

# Identifying Areas with High Proclivity for EV Adoption

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# Center for Sustainable Energy (CSE)



Building  
Performance



Clean  
Transportation



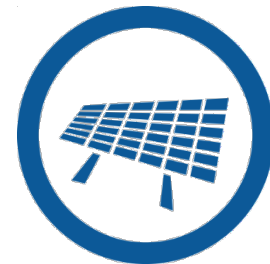
Distributed  
Generation



Energy  
Efficiency



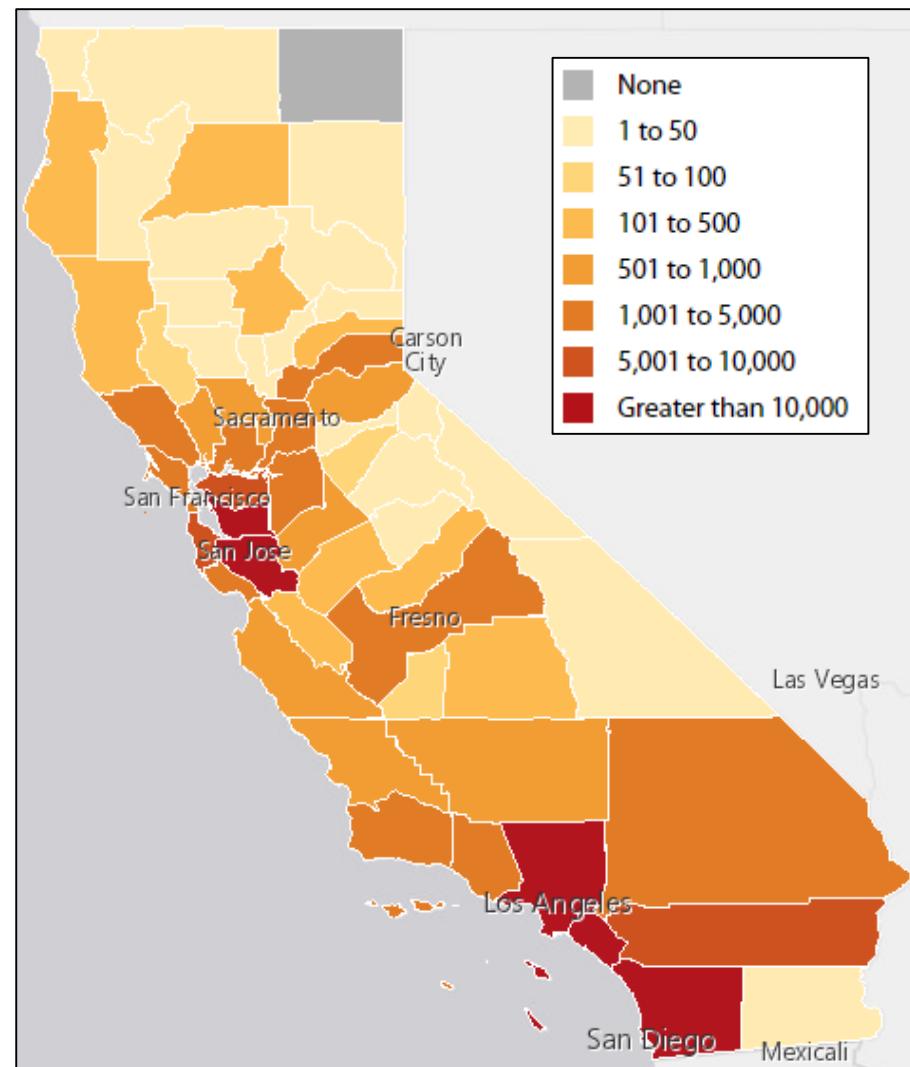
Energy  
Storage



Energy  
Policy

# Clean Vehicle Rebate Project (CVRP)

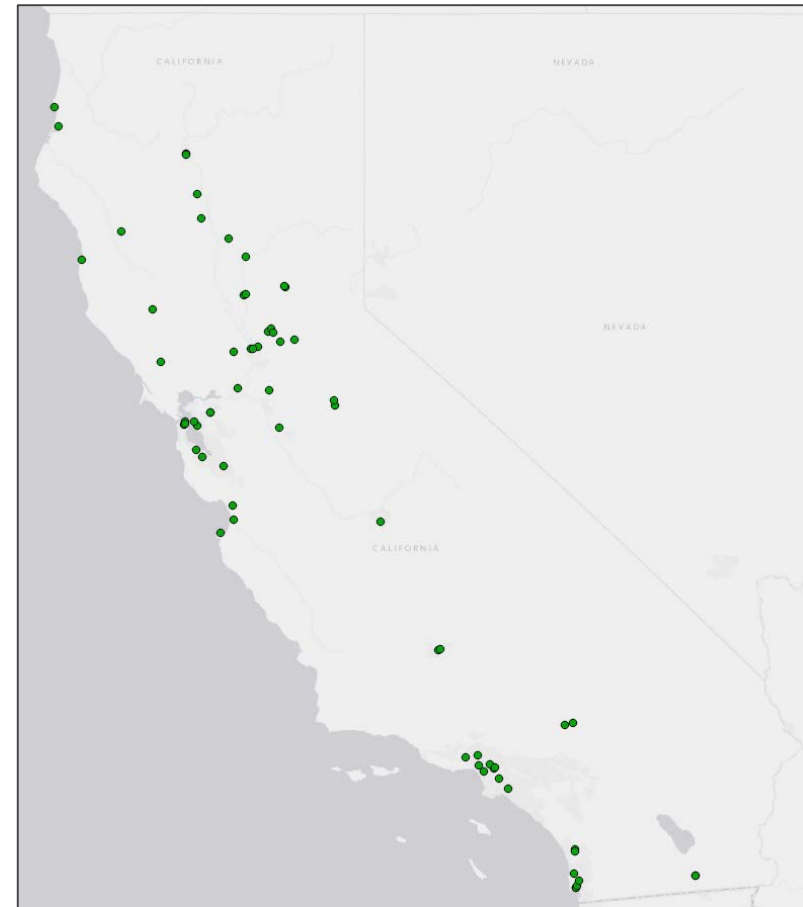
- Seven years
- > 208,000 rebates
- > \$456M
- Equity emphasis
- **Major outreach and education component**



# Outreach efforts: EV-ready new car shoppers

- Activities:
  - **Community and industry event attendance**
  - Digital marketing
  - Project website
  - Cross program collaboration

Map of events





# Where should we focus outreach efforts?



# Methodology

1. Literature review
2. Data collection
3. Feature reduction (via PCA)
4. Battery-electric vehicle (BEV) model building and selection
5. Validation and sensitivity testing
6. Implementation and mapping

# Literature consulted

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# Broad factor categories

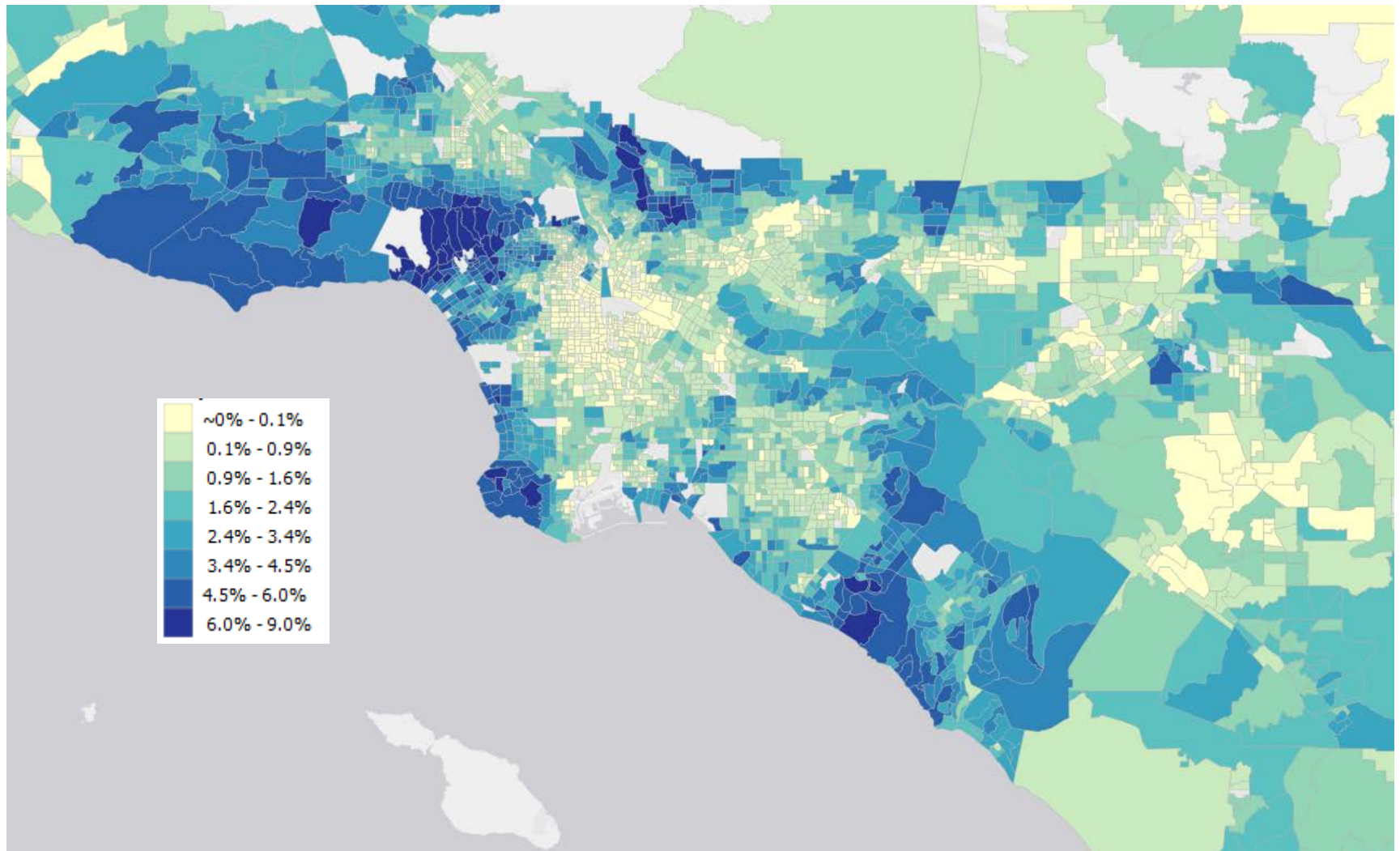
- Demographics
- Housing characteristics
- Local auto market composition
- Consumer preferences and attitudes
- Consumer behaviors
- Public support



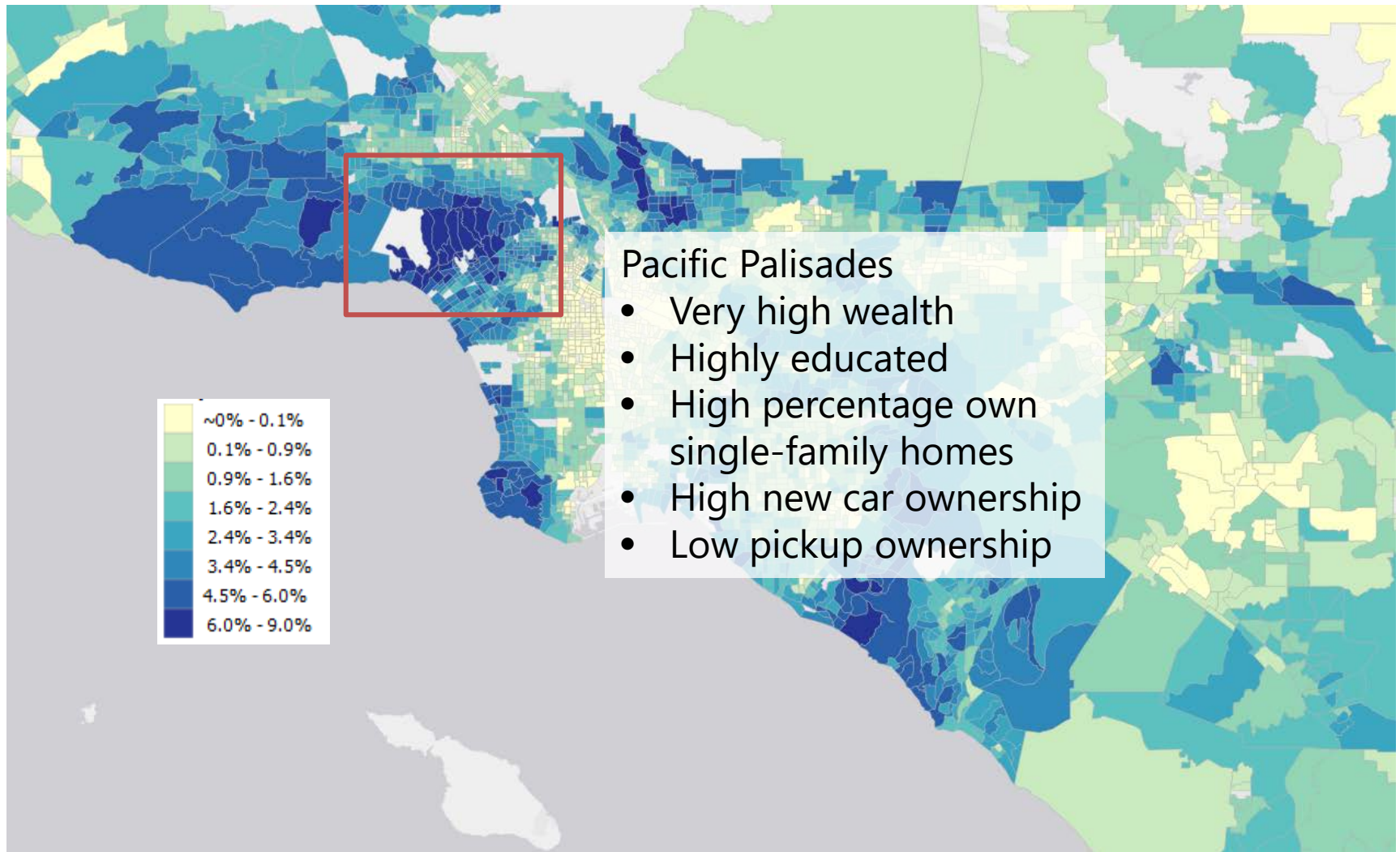
# Factors included in multivariate linear regression

- Percent of population with a graduate degree
- Log of mean household income
- Non-pickup-truck new vehicle market share
- Non-SUV new vehicle market share
- Owner-occupied housing with fewer than 5 units
- New car ownership
- HOV lane miles within 30 miles of the census tract
- Urban/rural census tract designation

# Expected BEV market share: Los Angeles

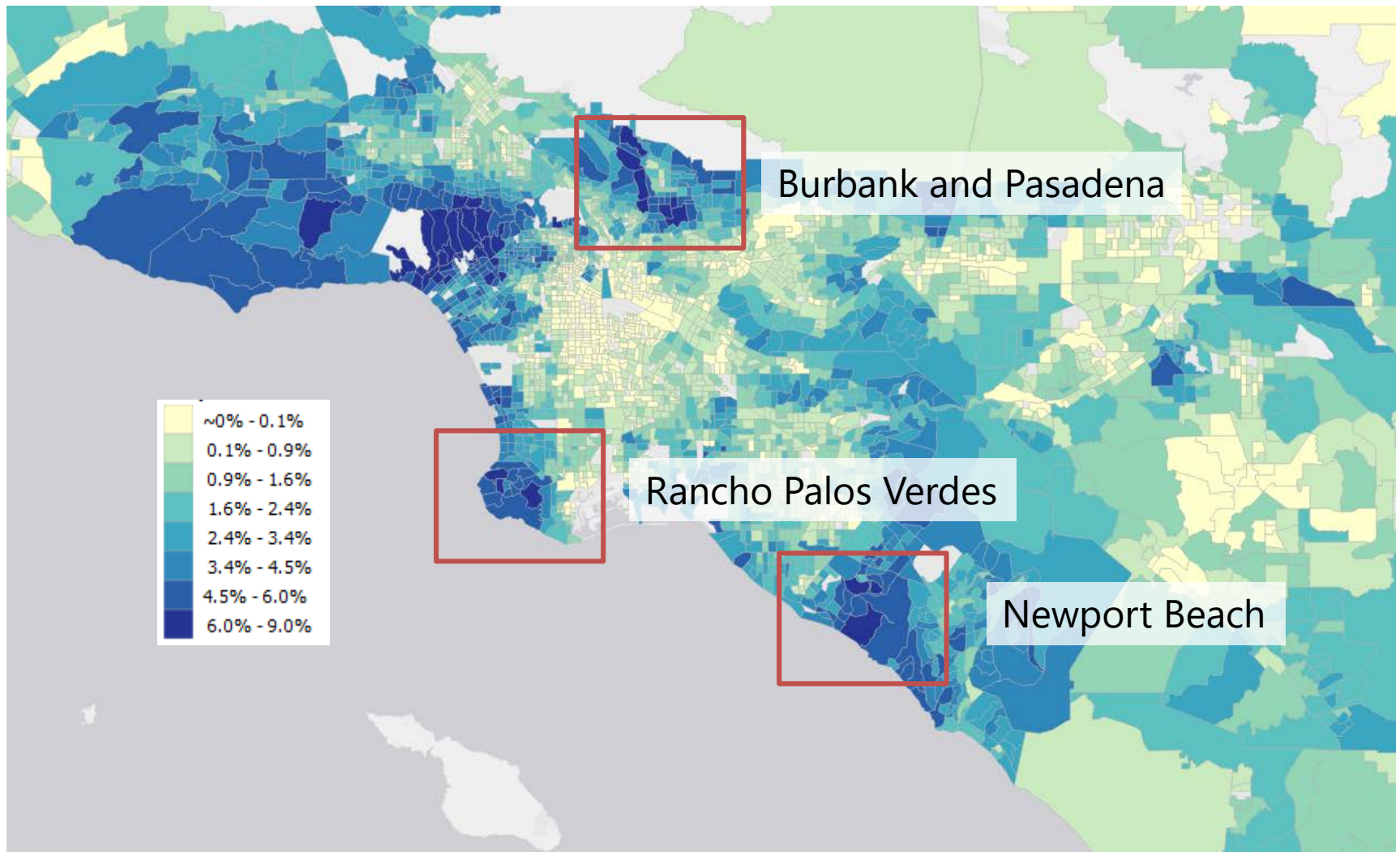


# Expected BEV market share: Los Angeles

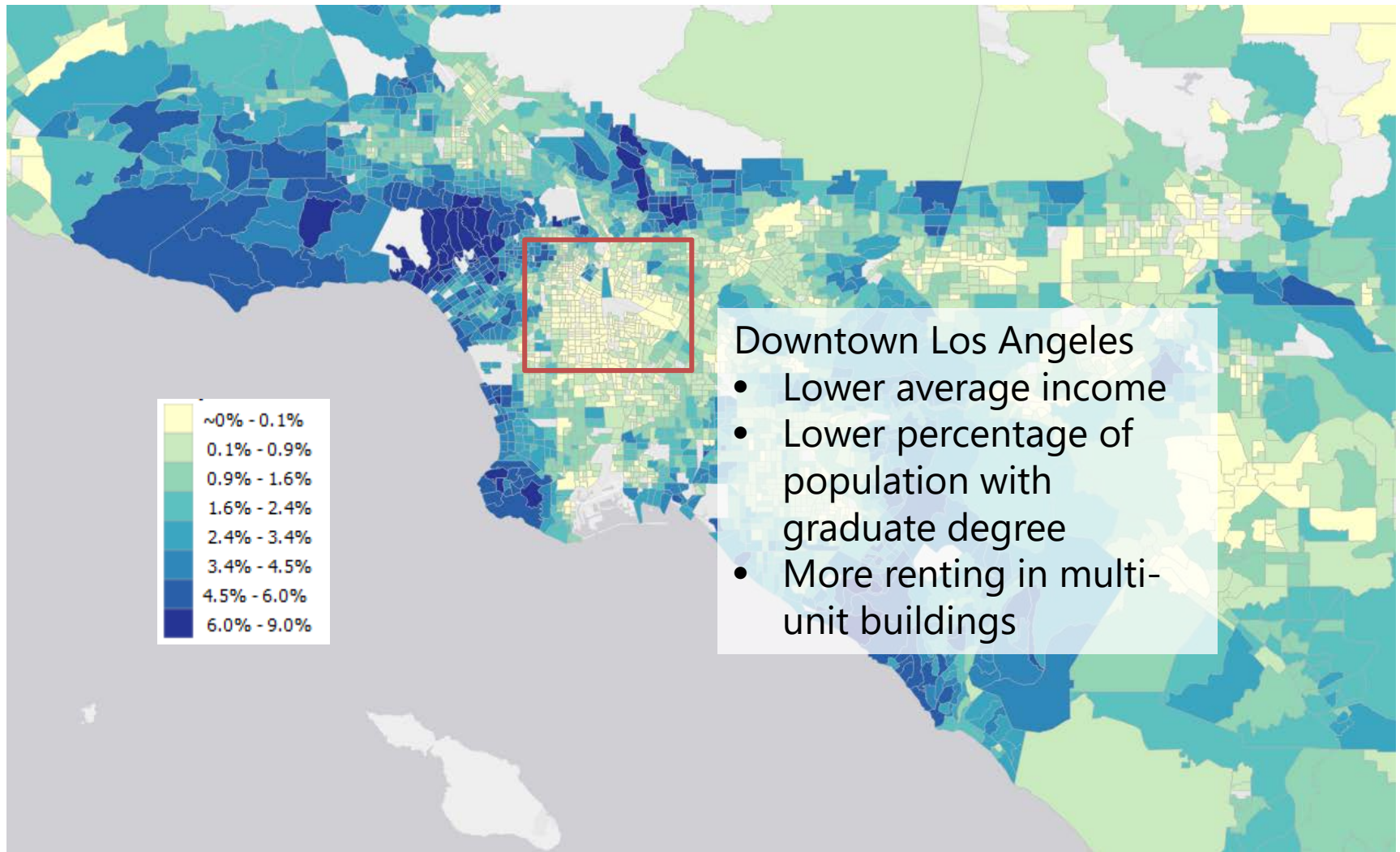




# Expected BEV market share: Los Angeles

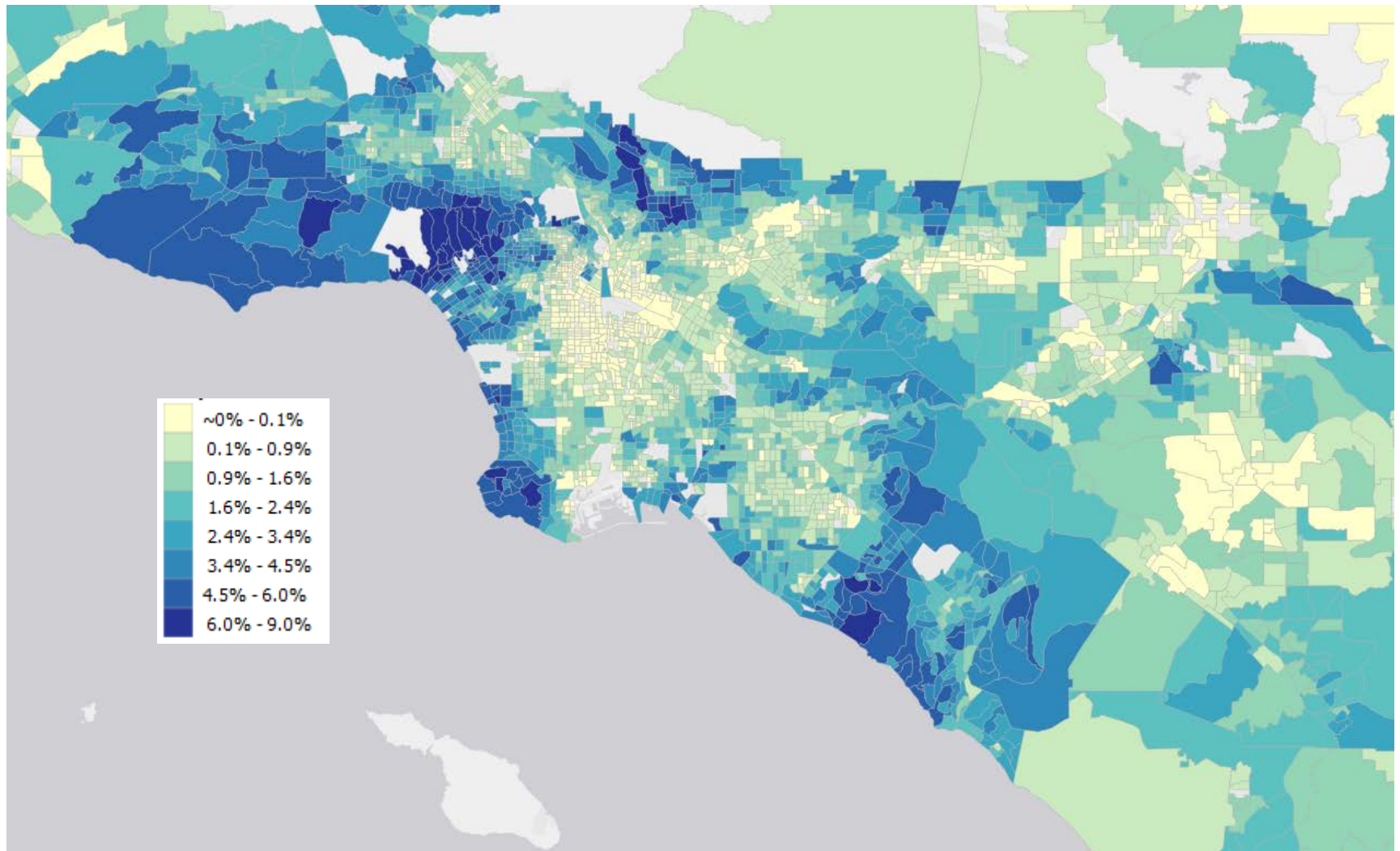


# Expected BEV market share: Los Angeles

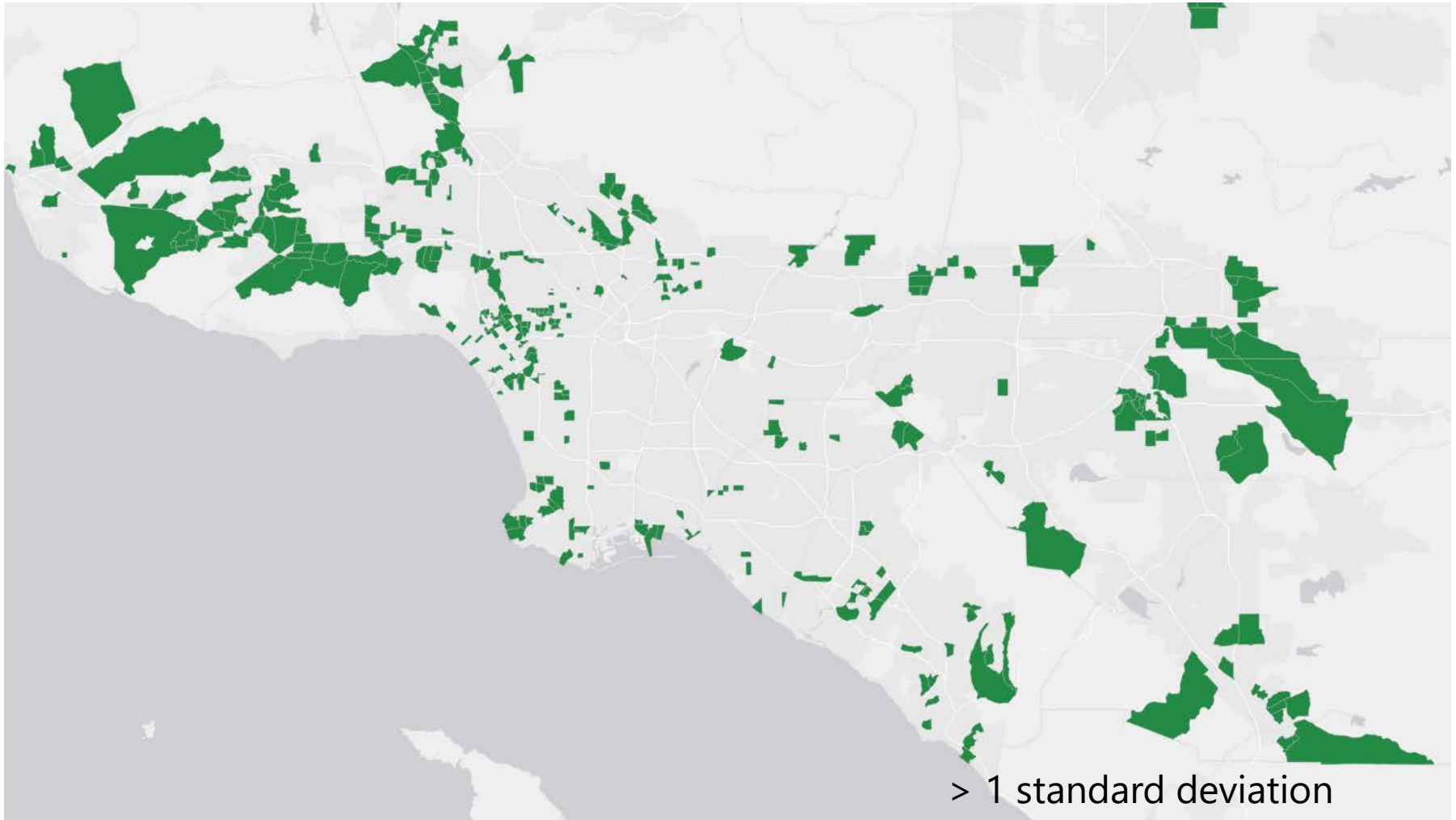




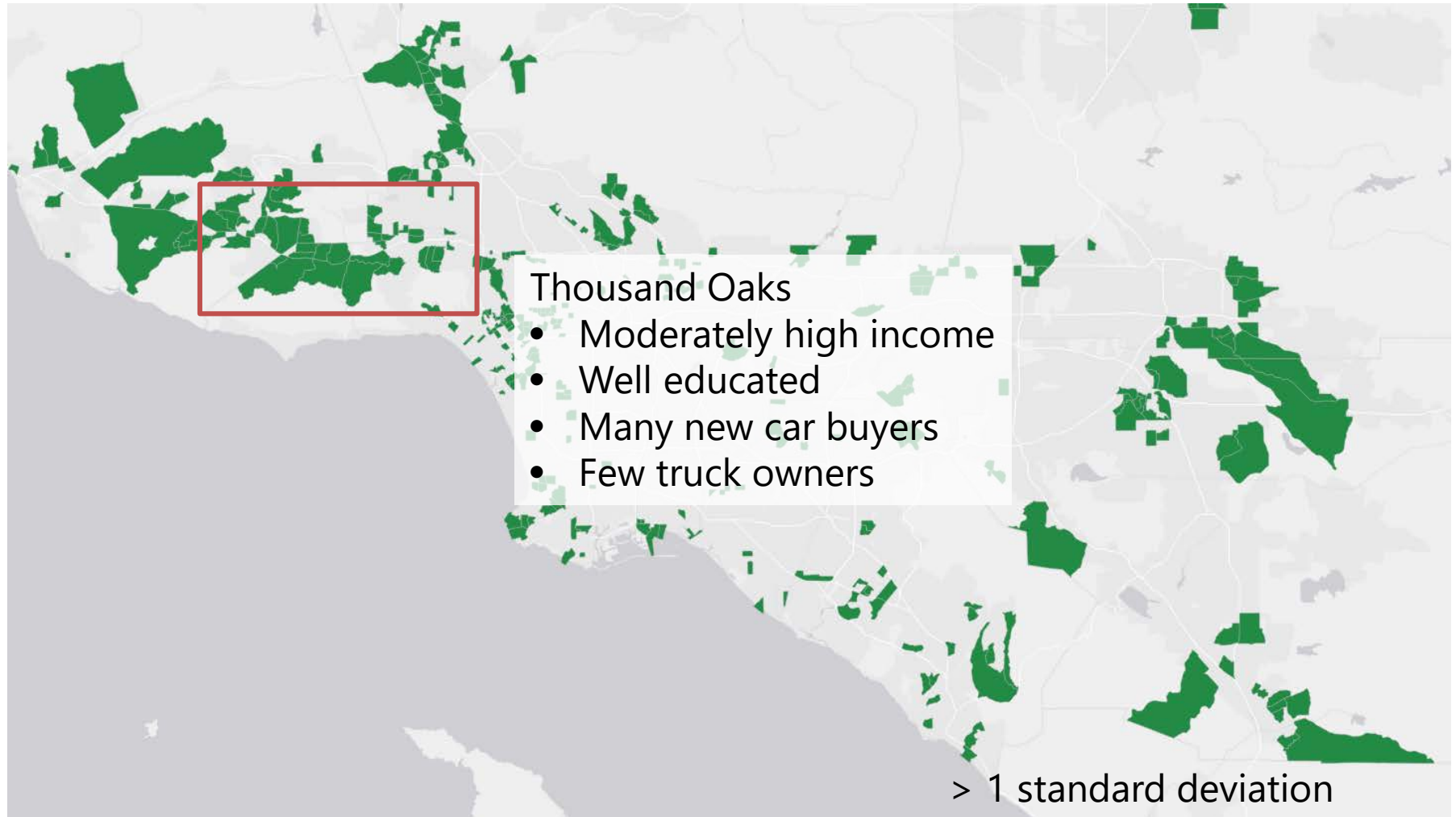
# Expected BEV market share: Los Angeles



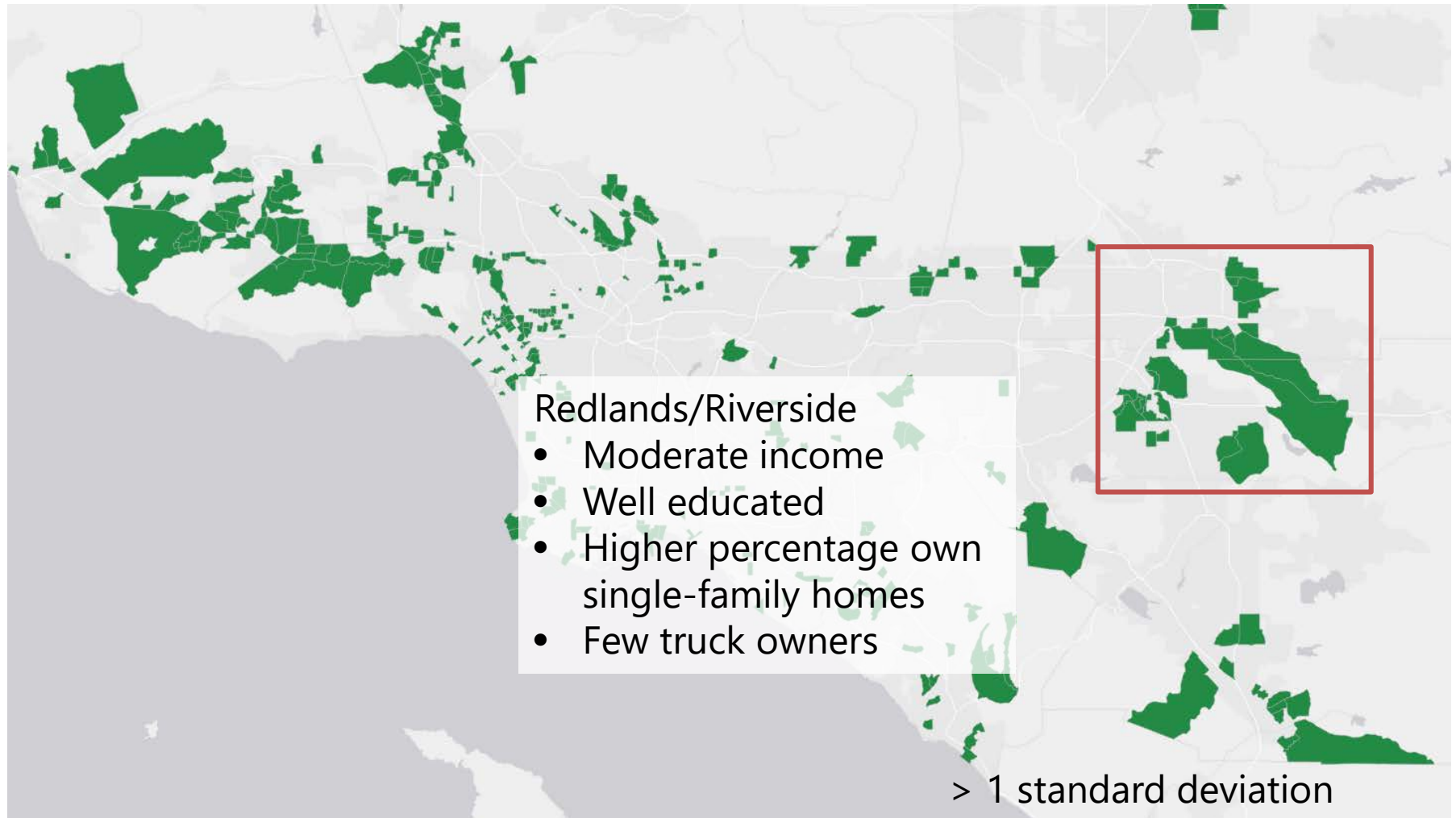
# Under performance



# Under performance



# Under performance

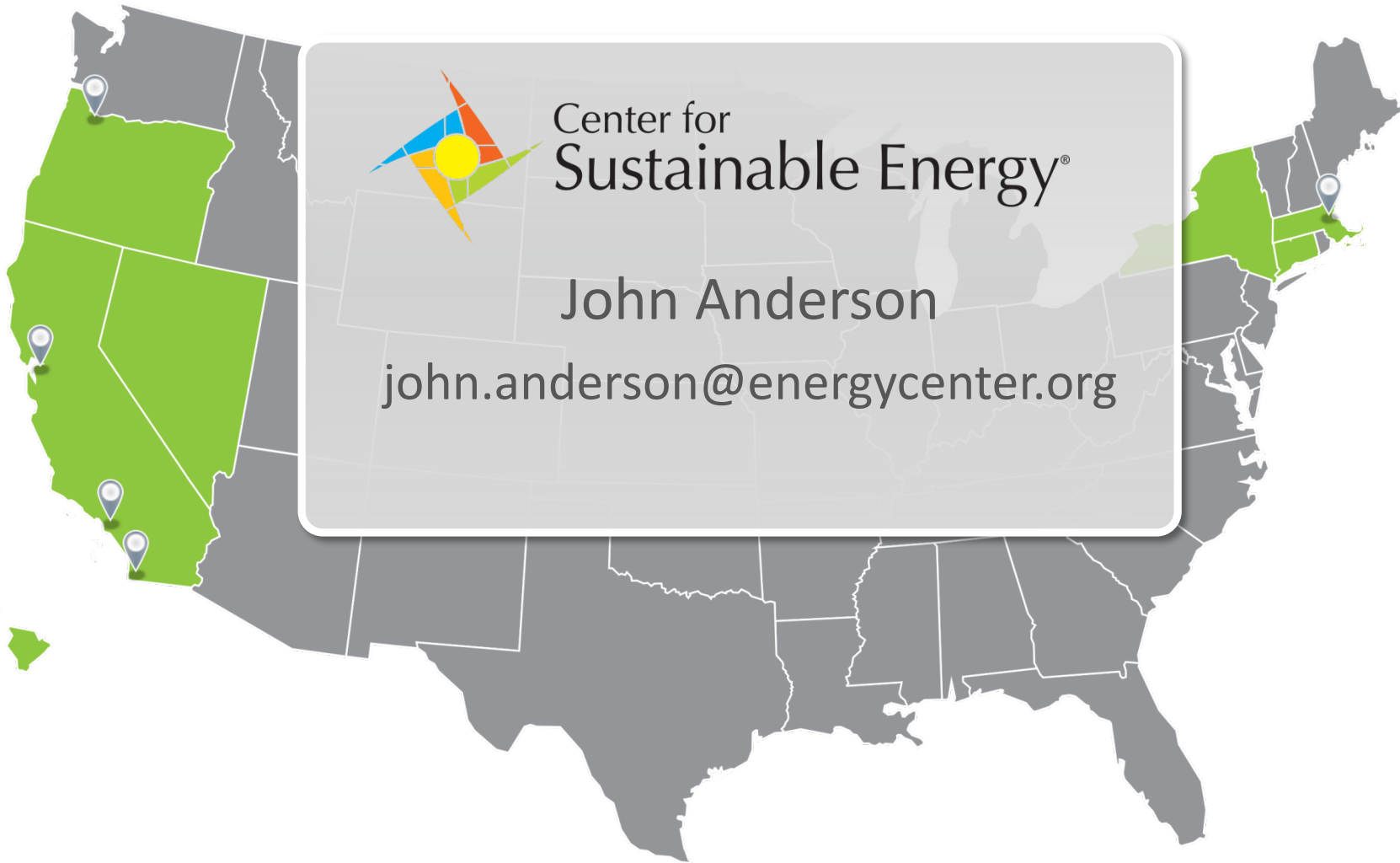




# Next steps

- Repeat analysis for PHEV market share
- Incorporate more consumer preferences and behaviors
- Add market development stage component
- Regional, household-level analysis
- Deal with multicollinearity
- Repeat analysis for underserved car shoppers





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