COOLING THE CAPITAL REGION
ADDRESSING THE URBAN HEAT ISLAND EFFECT

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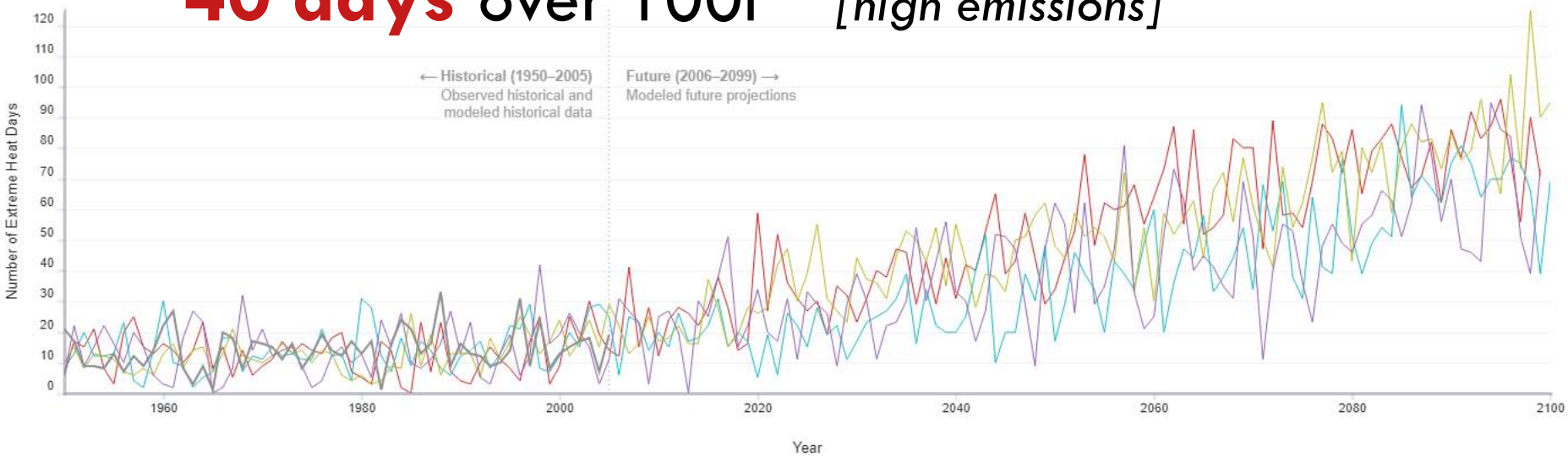
RISING HEAT

Compared to 12 days over 100 F each summer historically,
by 2050 Sacramento is projected to see:

34 days over 100F *[low emissions]*

40 days over 100F *[high emissions]*



And by **2085-2099**,

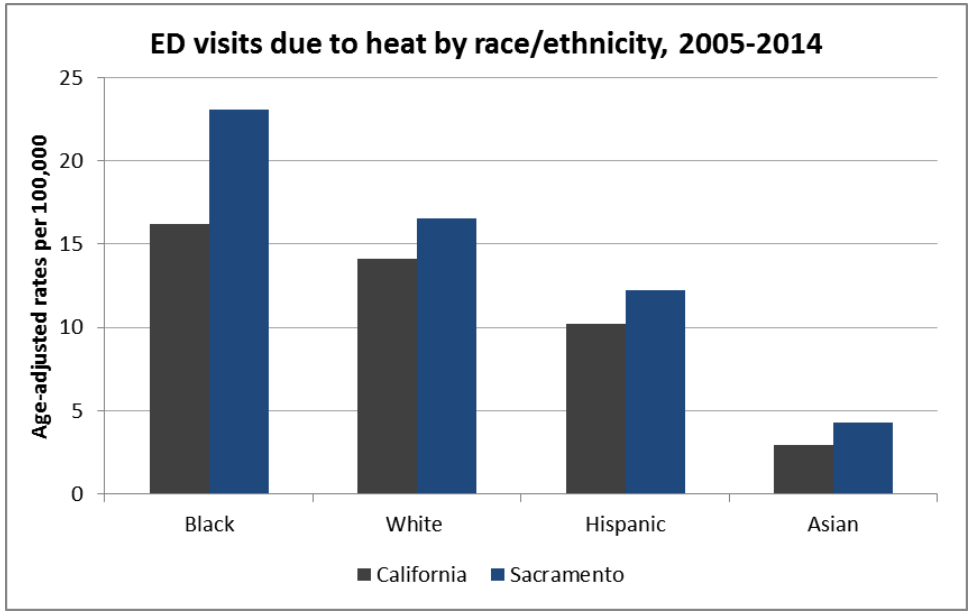
46 days over 100F *[low emissions]*

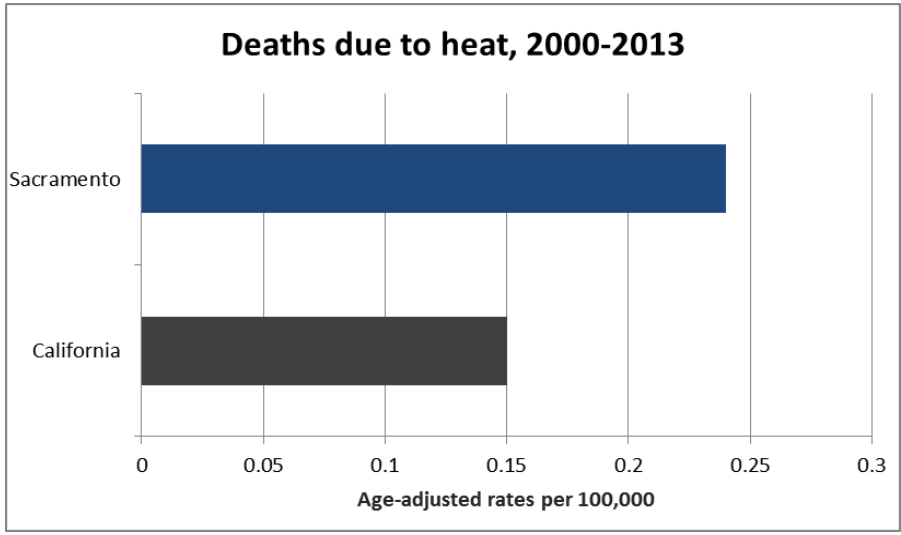
72 days over 100F *[high emissions]*

Source: Cal-Adapt

HEAT IS ALREADY AFFECTING HEALTH

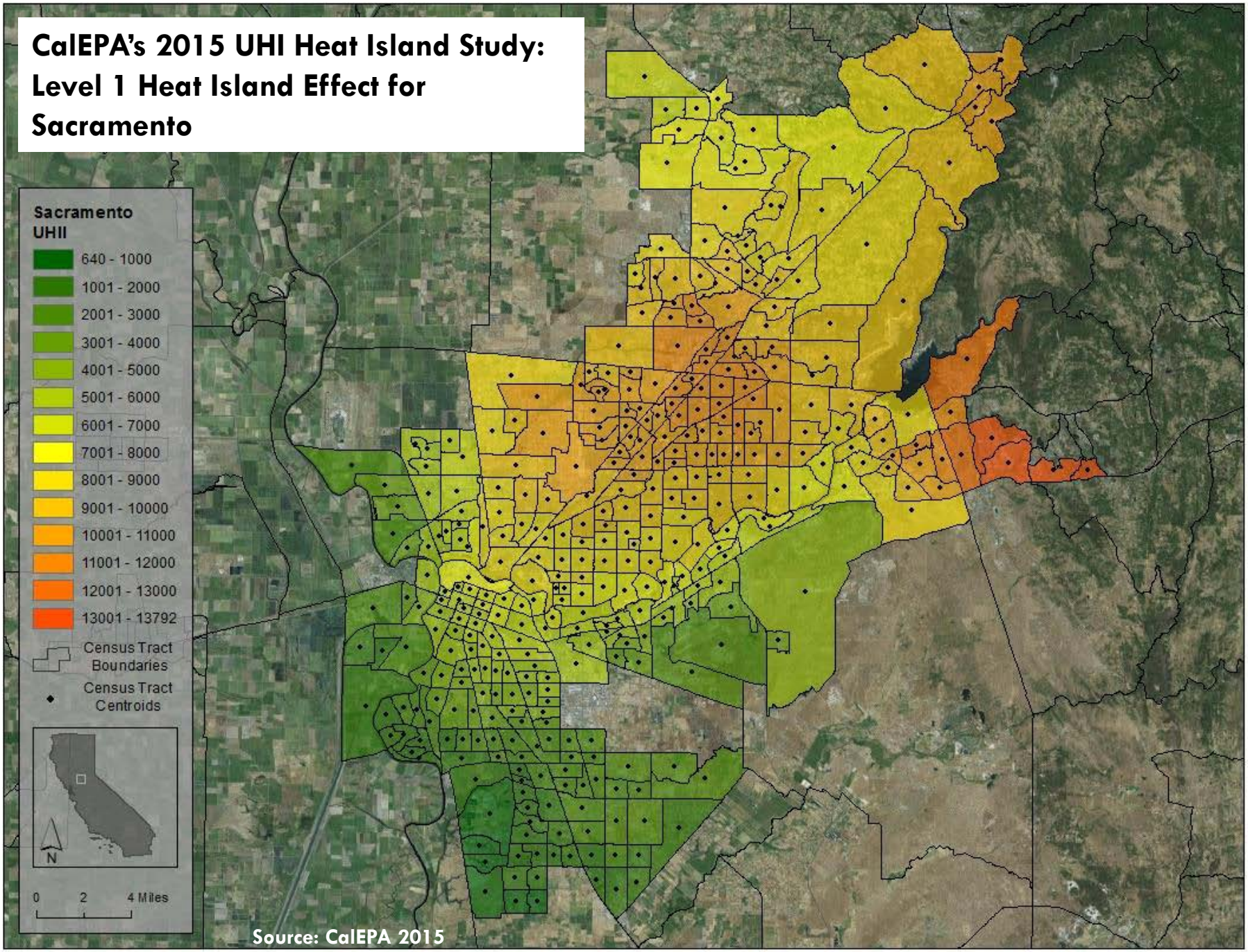
Sacramento County already experiences heat-related deaths and emergency visits in excess of the statewide average.





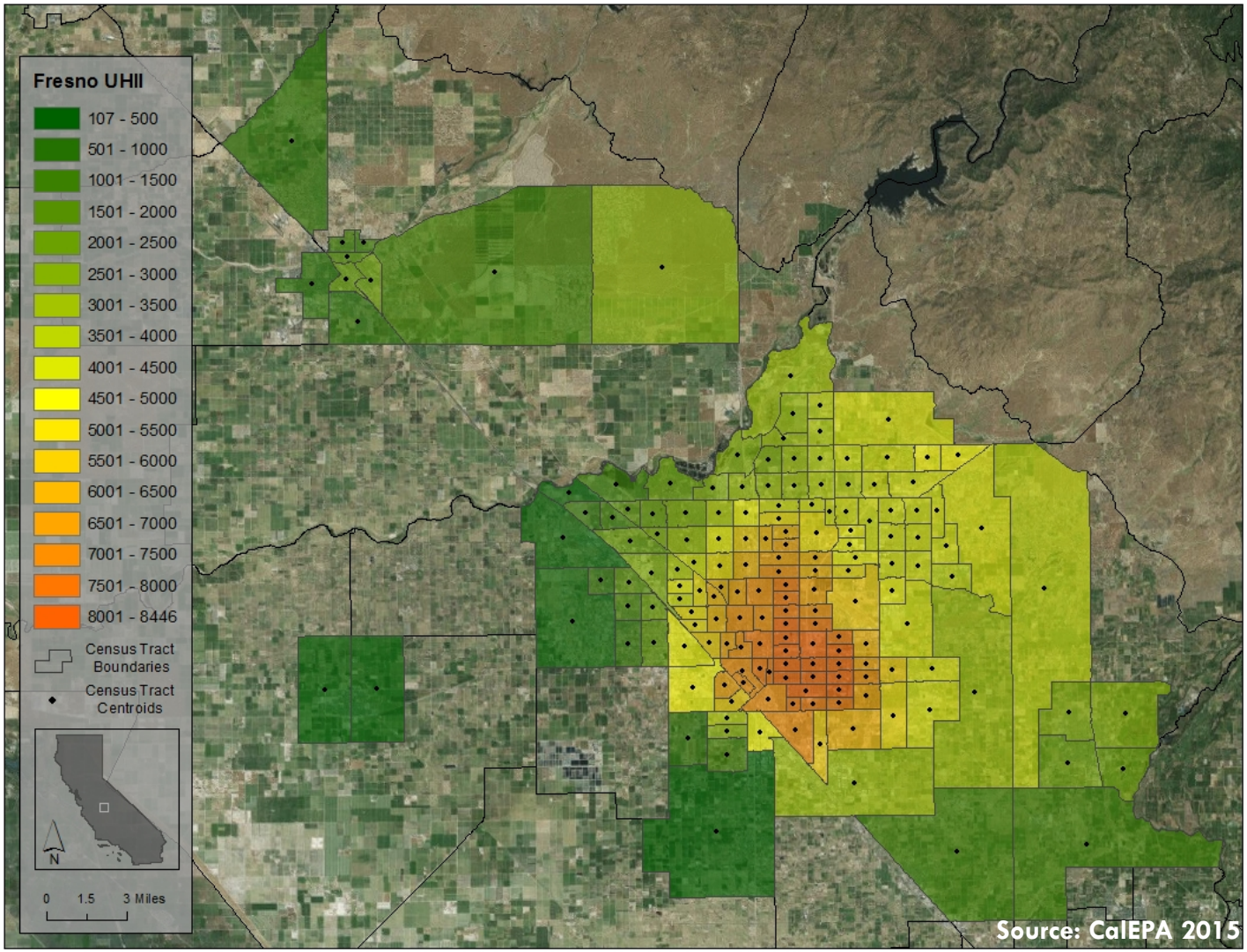
(Source: CDPH)

CalEPA's 2015 UHI Heat Island Study: Level 1 Heat Island Effect for Sacramento

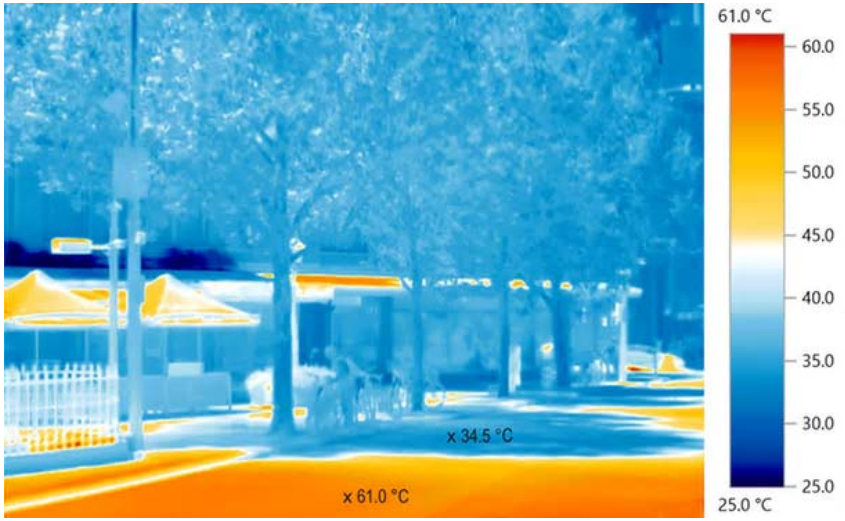


Source: CalEPA 2015

For comparison, Fresno exhibits a more 'classic' urban heat island effect.



OUR SOLUTION: COOLING THE CAPITAL REGION

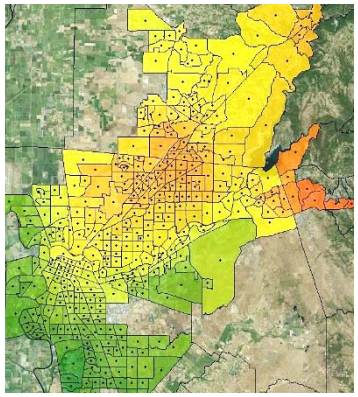


Funding opportunity: Senate Bill 1 Adaptation Planning Grant from California Department of Transportation

Awarded $487,775 in December 2017 for the **Capital Region Transportation Sector Heat Pollution Reduction Project.**

Project timeline: May 2018 to February 2020

PROJECT CONCEPT



Heat Island Model

Cooling Solutions

Transportation Plans

Community Input

A comprehensive Heat Pollution Reduction Plan, with specific recommendations for integrating heat-mitigation strategies into transportation plans, projects, guidelines, and codes.

PROJECT PARTNERS

Urban heat island modeler – Altostratus, Inc.

- Build UHI model for six-county Sacramento region
- Current and future climate scenarios
- **Mitigation measures:** Uniform application, targeted priority areas, and/or in combination with other measures.

Transportation planner: RFP, TBD

Project management team:

Sacramento Metropolitan Air Quality Management District, Local Government Commission

Technical Advisory Committee members & stakeholders:

Sacramento Municipal Utility District, Placer County Air Pollution Control District, City of Sacramento, County of Sacramento, Yolo County, City of Davis, El Dorado County, Sacramento Area Council of Governments

WHAT MITIGATION MEASURES WILL WE LOOK AT?

PROJECT TIMELINE

May 2018 | May 2019 | April 2020

- Model urban heat island effect
- Conduct community outreach
- Analyze transportation plans and projects
- Develop Regional Heat Pollution Reduction Plan
- Share recommendations with partners

QUESTIONS?

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Thank you!

RESOURCES

Urban Heat Islands – General

Global Cool Cities Alliance
https://globalcoolcities.org

Lawrence Berkeley National Laboratory Urban Heat Island Group
https://heatisland.lbl.gov

EPA – Heat Islands
www.epa.gov/heat-islands

Trees and Greening

Sacramento Tree Foundation
www.sactree.com

Nature Conservancy – Planting Healthy Air
https://global.nature.org/content/healthyair

American Society of Landscape Architects
www.asla.org/residentialgreenwalls.aspx

Cool Roofs and Pavements

A Practical Guide to Cool Roofs and Pavements
www.coolrooftoolkit.org/wp-content/pdfs/CoolRoofToolkit_Full.pdf

Cool California – Cool Roofs
https://coolcalifornia.arb.ca.gov/cool-roofs

SMUD Cool Roof Rebate
www.smud.org/coolroof

EPA Cool Walls presentation
www.epa.gov/heat-islands/writings-wall-recent-cool-wall-research-and-measures

Electric Vehicles

California Clean Vehicle Rebate Project
https://cleanvehiclerebate.org/eng

SMUD Electric Vehicle Rebates
www.smud.org/en/Going-Green/Electric-Vehicles/Residential