



# Electric Vehicle Adoption Analysis

## Market Findings & Strategic Insights

This comprehensive analysis evaluates the rapidly evolving electric vehicle landscape across 150,482 registered EVs, examining growth patterns, market dynamics, and strategic implications for transportation policy and fleet management decisions.

# Executive Summary

## Market Leadership

Tesla dominates with 68,983 vehicles - 5x more than nearest competitor, establishing clear market hierarchy

## Technology Preference

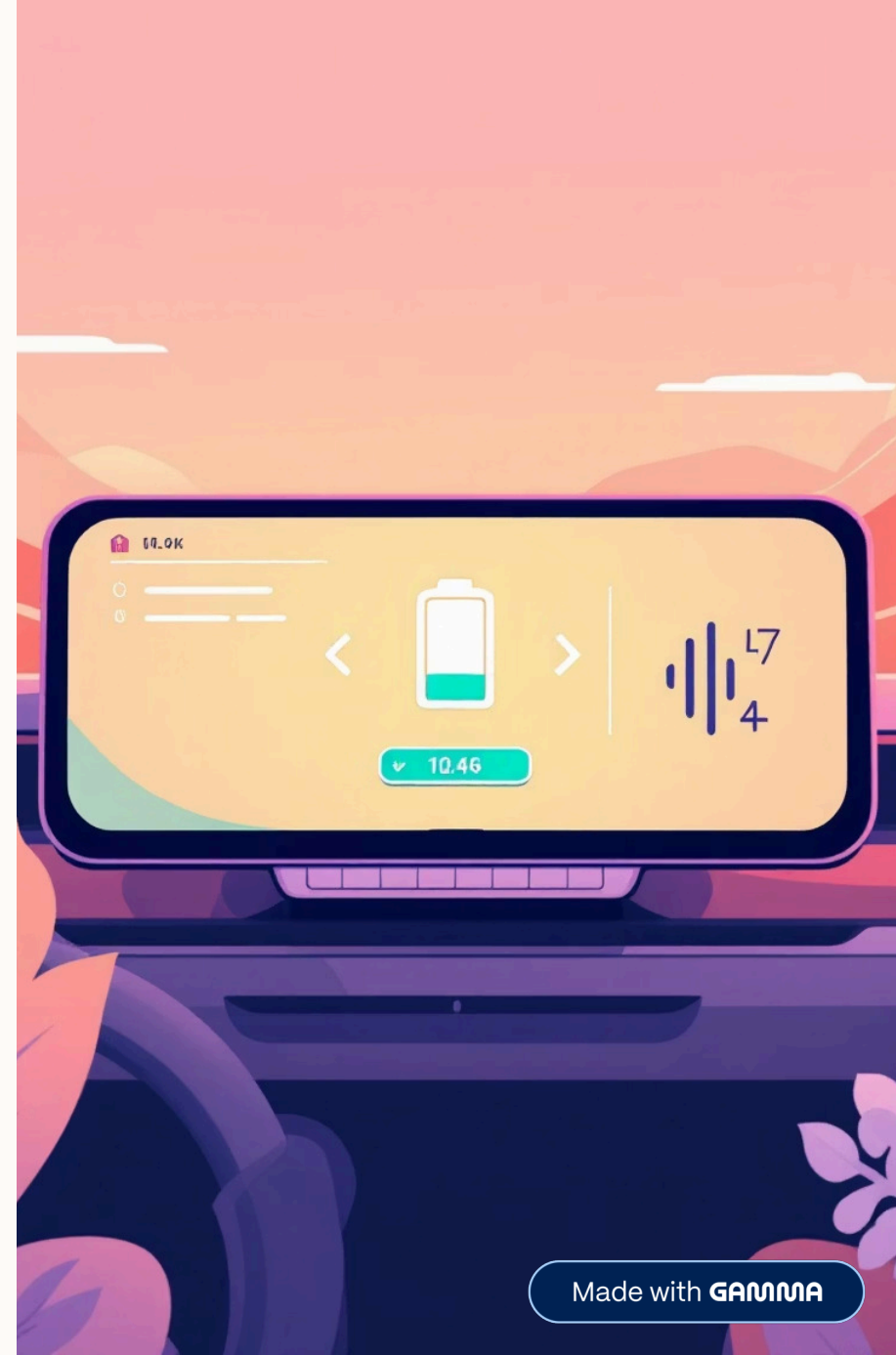
Battery Electric Vehicles capture 78% market share, indicating consumer confidence in full-electric solutions

## Growth Acceleration

Post-2018 exponential growth with 2022 marking highest adoption year at 37,080 new registrations

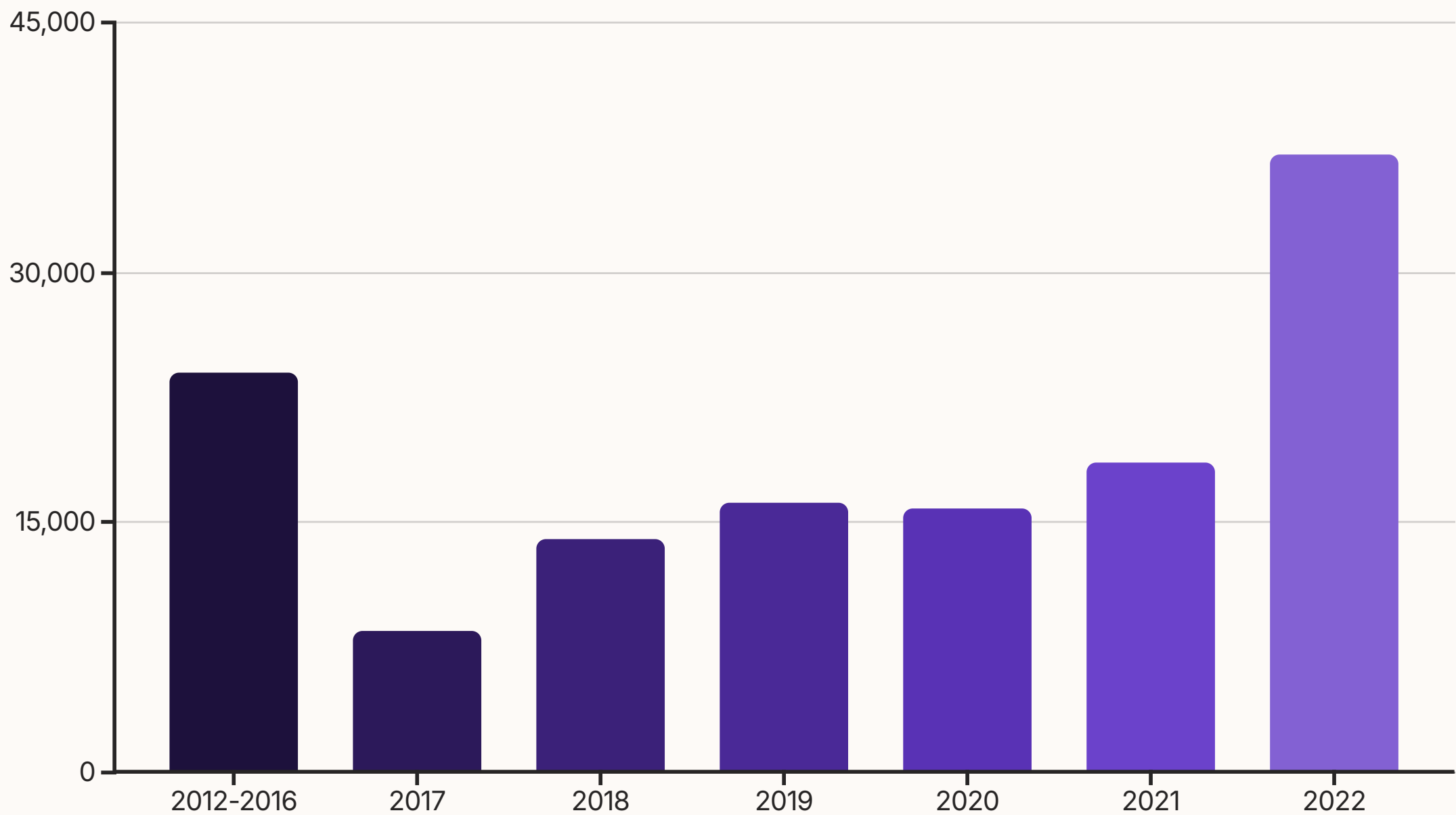
## Policy Gaps

46.3% of vehicles show unknown CAFV eligibility, highlighting critical data reporting deficiencies



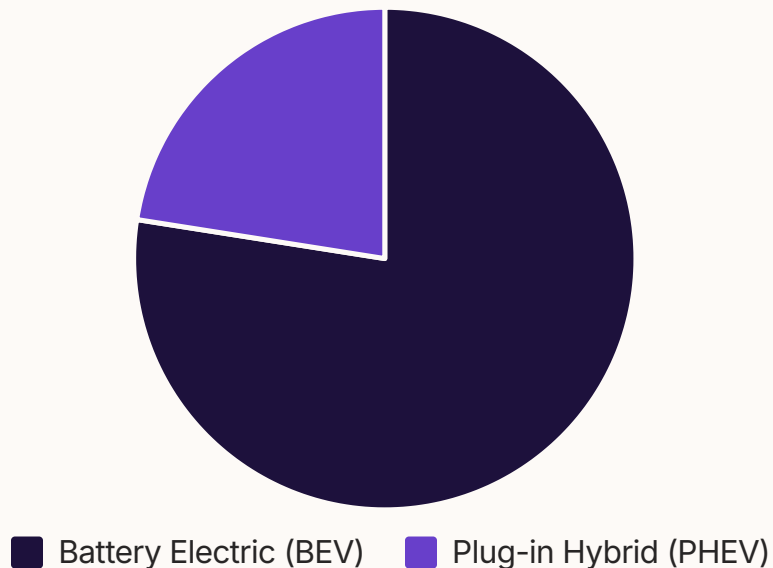
# Vehicle Growth Trajectory

Total Fleet: 150,482 Registered Electric Vehicles



The market experienced a dramatic inflection point after 2018, with adoption rates more than doubling year-over-year. This acceleration reflects improved battery technology, expanded charging infrastructure, and favorable policy incentives creating market momentum that continues today.

# BEV vs PHEV Market Dynamics



## Clear Consumer Preference for Full-Electric

BEVs represent **78%** of the total fleet with 117,000 vehicles, while PHEVs account for just **22%** with 34,000 units.

This dominance signals consumer confidence in pure electric solutions and suggests infrastructure improvements have addressed range anxiety concerns. The trend indicates potential future phase-out of hybrid technologies as battery capabilities continue advancing.

# Manufacturer Market Leadership

68,983

**Tesla**

Market leader with over 5x competitive advantage

13,497

**Nissan**

Distant second with established Leaf platform

12,026

**Chevrolet**

Strong third position with Bolt series

Tesla's overwhelming dominance reflects superior brand positioning, charging infrastructure investment, and continuous innovation. Traditional automakers like Ford (7,614), BMW (6,439), and Kia (6,198) are gaining traction but face significant catch-up challenges in market penetration and consumer mindshare.





# Top-Performing Vehicle Models

## 1 Tesla Model Y - 28,502 units

Leading SUV choice combining utility with electric performance, capturing growing SUV market preference

## 2 Tesla Model 3 - 27,709 units

Mass-market sedan success story, democratizing premium electric vehicle access

## 3 Nissan Leaf - 13,187 units

Most successful non-Tesla model, proving market diversity beyond single manufacturer dominance

## 4 Tesla Model S - 7,611 units

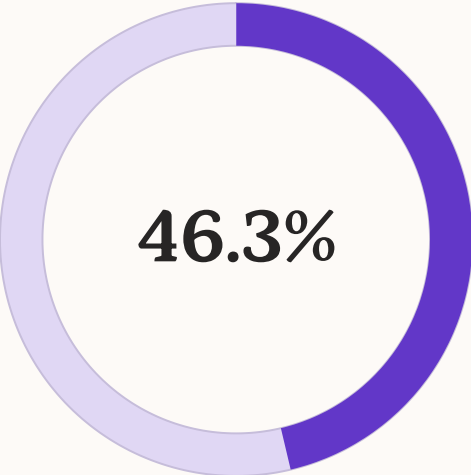
Premium flagship maintaining relevance in luxury electric segment

Market concentration in Tesla's top two models demonstrates strong brand loyalty while competition exists across price segments with models like Bolt EV, Model X, Volt, ID.4, Niro, and Pacifica providing consumer choice.



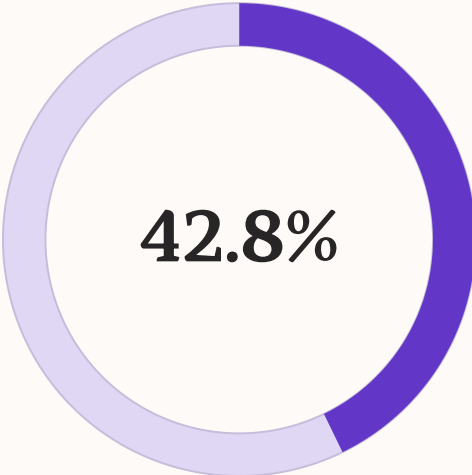
# CAFV Eligibility Analysis

## Critical Data Gap Reveals Policy Oversight Challenges



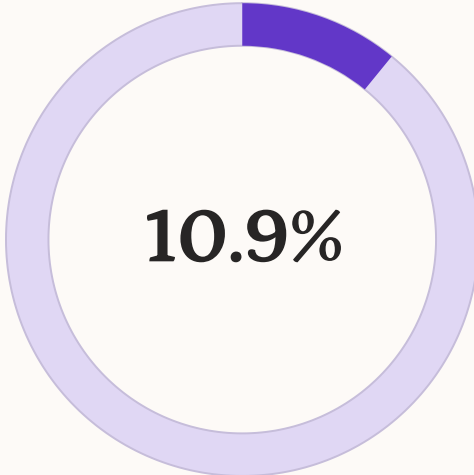
**Eligibility Unknown**

Significant data reporting gap requiring immediate attention



**Eligible Vehicles**

Strong proportion meeting Clean Alternative Fuel standards



**Not Eligible**

Primarily due to insufficient battery range specifications

The substantial unknown eligibility percentage indicates systemic issues in data collection and compliance monitoring. This gap undermines policy effectiveness and suggests immediate need for enhanced reporting requirements and standardized eligibility verification processes.



# Geographic Distribution Patterns

## Urban & Coastal Concentration

Electric vehicle adoption shows clear geographic clustering in metropolitan areas and coastal regions, reflecting infrastructure availability and demographic factors.

States with missing or incomplete data represent significant expansion opportunities through targeted policy interventions and infrastructure development.

## Strategic Implications

- Infrastructure gaps in rural and inland regions
- Policy support needed for underrepresented areas
- Market penetration opportunities in emerging regions
- Charging network expansion priorities identified





# Strategic Insights & Market Intelligence



## Technology Shift

BEV dominance at 78% indicates market confidence in full-electric solutions, suggesting accelerated phase-out of hybrid technologies



## Market Leadership

Tesla's commanding position establishes performance benchmarks while creating competitive pressure for traditional automakers



## Growth Momentum

Post-2018 exponential adoption rates demonstrate market maturation and consumer acceptance reaching tipping point



## Data Quality

Significant CAFV eligibility gaps highlight critical need for enhanced compliance monitoring and reporting standards



# Recommendations & Next Steps

1

## Strengthen Data Governance

Implement mandatory CAFV eligibility reporting and establish standardized compliance verification processes to eliminate 46% data gap

2

## Expand Infrastructure Coverage

Prioritize charging network development in underrepresented geographic regions to accelerate adoption in rural and inland areas

3

## Monitor Technology Transitions

Track PHEV adoption patterns to anticipate market shifts and adjust policy incentives accordingly as BEV preference solidifies

4

## Leverage Market Leadership

Utilize Tesla's success metrics as benchmarks for evaluating competitive manufacturer performance and infrastructure requirements

These strategic actions will position stakeholders to capitalize on the electric vehicle market's continued expansion while addressing current policy and infrastructure gaps that may limit future growth potential.