

NOT JUST GOLF CARTS: PROMOTING THE USE OF NEIGHBORHOOD ELECTRIC VEHICLES (NEVs) BY TARGETING COMMUNITIES APT FOR NEV ADOPTION

AUTHORS
 Kimberly Clark, Southern California Association of Governments
 Marco Anderson, Southern California Association of Governments
 Matthew Abad, Southern California Association of Governments

40% OF AUTO TRIPS ARE < 2 MILES (3.2 KM)

- Emissions resulting from short trips represent a disproportionate share of all vehicle pollution
- Neighborhood Electric Vehicles (NEVs) can be a viable option to replace short gasoline-powered trips
- Adoption rates are promising: demonstration studies show that 46% of all round trips were completed by NEVs for participating households
- NEVs can reduce carbon dioxide (CO2) emissions per mile by 50% to 88% when compared to gasoline powered emissions, depending on regional electricity generation factors



ABOUT SCAG
 SCAG is the nation's largest metropolitan planning organization, representing six counties, 191 cities and more than 18 million residents. SCAG undertakes a variety of planning and policy initiatives to encourage a more sustainable Southern California now and in the future.

SCAG VISION STATEMENT
 An international and regional planning forum trusted for its leadership and inclusiveness in developing plans and policies for a sustainable Southern California.

SCAG MISSION STATEMENT
 Under the guidance of the Regional Council and in collaboration with our partners, our mission is to facilitate a forum to develop and foster the realization of regional plans that improve the quality of life for Southern Californians.

WHAT ARE NEIGHBORHOOD ELECTRIC VEHICLES (NEVs)?
 NEVs are a federally designated class of roadway passenger vehicles. Must meet stricter safety standards than golf carts. Can only travel on lower speed roads < 35 miles per hour (mph) / < 56 kilometers per hour (kph)

WHAT TYPES OF TRIPS ARE MOST POPULAR FOR NEVs?
 Picking Up Children | Shopping | Work

HOW CAN WE DETERMINE WHERE NEVs MOST VIABLE?
 Density of schools within 6 miles of a given census tract
 Density of retail locations within 6 miles of a given census tract
 Density of workers who travel less than 12 miles to work from a given tract

ESTABLISH 6 MILE AND 12 MILE SERVICE AREAS FOR EACH TRACT USING STREETS LESS THAN 35 MPH

IDENTIFY EACH TRACT'S RESIDENTIAL CENTER USING PARCEL BASED LAND USE DATA

IDENTIFY EACH TRACT'S EMPLOYMENT CENTER USING BUSINESS LOCATIONS AND EMPLOYMENT DATA

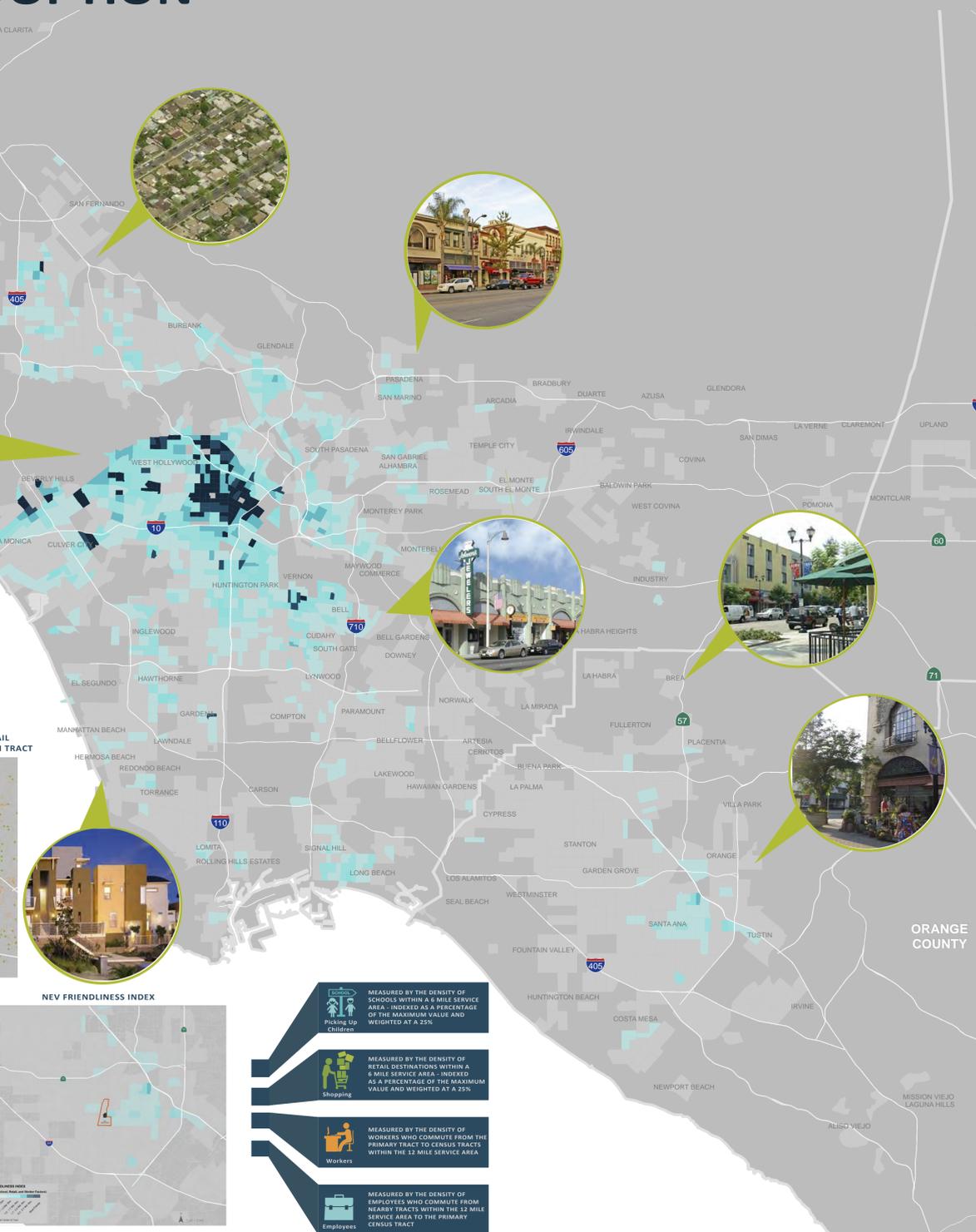
TABULATE THE DENSITY OF SCHOOLS AND RETAIL LOCATIONS WITHIN A 6 MILE SERVICE AREA OF EACH TRACT

REDUCTION IN IMPACTS OF MARGIN OF ERROR IN CTPP

NEV FRIENDLINESS INDEX

NEV FRIENDLINESS INDEX (Density of School, Retail, and Worker Factors)

Slightly Friendly: 0.25 - 0.75 Std. Dev.
 0.75 - 1.2 Std. Dev.
 1.2 - 1.7 Std. Dev.
 1.7 - 2.2 Std. Dev.
 2.2 - 2.7 Std. Dev.
 Most Friendly



HOW DO NEV FRIENDLY AREAS COMPARE? SOCIOECONOMIC AND TRAVEL CHARACTERISTICS FOR THE HIGHEST SCORING AREAS OF NEV FRIENDLINESS COMPARED TO THE SCAG REGION

MINORITY POPULATION AS A PERCENTAGE OF THE TOTAL
 80.1% NEV vs. 67.1% SCAG

PERCENT OF HOUSING OCCUPIED BY RENTERS
 71.5% NEV vs. 42.5% SCAG

MULTIFAMILY HOUSING
 68% NEV vs. 34% SCAG

WORKERS WHO DRIVE ALONE TO WORK
 64.6% NEV vs. 74.5% SCAG

PERCENT OF INDIVIDUALS IN POVERTY
 26.1% NEV vs. 16.6% SCAG

MEDIAN HOUSEHOLD INCOME
 \$57,349 NEV vs. \$38,725 SCAG

MEDIAN AGE
 32 NEV vs. 35 SCAG



SOURCES: SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS, SOUTH BAY CITIES COUNCIL OF GOVERNMENTS, 2006-2010 CENSUS TRANSPORTATION PLANNING PRODUCTS, 2009-2013 AMERICAN COMMUNITY SURVEY 5 YEAR ESTIMATES, INFOUSA, ESRI, FHWA, FREEPIK.COM