Making a Wise Investment in PEV Public Infrastructure

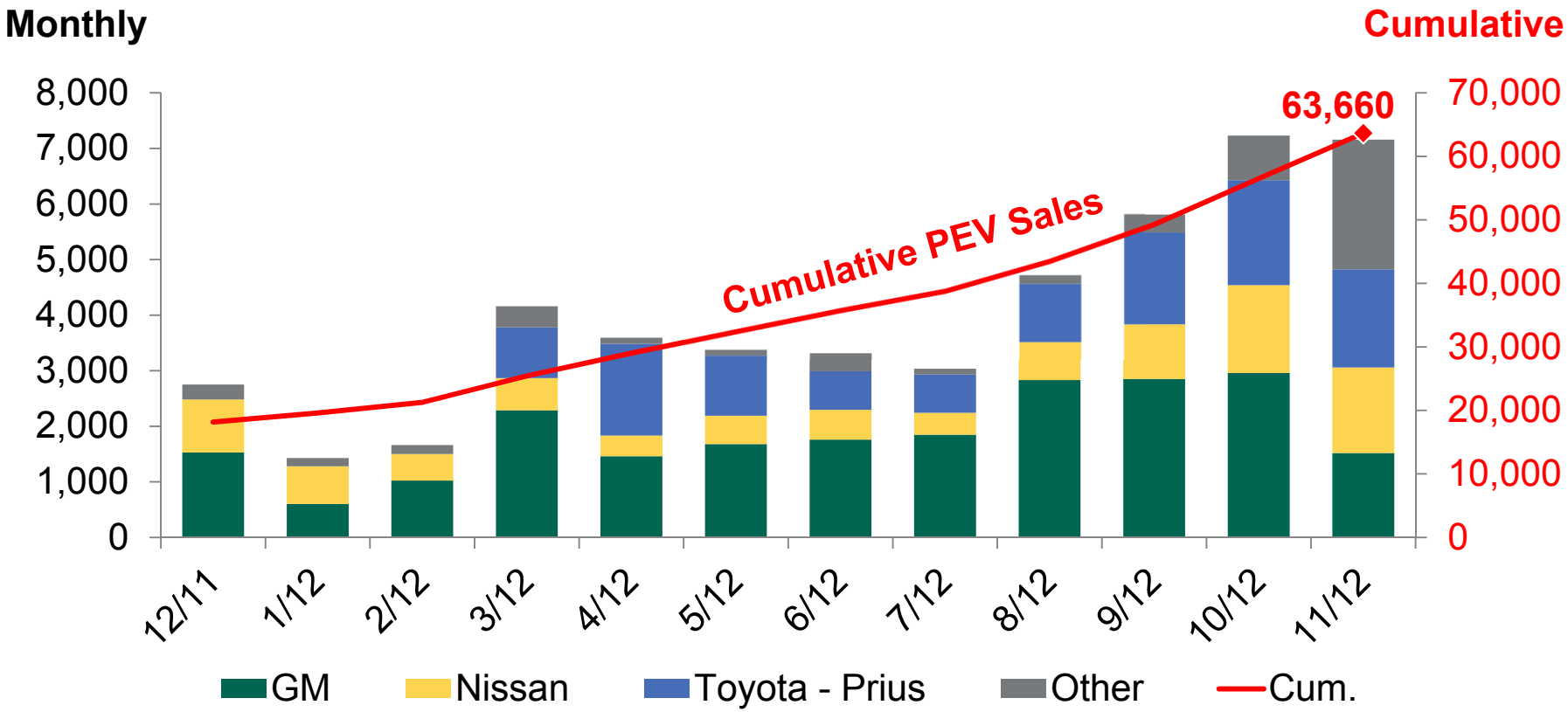
January, 2013

Downloaded from amonline.trb.org

CONFIDENTIAL – Internal Use Only
© Copyright 2013, Southern California Edison

National PEV Sales: GM and Toyota dominate

Since April 2012, GM and Toyota have captured about 80% of the plug-in electric vehicle market

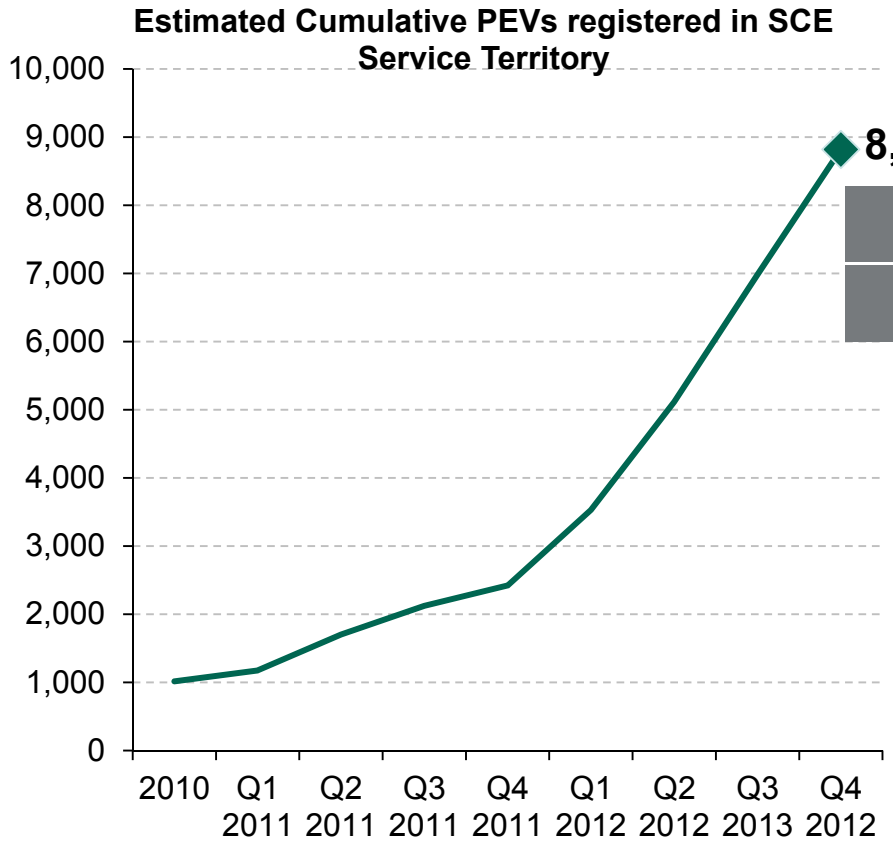


Source: Automotive News

Downloaded from amonline.trb.org
CONFIDENTIAL – Internal Use Only
© Copyright 2013, Southern California Edison

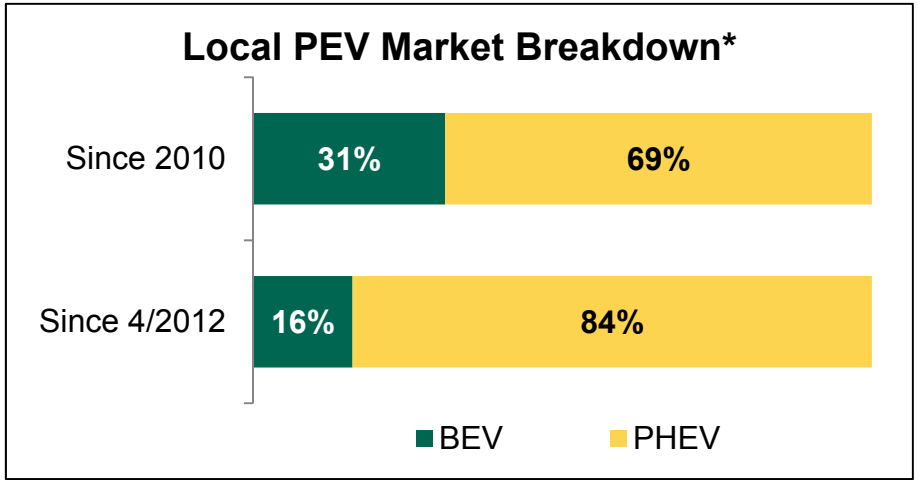
Market Information is Critical – SCE Local PEV Market Update

While still nascent, the local PEV market is also increasingly dominated by PHEVs



8,813 Registrations*

	SCE's Service Territory
14%*	US PEV Sales
40%*	California PEV Sales



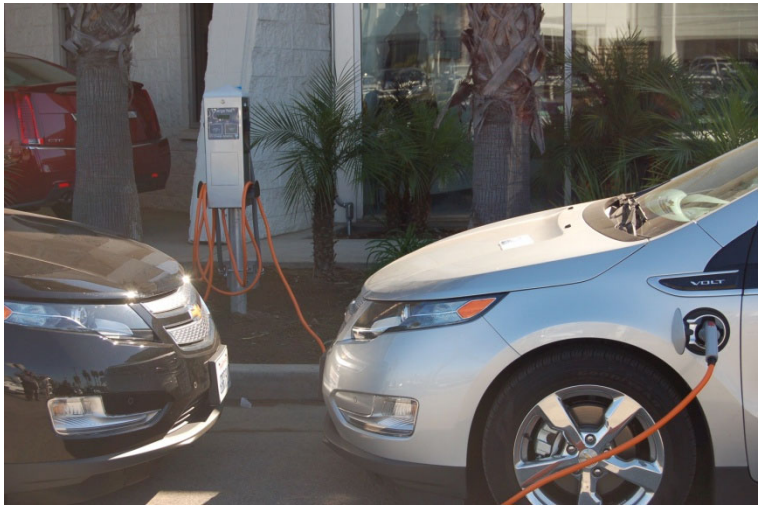
* SCE estimation

Downloaded from amonline.trb.org

CONFIDENTIAL – Internal Use Only
© Copyright 2013, Southern California Edison

SCE Market Research

EARLY BUYER STUDY

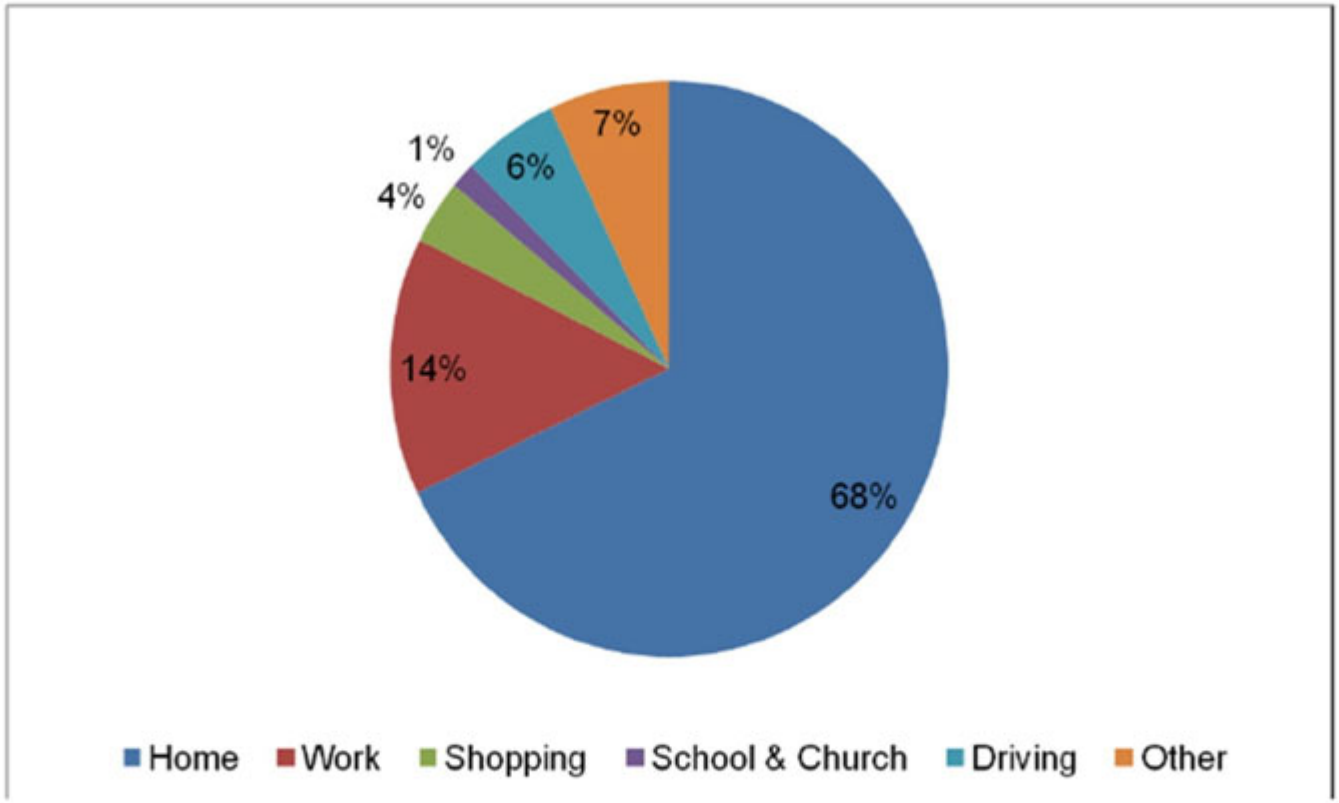


MULTI-FAMILY UNITS
NEEDS ASSESSMENT

NON-RESIDENTIAL
INFRASTRUCTURE
NEEDS ASSESSMENT

Downloaded from amonline.trb.org
CONFIDENTIAL – Internal Use Only
© Copyright 2013, Southern California Edison

Vehicle location when not driven



Vehicles spend large amounts of time both parked and just sitting at home and work.

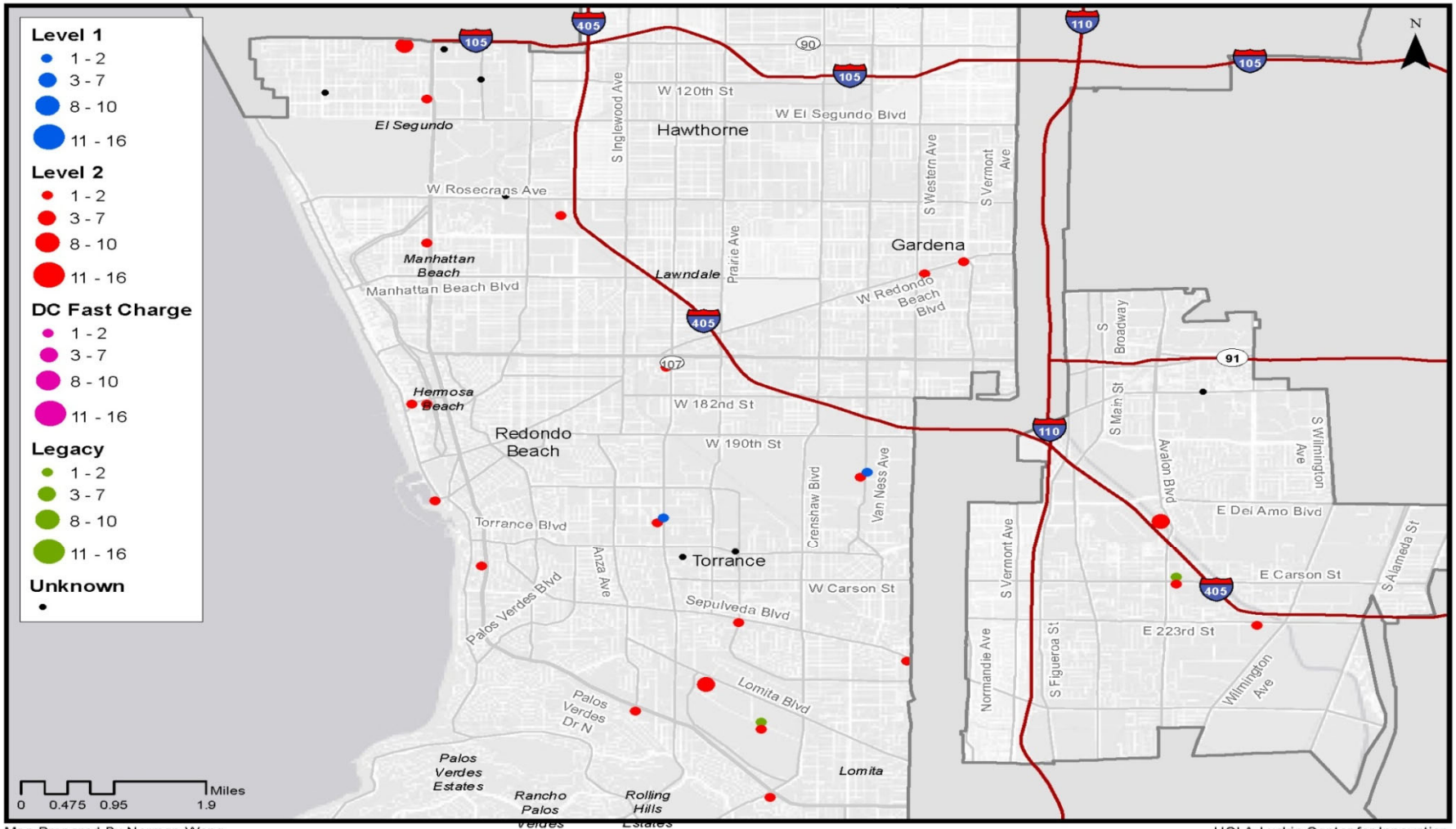
© 2011 Electric Power Research Institute, Inc. All rights reserved.

EPRI ELECTRIC POWER RESEARCH INSTITUTE

Downloaded from amonline.trb.org

CONFIDENTIAL – Internal Use Only
© Copyright 2013, Southern California Edison

Public Charging Stations - South Bay Cities Council of Governments



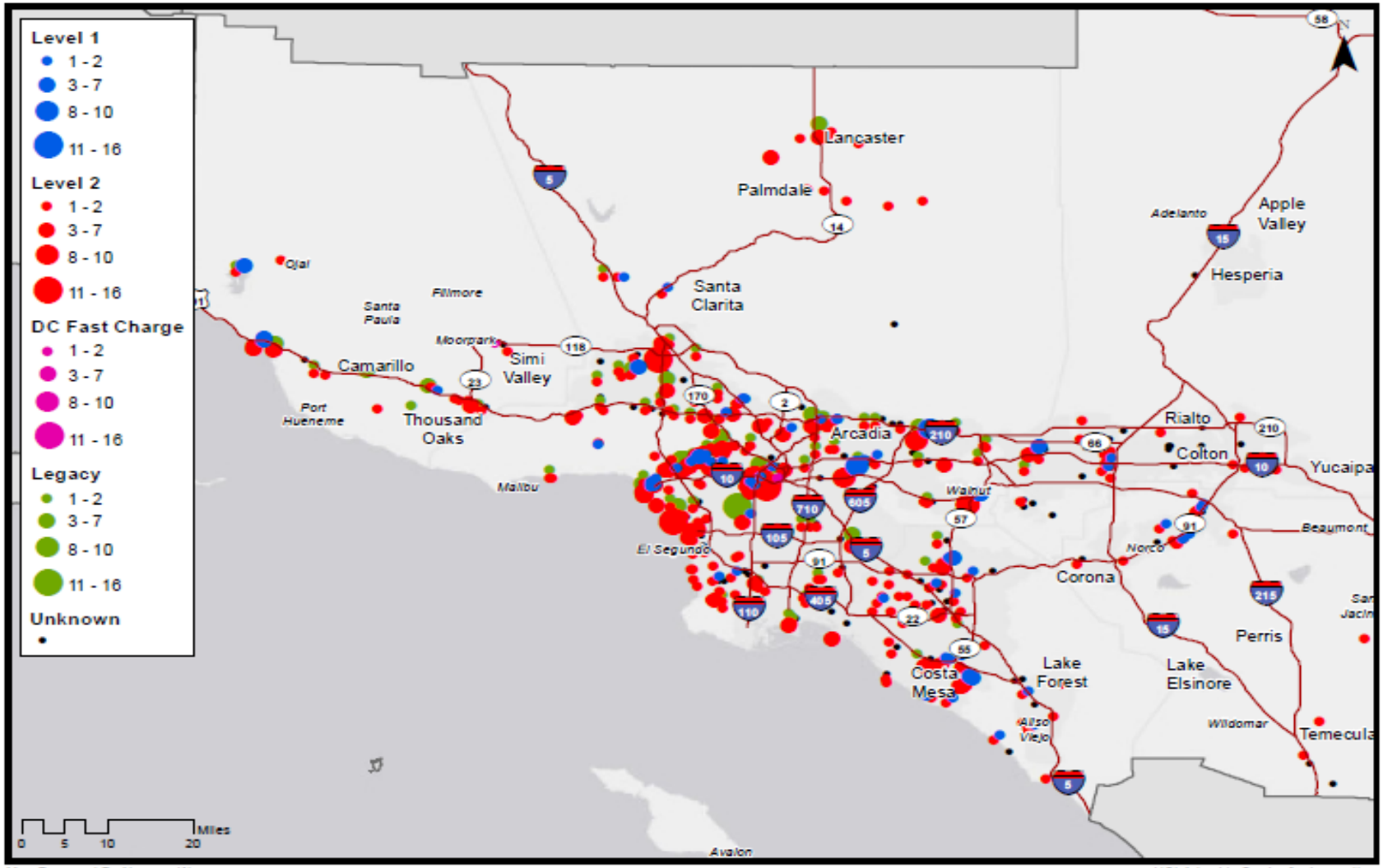
Map Prepared By Norman Wong
November 2012

UCLA Luskin Center for Innovation
UCLA Lewis Center for Regional Policy Studies

Downloaded from amonline.trb.org

CONFIDENTIAL – Internal Use Only
© Copyright 2013, Southern California Edison

Public Charging Stations
SCAG Region



Map Prepared By Norman Wong
December 2012

UCLA Luskin Center for Innovation
UCLA Lewis Center for Regional Policy Studies

Downloaded from amonline.trb.org

CONFIDENTIAL – Internal Use Only
© Copyright 2013, Southern California Edison

Charging Infrastructure Siting Criteria

The criteria include sites that:

- Are highly visible
- Exhibit long dwell times
- Are convenient
- Near transportation corridors, and in selected cases,
- Are on public property.

Downloaded from amonline.trb.org
CONFIDENTIAL – Internal Use Only
© Copyright 2013, Southern California Edison

Recommended Action Steps:

Step 1: Establish a Local Government Agency to Lead and Champion a PEV needs study

Step 2: Define the importance of the Regional Study

Step 3: Obtain an appropriate level of funding from State, Local and Federal Sources

Step 4: Establish a collaborative team that blankets the region

Downloaded from amonline.trb.org
CONFIDENTIAL – Internal Use Only
© Copyright 2013, Southern California Edison

Recommended Action Steps:

Step 5: Develop a simple clean scope of work

Step 6: Implement the necessary fact based research

Step 7: Utilize "professional" planners that understand the regions complexity

Step 8: Execute the scope of work

Step 9: Complete a comprehensive study with recommendations and templates useful to the entire region

Downloaded from amonline.trb.org
CONFIDENTIAL – Internal Use Only
© Copyright 2013, Southern California Edison

Quotes from Electrify Heartland

A planning project of the Metropolitan Energy Center

- "The public electric vehicle charging infrastructure is growing at a rate sufficient to serve the number of electric vehicles anticipated in the foreseeable future. There are currently 78 public electric vehicle charging stations in the Electrify Heartland planning region (40 in Missouri and 38 in Kansas) according to the Department of Energy's Alternative Fuel and Data Center, with additional stations opening nearly every week."
- "Electric vehicles pose no clear and present threat to existing electric utility infrastructure."
- " "Range anxiety" has been replaced by "range confidence" for early adopters of electric vehicles, who find that vehicles range and charging times are more than adequate for their everyday driving needs."
- "Most electric vehicle owners conduct the majority of their electric vehicle charging at home."

Source: www.electrifyheartland.org/news/kansas-city-region-ready-for-electric-vehicles

Downloaded from amonline.trb.org
CONFIDENTIAL – Internal Use Only
© Copyright 2013, Southern California Edison