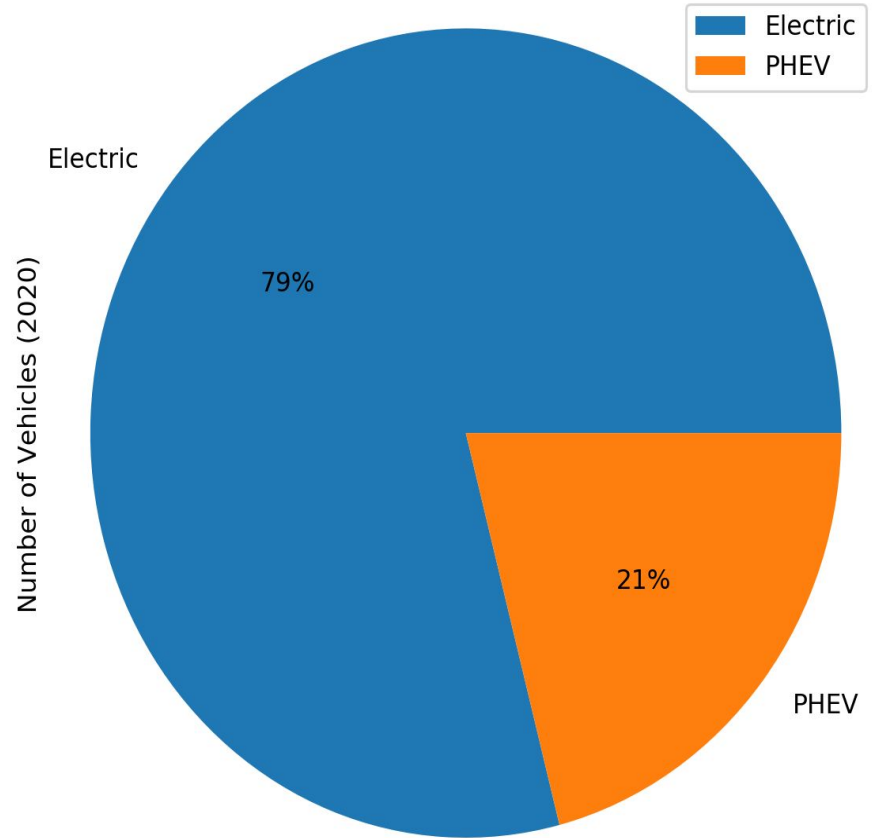
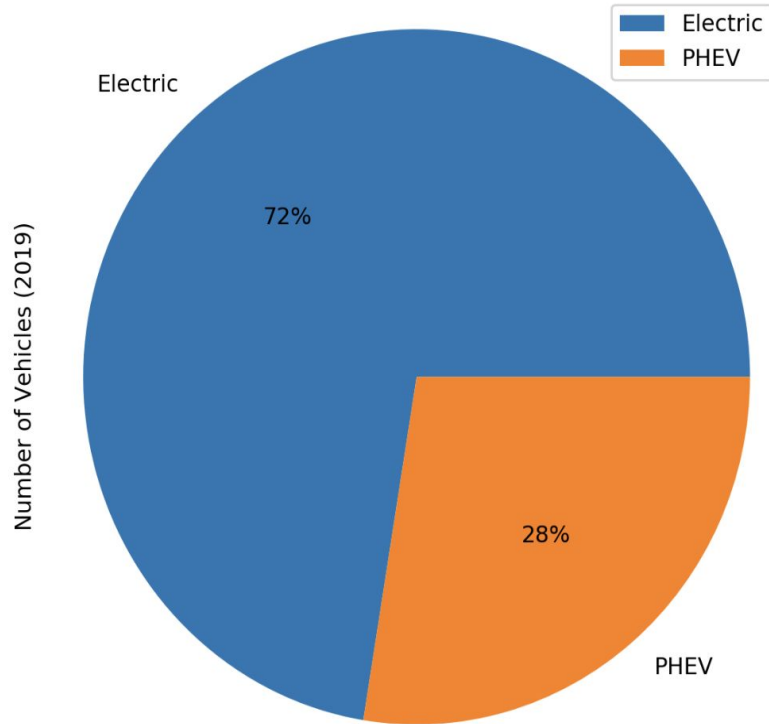


# Number of Vehicles vs. MODEL



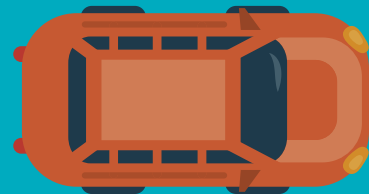
## Markup of EV to PHEV sales for Top 3 Median Income Counties

Markup of EV to PHEV sales for Top 3 Median Income Counties

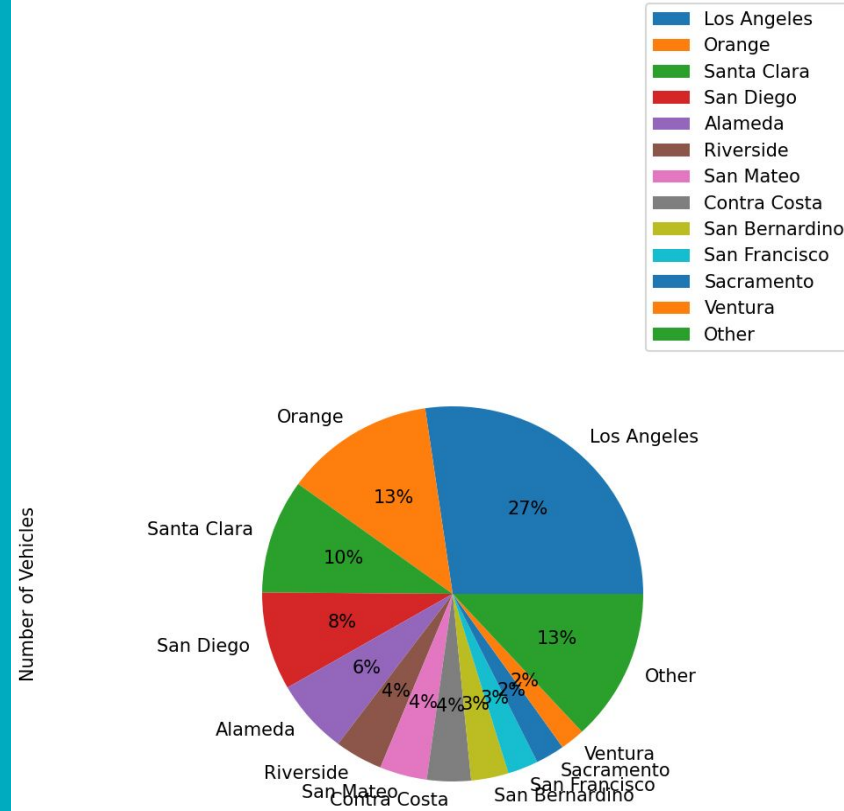


These EV types are considered more favorable for several reasons:

- Environmental Benefits
- Cost Savings
- Incentives
- Positive Public Perception
- Health Benefits



% of ZEV Sales Across Each CA County



## conclusion

The popularity of all-electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) stems from their numerous advantages, including environmental benefits, cost savings, supportive policies, advancements in battery technology, and positive public perception. As more people become environmentally conscious and governments emphasize sustainability, the demand for these EV types is expected to continue growing, leading to a cleaner and more sustainable transportation future.



- An executive summary or overview of the project and project goals:
  - Explain how the project relates to the industry you selected.

We looked at California's counties and how many sales were done in each county. We then focused on the top three counties and the bottom three. For the top three we plan to put more money into marketing for the top three and how to remarket to our bottom three so we can increase sales in the bottom counties.

- An overview of the data collection, cleanup, and exploration processes:
  - Describe the source of your data and why you chose it for your project.
  - Ev sales, charging stations through out california, median incomes from california by county. it best represents why the top three counties have teh most amount of EV sales and helps us how to directly market towards them.Helps us see weather we need to reinforce marketing in the bottom three or pull away from market.
  - Describe the collection, exploration, and cleanup process.
  - Census.gov /
  - Eliminating column or information irrelevant to our presentation
  - Data was clean

- The approach that your group took to achieve the project goals:
  - Include any relevant code or demonstrations of the application or analysis.
  - Link file, clean california CSV files and one line codes to help us present what we were trying to visualize
  - 
  - Discuss any unanticipated insights or problems that arose and how you resolved them.
  - Making sure we were showing the correct amount of car sales per countie
  - Shrinking our sample size
  - Show correlation of why top 3 had the most EVs compared to bottom 3



- The results/conclusions of the application or analysis:
  - Include relevant images or examples to support your work.
  - If the project goal was not achieved, discuss the issues and how you attempted to resolve them.

- Next steps:
  - Briefly discuss potential next steps for the project
  - Population size
  - Better show median income for counties with outliers
  - Possibly look up info for how many EV's break down
  - Look up truck sales for the bottom 3 counties

