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# CEC AB118 Workshop

**ADVANCED**  
**TECHNOLOGY**  
Transmission & Distribution Business Unit



**October, 2009**

# Background: SCE Has Had an Industry Leading EV Program since 1988



– President Barack Obama visits SCE's Electric Vehicle Technical Center in March, 2009



SCE's EV Technical Center- unique in the Utility Industry was founded in 1993



SCE's Garage of The Future is generating data related to the convergence of solar, stationary storage, vehicle charging and discharging and home energy management

# Vehicle launches between 2010-2012

## Driving Need For Utilities to get PEV Ready



# SCE's PEV Readiness Activities



## Early Market

Modest number of cars; demanding & vocal customers; high visibility; uncertainty around market development; emerging industry standards with certification standards implemented towards 2014; policy decisions developed and implemented

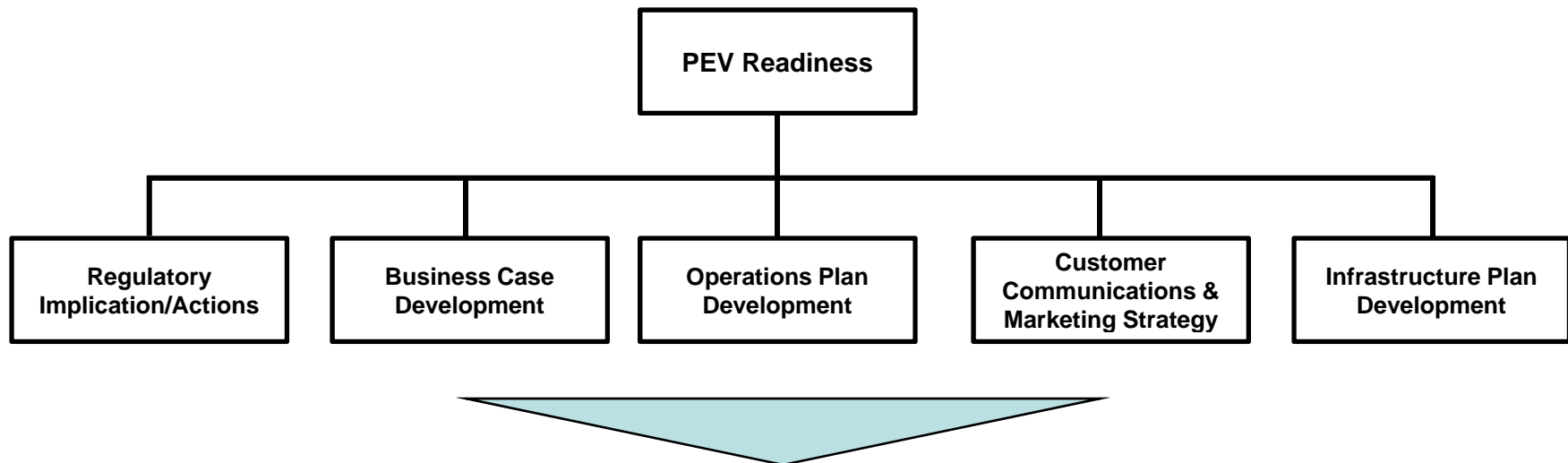
## Developing Market

Growing number of cars; some clarity around winners & losers in technology and market share; growing significance of load management



Given uncertainties and challenges involved in addressing an emerging market, SCE is developing a detailed 5-year plan. In addition, we will also evaluate the outer years up to 2020, but uncertainties will likely be high.

# PEV Readiness Program Organization



**SCE has launched a company-wide program to ensure readiness for early market adoption of PEV. The initial focus is to support customers in the vehicle purchase and charging infrastructure installation process and ensuring positive customer experience as they choose pricing options for charging.**

# SCE's PEV Readiness Guiding Principles



## 1. Support Customers:

**Customer Friendly Processes:** Design robust, scalable, cost effective processes/procedures that meet the needs of a growing market

**Customer Choice:** Address Customers' needs for choice (rate options, infrastructure charging options, etc)

**Customer Education:** Design a customer outreach and education program that helps customers get their homes and businesses PEV ready

## 2. Get the Infrastructure Ready:

**Distribution System Implications:** Identify likely locations of PEVs at the neighborhood and circuit level, determine system impacts and take proactive action, where necessary, to maintain system reliability and safety

# SCE's PEV Readiness Guiding Principles- Cont.

## 3. Support Commission in Developing Fair and Workable Policies:

**Compliance with Existing Policies:** Ensure electric system reliability, reasonable and appropriate PEV rates and incentives and optimize system use

**Encourage and Support Early Adoption:** Address customer needs in charging infrastructure and determine roles of many stakeholders

**Adopt Codes and Standards Ensuring Compatibility with Smart Grid:** Support the Commission in ensuring the PEV infrastructure is consistent with common requirements (e.g., NIST, SAE)

# Need For Near Term Focus

- Focus on addressing the right issues at the right time
  - CPUC's OIR with 42 questions is a good indicator of complexity
  - Not likely to be any single solution addressing needs of 14 million people in SCE's 50,000 square mile service area
  - There are many different points of view that need to be heard through the regulatory process
- Recommend using AB118 to update existing public charging infrastructure built in the 1990's
  - Over 1,800 charge points in SCE service area
  - Pending J1772 connector standards
  - SCE/SCAQMD proposal for Los Angeles
- Recommend need for stakeholder workshops or taskforce to develop phase 2 infrastructure build out plan (staged to vehicle sales velocity and vehicle type)





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