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Southern California PEV Readiness Plan: A Guide to Planning for Plug-in Electric Vehicles

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Southern California PEV Readiness Plan

A Guide to Planning for Plug-in Electric Vehicles

J.R. DeShazo and Ayala Ben-Yahuda - 2012

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RESEARCH TOPIC

Many policy-makers and environmentalists are optimistic about the ability of Plug-in Electric Vehicles (known as PEVs) to lower emissions, improve air quality, increase electric grid efficiency, and reduce fuel costs. Yet the success of PEVs in Southern California depends on how well we utilize our infrastructure to provide the necessary support system of charging stations for PEVs. This report serves to help planners understand the landscape of PEV planning by outlining the “ecosystem” of these PEV stakeholders whose actions shape the technology’s viability and success.



RECOMMENDATIONS

- Single-family homes are critical to PEV adoption in the near term. These residences are the largest PEV host source to date, largely due to owner authority over attached garages, the availability of ample charging space, and electrical installation accessibility.
- Multi-unit Dwellings (MUDs) represent the future market for PEVs. A study by the Luskin Center at UCLA found 65% of prospective early PEV adopters in Los Angeles are residents and renters at MUDs.
- Cities with high ratios of workplaces/employees relative to residents should prioritize workplace incentives and target both technology firms and large, white-collar firms.
- Retail locations are an important third source for PEV charging outside of the home and workplace, and planners should look to retail sites where PEV’s are already parking for long periods of time in determining where to install charging equipment.

NAVIGATING THE PLAN

The chapters in this document help PEV planning as follows:

Content Area	Primary Audience	Chapter
Basic knowledge about PEVs , types of charging, and the ecosystem of stakeholders that support PEV readiness.	Planners, property owners, employers, retailers, government	Chapter 2 and Chapter 3
Introduction of methods for assessing the local land use mix and prioritizing the dominant land uses for targeted PEV readiness efforts.	Planners, government	Chapter 4
Overview of siting support methods for PEV charging at single-family homes, multi-dwelling units, workplaces, retail, and public-sector locations.	Planners, property owners, employers, retailers, government	Chapter 5, Chapter 6, Chapter 7, Chapter 8
Discussion of financial viability , including pricing and cost models for charge station hosts and drivers.	Planners, government	Chapter 9
Description of measures that drive down the hard and soft costs of installing PEV charging. These include zoning ordinances, building codes, permit and inspection streamlining, and parking policies.	Planners, government	Chapter 10, Chapter 11, Chapter 12, Chapter 13
Evaluation of PEV readiness at utilities in the SCAG region.	Planners, utilities	Chapter 14
Guidance for outreach efforts to stakeholders in single-family homes, multi-unit dwellings, workplaces and retail properties.	Planners, government	Chapter 15
Tool that allows local planners to see how many PEVs are registered locally and in what neighborhoods PEV registrations are concentrated. This source also provides projections of PEV growth over time by council of government (COG).	Planners, government	The Southern California PEV Atlas

DeShazo, J.R and Ayala Ben-Yahuda. 2012. "Southern California Plug-In Electrical Vehicle Readiness Plan ," *UCLA Luskin Center for Innovation*.