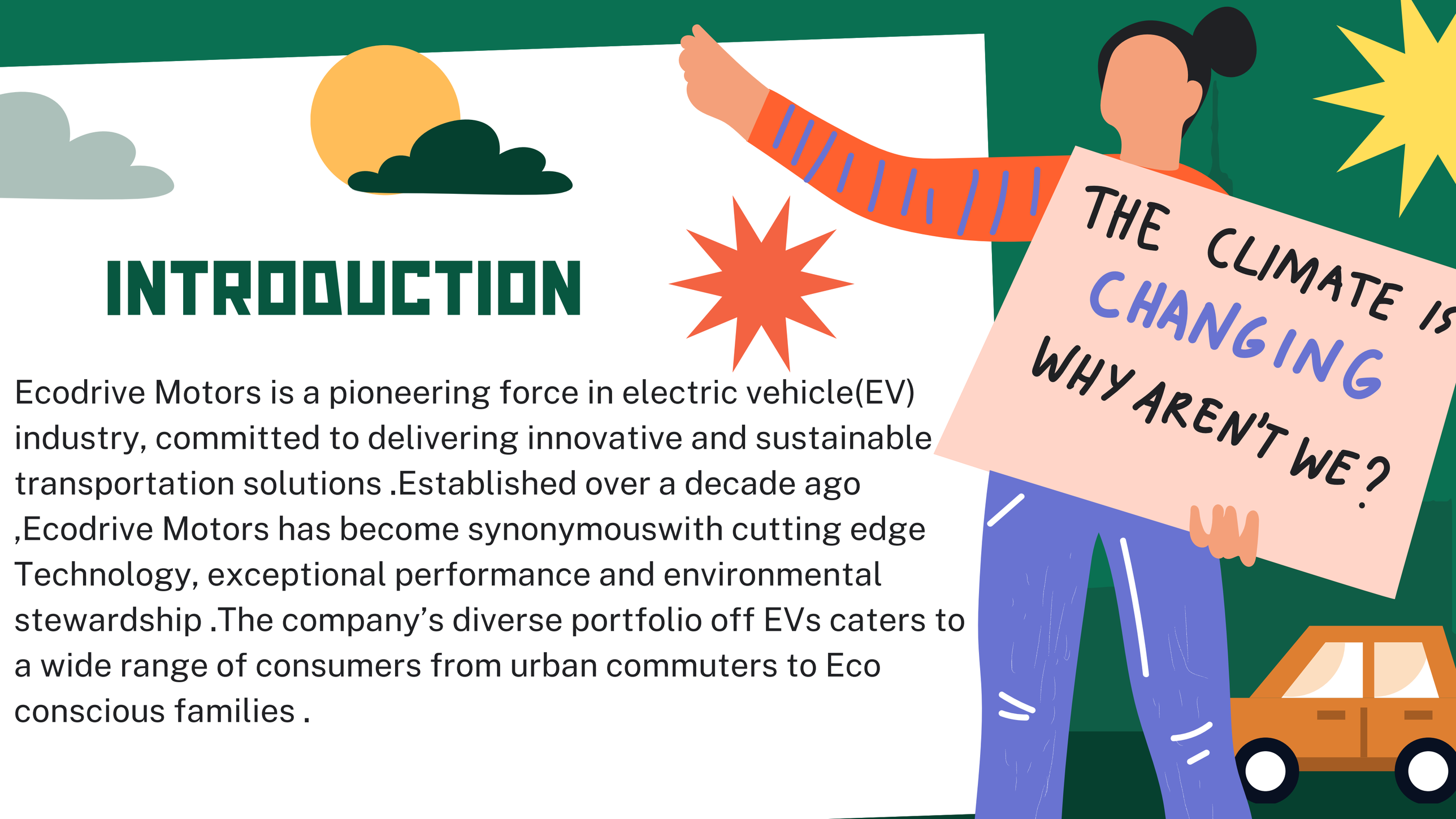
ECO DRIVE MOTORS

By M ROMI CHANU

INTRODUCTION

Ecodrive Motors is a pioneering force in electric vehicle(EV) industry, committed to delivering innovative and sustainable transportation solutions .Established over a decade ago ,Ecodrive Motors has become synonymouswith cutting edge Technology, exceptional performance and environmental stewardship .The company’s diverse portfolio off EVs caters to a wide range of consumers from urban commuters to Eco conscious families .



PROBLEM STATEMENT

despite its successes the company faces a significant challenge: understanding the dynamic patterns and trends in EV adoption across different regions

The company’s executives recognized the need to comprehensively analyze available EV population data to uncover actionable insights.

GOAL & KPIS

Analyzing EV population data to better understand the market, target the right customers, and ultimately achieve the mission of leading the transition to a cleaner future.

1.EV ADOPTION RATE:

2.EV REGISTRATION GROWTH RATE:

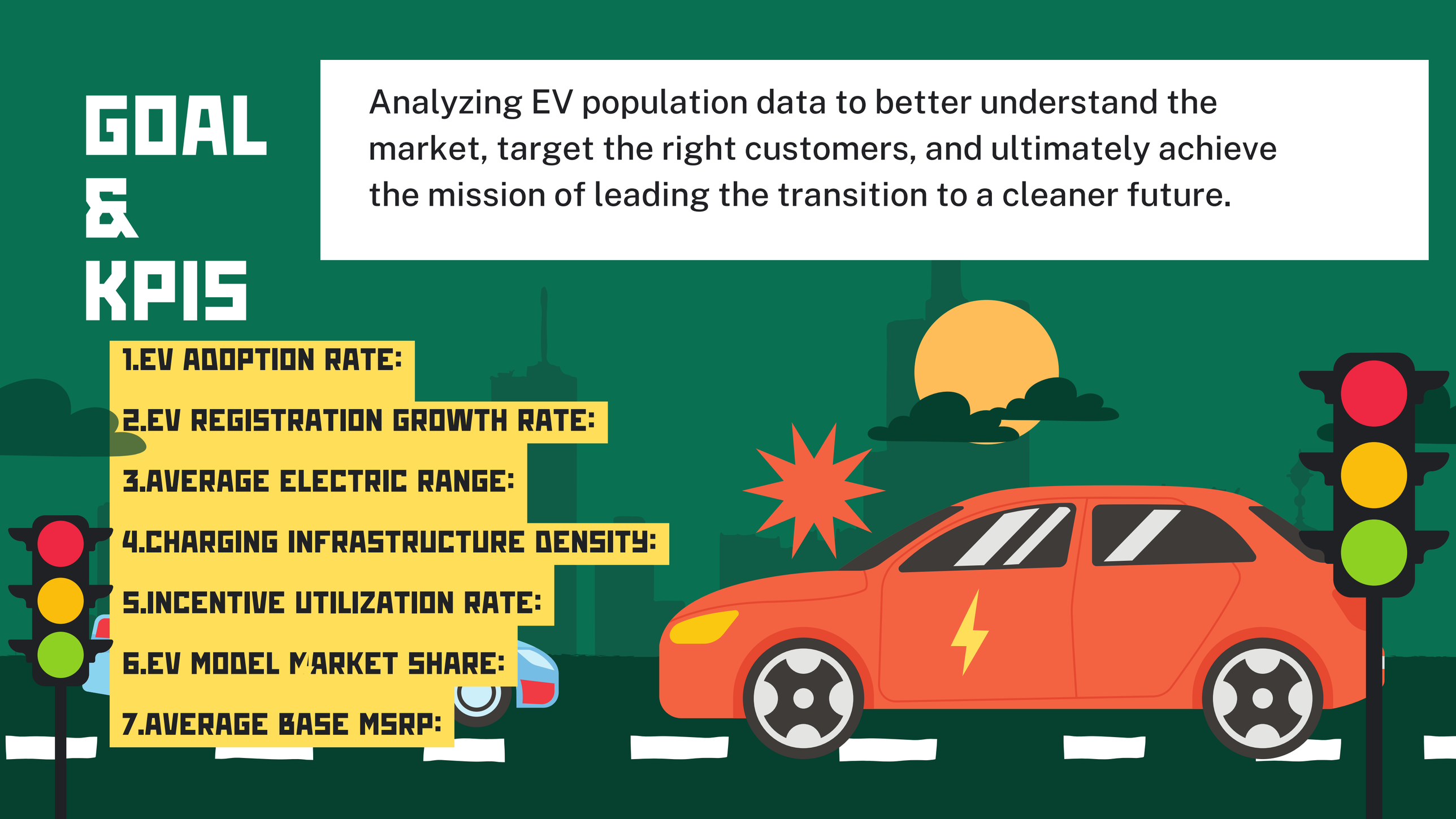
3.AVERAGE ELECTRIC RANGE:

4.CHARGING INFRASTRUCTURE DENSITY:

5.INCENTIVE UTILIZATION RATE:

6.EV MODEL MARKET SHARE:

7.AVERAGE BASE MSRP:



RECOMMENDED ANALYSIS

Q1. What is the total number of electric vehicles registered in each county?

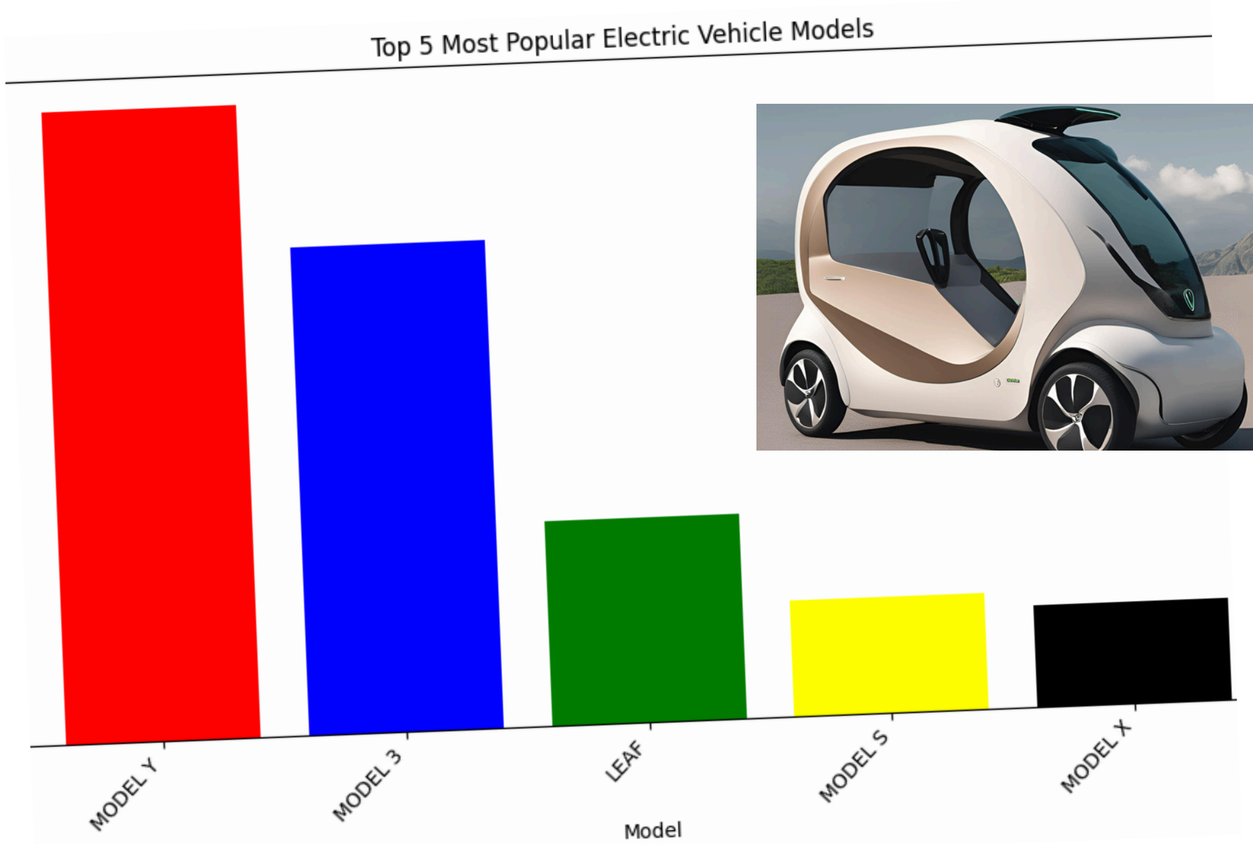
- Analysis: EV registrations vary significantly across countie. Counties with higher registrations may have more supportive environments for EV adoption.

Q2. What is the average electric range of vehicles by type (BEV vs PHEV)?

- Analysis: BEVs have a higher average range than PHEVs, indicating their suitability for longer trips. BEV has an average of 60 while PHEV have an average of 30

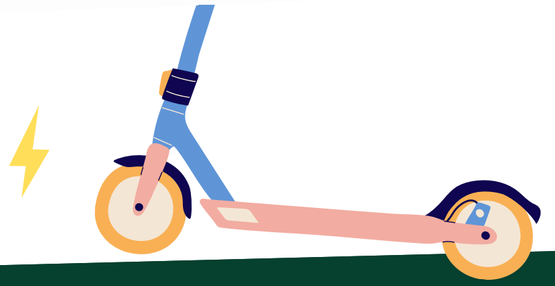
Q3. Which are the top 5 most popular electric vehicle models in the dataset?

Analysis: MODEL Y,MODEL 3, LEAF, MODEL X,MODEL S are the top 5 most popular model.

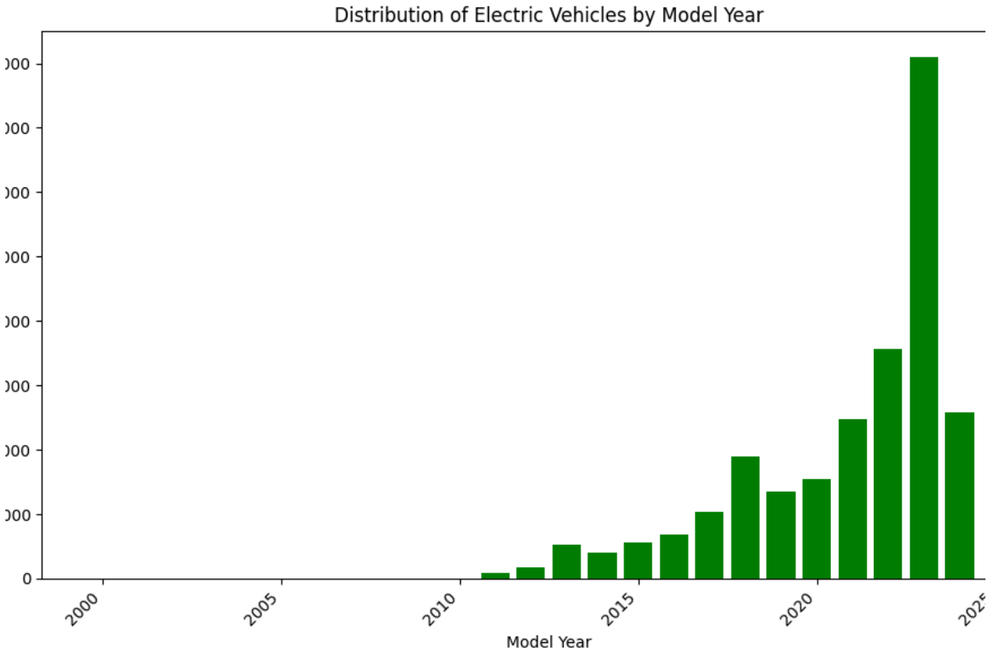


Q4. How many vehicles are eligible for clean alternative fuel vehicle incentives?

- **Analysis: A significant number of 17615 EVs are eligible for incentives, suggesting that government programs play a role in encouraging EV adoption**

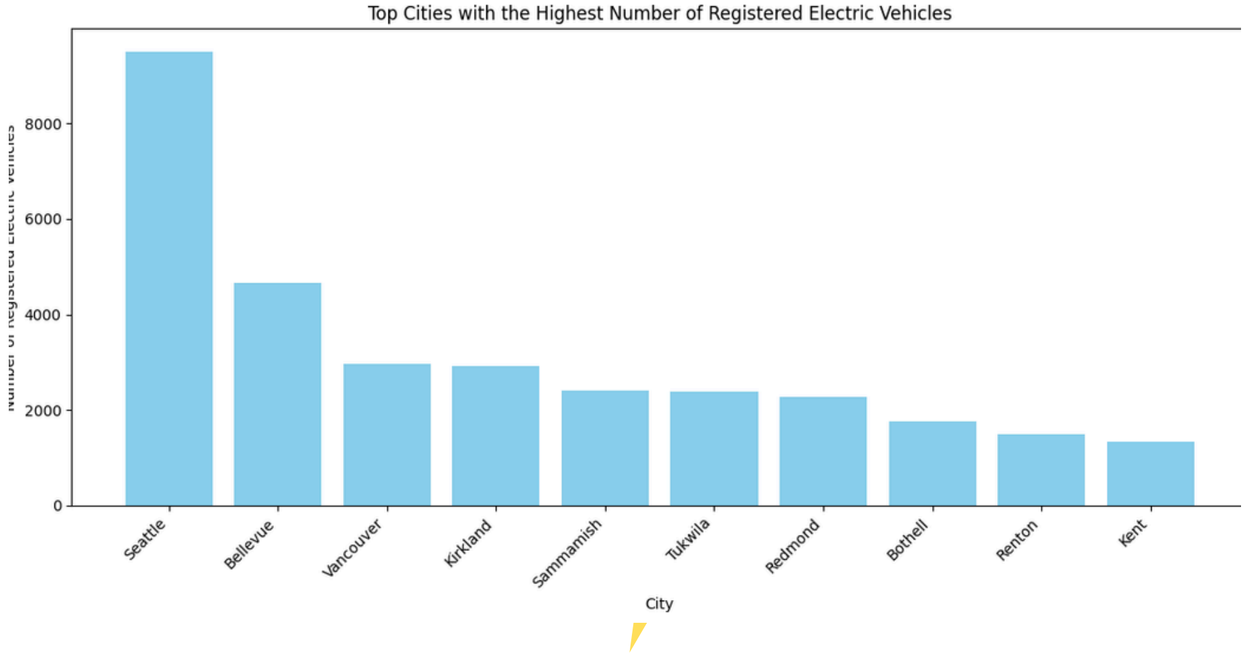


Q5. What is the distribution of electric vehicles by model year?



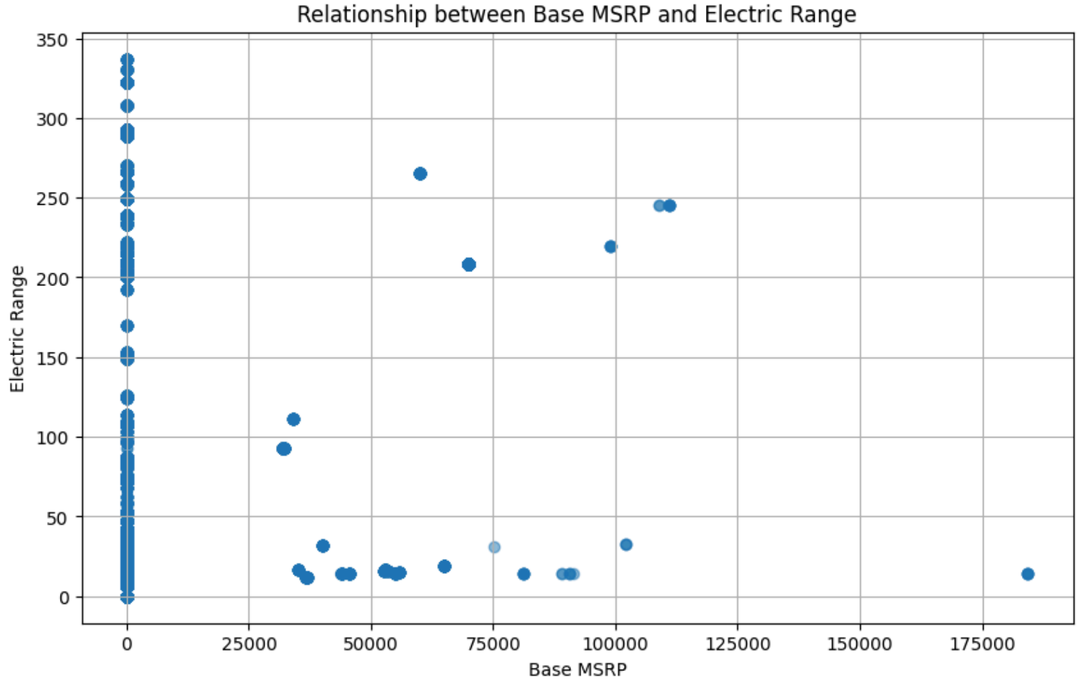
Q6. Which cities have the highest number of registered electric vehicles?

o Analysis: Urban areas with supportive policies and infrastructure see higher adoption.

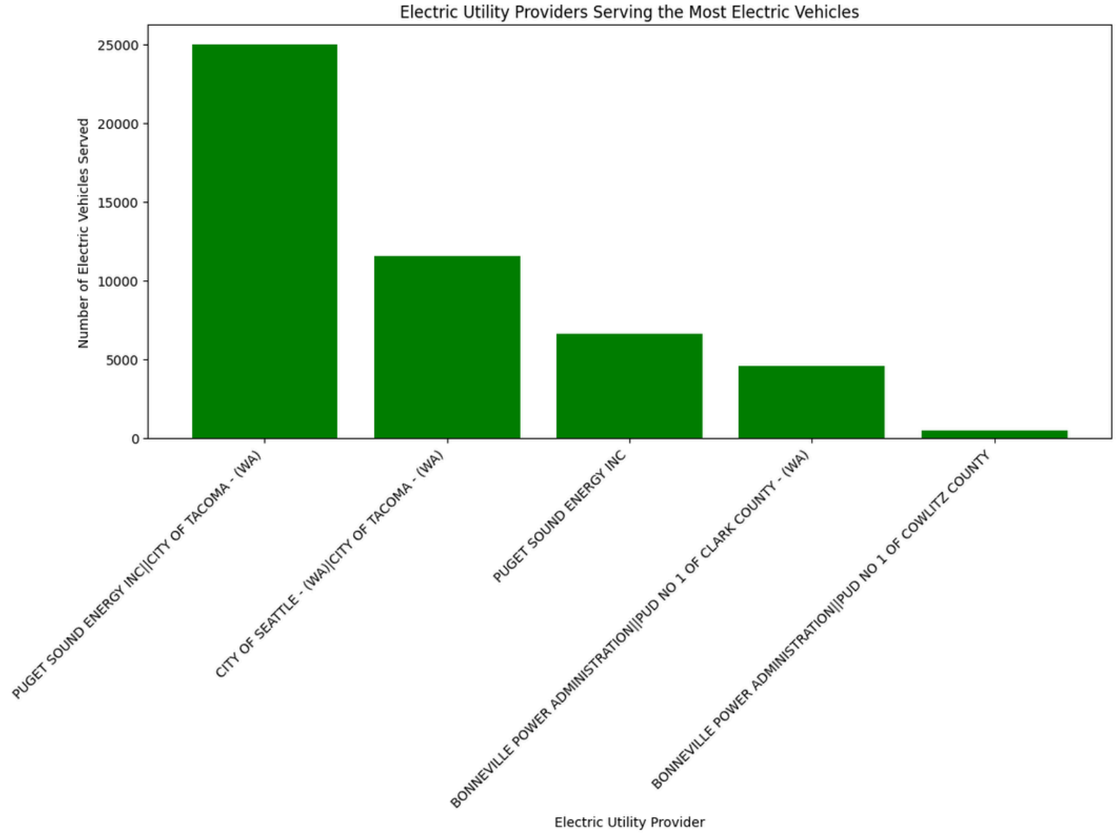


Q7. What is the relationship between base MSRP and electric range?

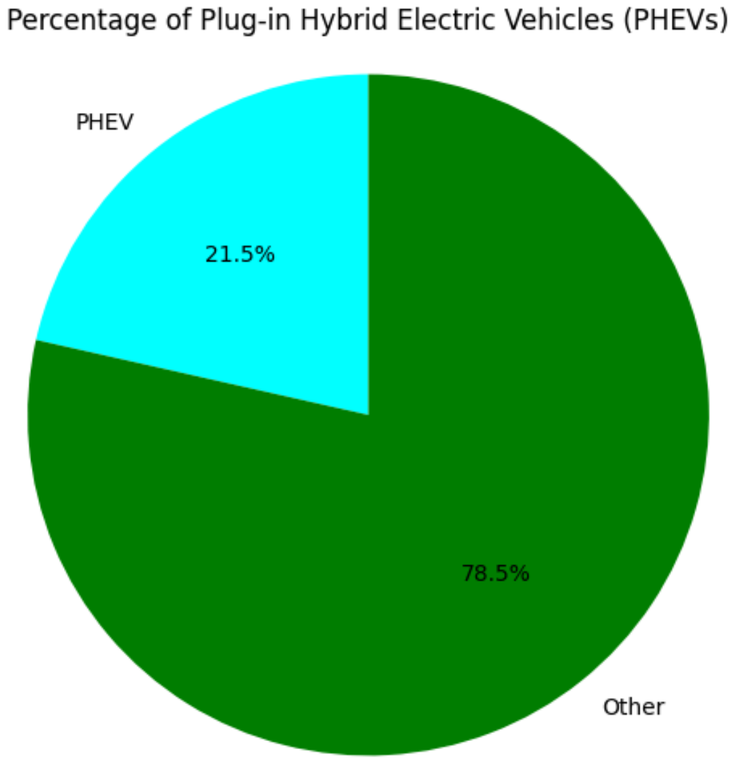
o Analysis: : Higher-priced EVs generally offer longer ranges, suggesting that consumers often need to pay a premium for extended driving distances.



Q8. Which electric utility providers serve the most electric vehicles?

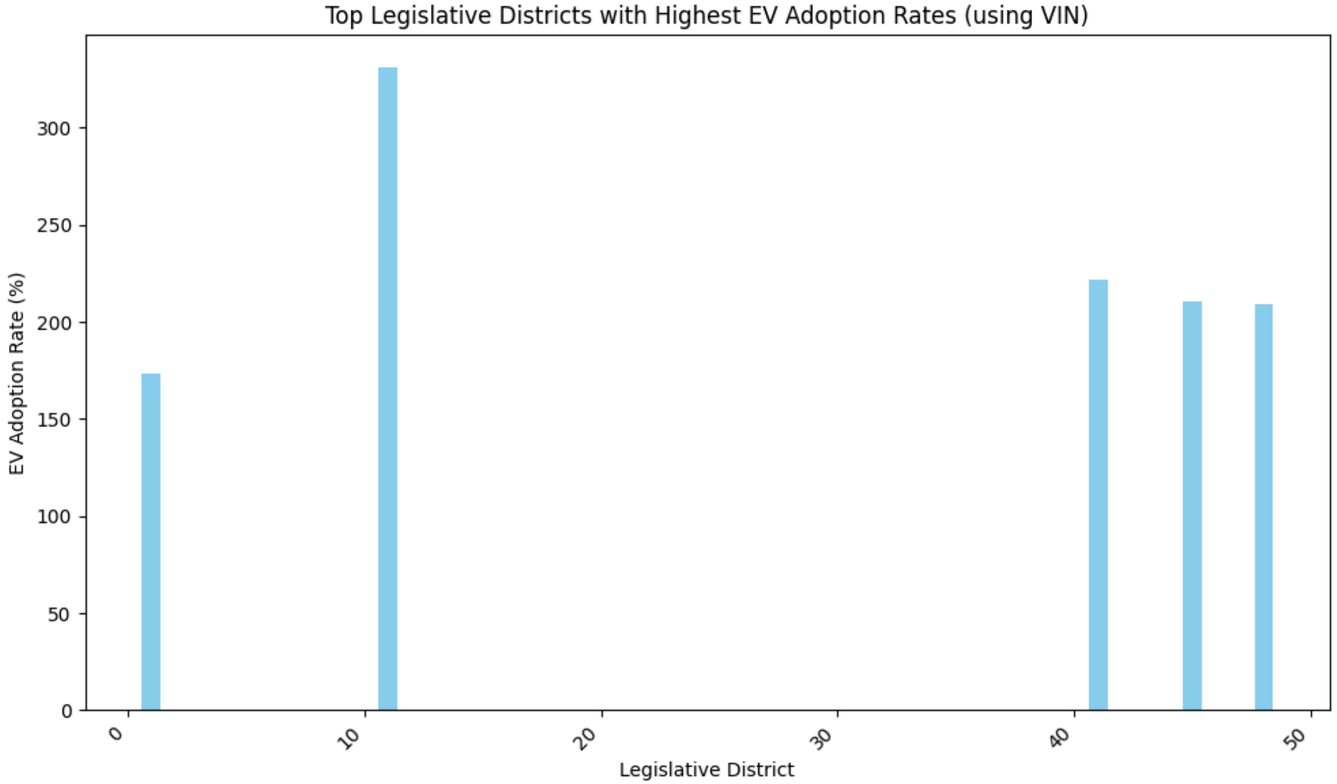


Q9. What percentage of vehicles are plug-in hybrid electric vehicles (PHEVs)?



Q10. Which legislative districts have the highest EV adoption rates?
Analysis:

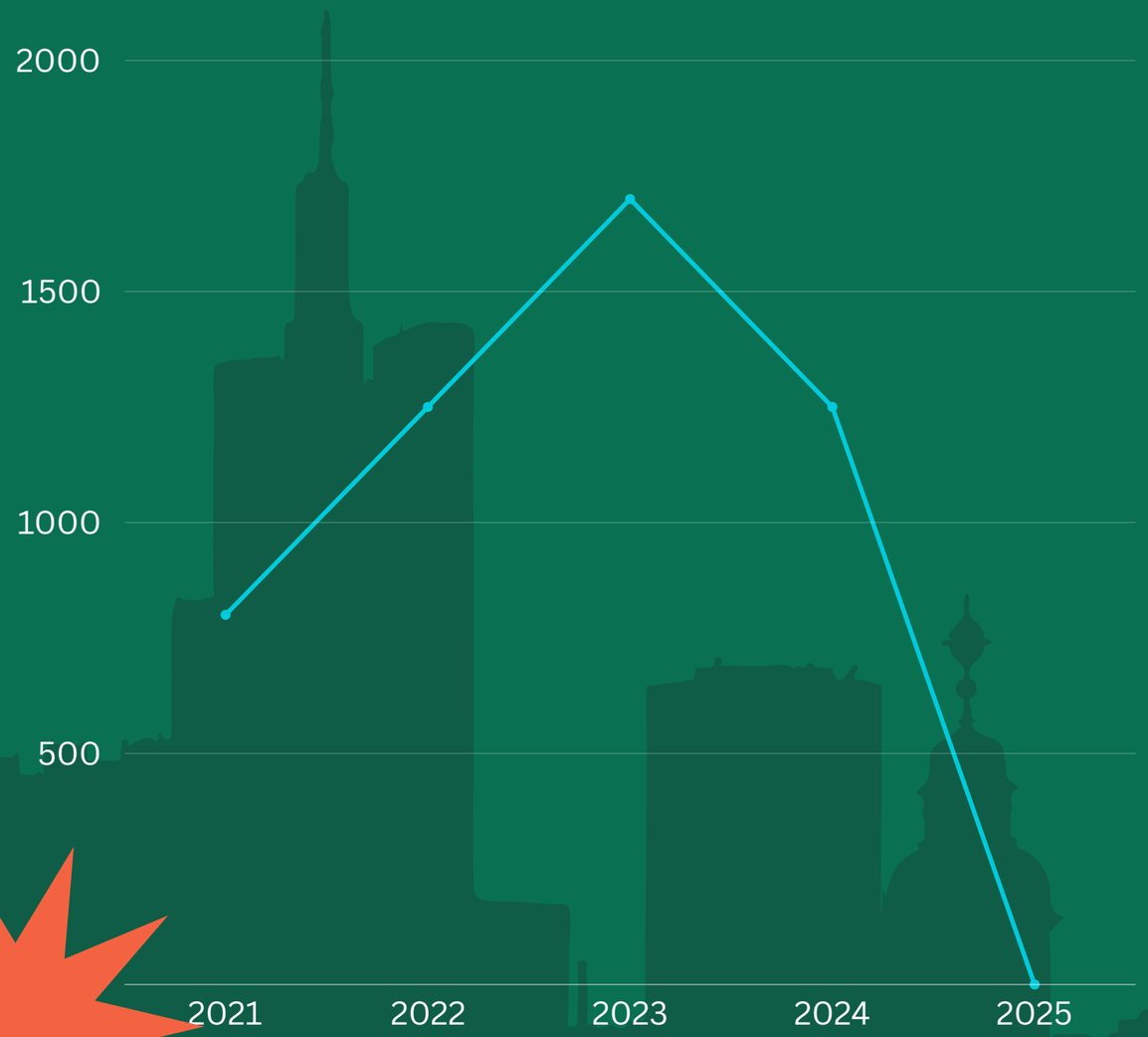
- **Legislative District 48: 208.9%**
- **Legislative District 45: 210.5 %**
- **Legislative District 41: 221.8 %**
- **Legislative District 11: 331 %**
- **Legislative District 1: 173%**



Q11. WHAT IS THE TREND OF ELECTRIC VEHICLE REGISTRATION OVER THE PAST 5 YEARS??

ANALYSIS

IT SUGGESTS A DECLINING TREND IN EV REGISTRATIONS. THIS COULD BE DUE TO VARIOUS FACTORS LIKE CHANGES IN GOVERNMENT INCENTIVES, MARKET SATURATION, OR SHIFTS IN CONSUMER PREFERENCES.



CONCLUSION

Key Findings

- **Regional Disparity**: EV registrations vary significantly across counties, indicating uneven adoption rates.
- **Model Popularity:** Model Y, Model 3, Leaf, Model X, and Model S are the most popular models.
- **Range Advantage:** BEVs generally offer longer ranges than PHEVs.
- **Market Growth:** EV registrations have been increasing steadily over recent years, indicating a growing market.
- **Urban Concentration:** Urban areas with supportive policies and infrastructure tend to have higher EV adoption rates.
- **Price-Range Relationship:** Higher-priced EVs generally offer longer ranges.
- **Legislative District Variations:** EV adoption rates vary significantly across legislative districts.

RECOMMENDATIONS

- **TARGETED INCENTIVES:** IMPLEMENT TARGETED INCENTIVES AND POLICIES IN COUNTIES WITH LOWER EV ADOPTION RATES TO STIMULATE GROWTH.
- **INFRASTRUCTURE DEVELOPMENT:** INVEST IN EXPANDING CHARGING INFRASTRUCTURE, PARTICULARLY IN AREAS WITH HIGH EV CONCENTRATION AND ALONG KEY TRANSPORTATION ROUTES.
- **PHEV SUPPORT:** CONTINUE TO SUPPORT THE DEVELOPMENT AND ADOPTION OF PHEVS AS A TRANSITION TECHNOLOGY.
- **DATA-DRIVEN POLICY:** LEVERAGE DATA ANALYSIS TO INFORM POLICY DECISIONS AND ALLOCATE RESOURCES EFFECTIVELY.
- **LEGISLATIVE DISTRICT FOCUS:** IMPLEMENT POLICIES THAT ADDRESS THE SPECIFIC NEEDS AND CHALLENGES OF LEGISLATIVE DISTRICTS WITH LOWER EV ADOPTION RATES.
- **MARKET ANALYSIS:** CONTINUOUSLY MONITOR MARKET TRENDS AND ADJUST POLICIES AND INCENTIVES ACCORDINGLY.
- **CONSUMER EDUCATION:** EDUCATE CONSUMERS ABOUT THE TOTAL COST OF OWNERSHIP OF EVS, INCLUDING ENERGY COSTS AND MAINTENANCE.

THANK YOU

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