

Plug-in Electric Vehicle Readiness

**Santa Barbara EV Workshop
February 12, 2011**



How to Get Plug-In Ready



3 Steps to Getting Plug-in Ready

Step #1

LEARN ABOUT


PEV READINESS:

GET INFO AT

www.sce.com/pev

Fill out Getting Plug- In Ready Checklist

PEV READINESS
Getting Plug-In Ready Checklist

 **SOUTHERN CALIFORNIA EDISON**
An EDISON INTERNATIONAL Company

CUSTOMER INFORMATION

Customer Name:

Customer Address:

Customer Service Account Number:

Dwelling Type: Single Family Townhome Condominium Apartment

Customer Preferred Phone Number: E-mail Address:

Preferred Method for Receiving Printed Information: E-mail Mail Fax

If fax, please provide fax number:

VEHICLE AND CHARGING INFORMATION

Approximate Date Vehicle Will Start Charging at Service Account Location:

Vehicle Charge Level: L1 - Slow (120 Volt) L2 - Fast (240 Volt)

Miles You Expect to Drive in Your Electric Vehicle Daily:

Expected Daily Charging Start Time: Expected Daily Charging End Time:

When You Currently Use Electricity:

Mostly during the day Mostly at night Used steadily throughout a 24-hour period

RESIDENTIAL ELECTRICAL INFRASTRUCTURE INFORMATION

Electrician Name:

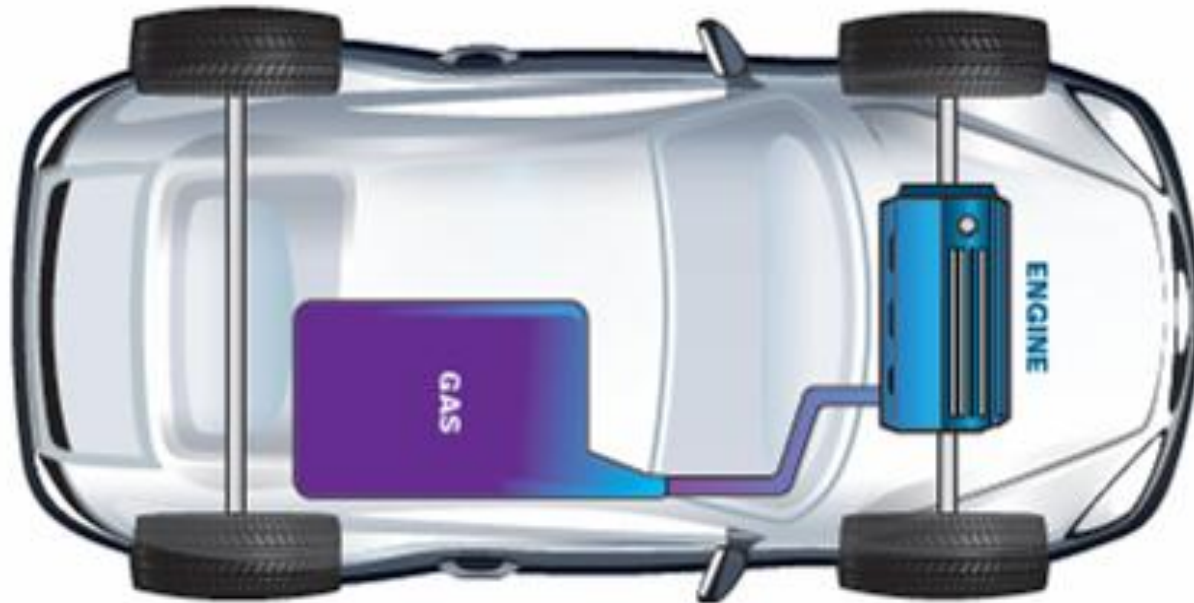
Electrician Phone Number: Electrician E-mail Address:

Number of PEVs Charging at this Location Today: Additional Planned PEV(s) and Expected Purchase Date(s):

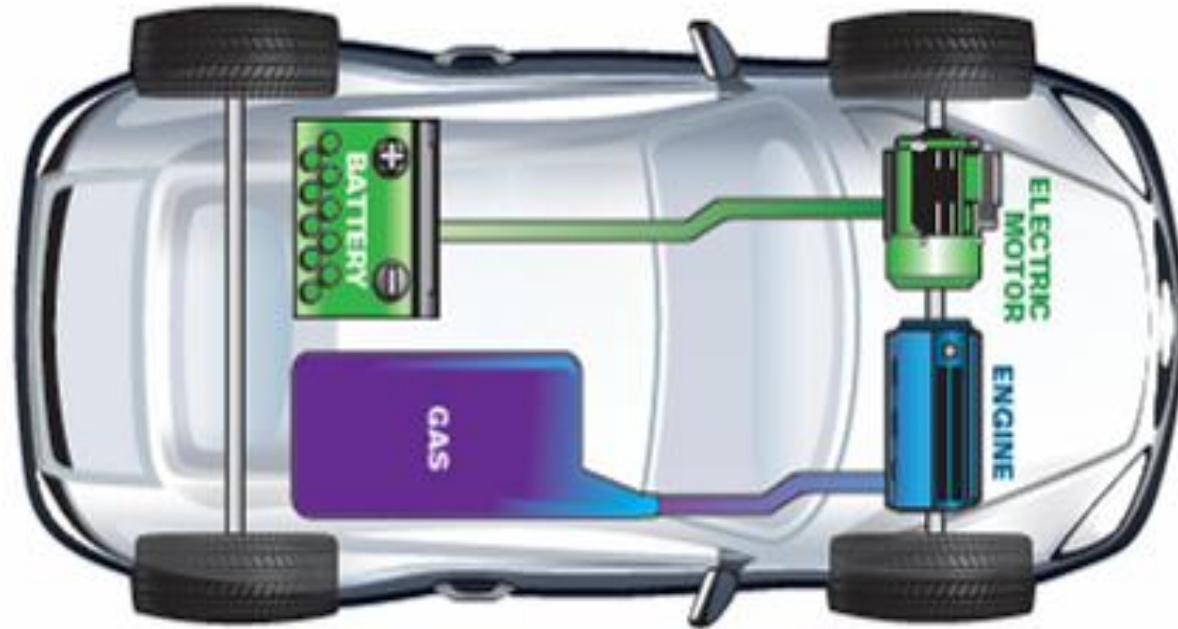
Using Existing Panel?	Upgrading panel?	Adding new panel?	Panel Accessibility Issues (locked gate, animals, need to be home, etc.)
<input type="checkbox"/> Yes <input type="checkbox"/> No Amps <input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No Amps <input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No Amps <input type="text"/>	

Choose a vehicle

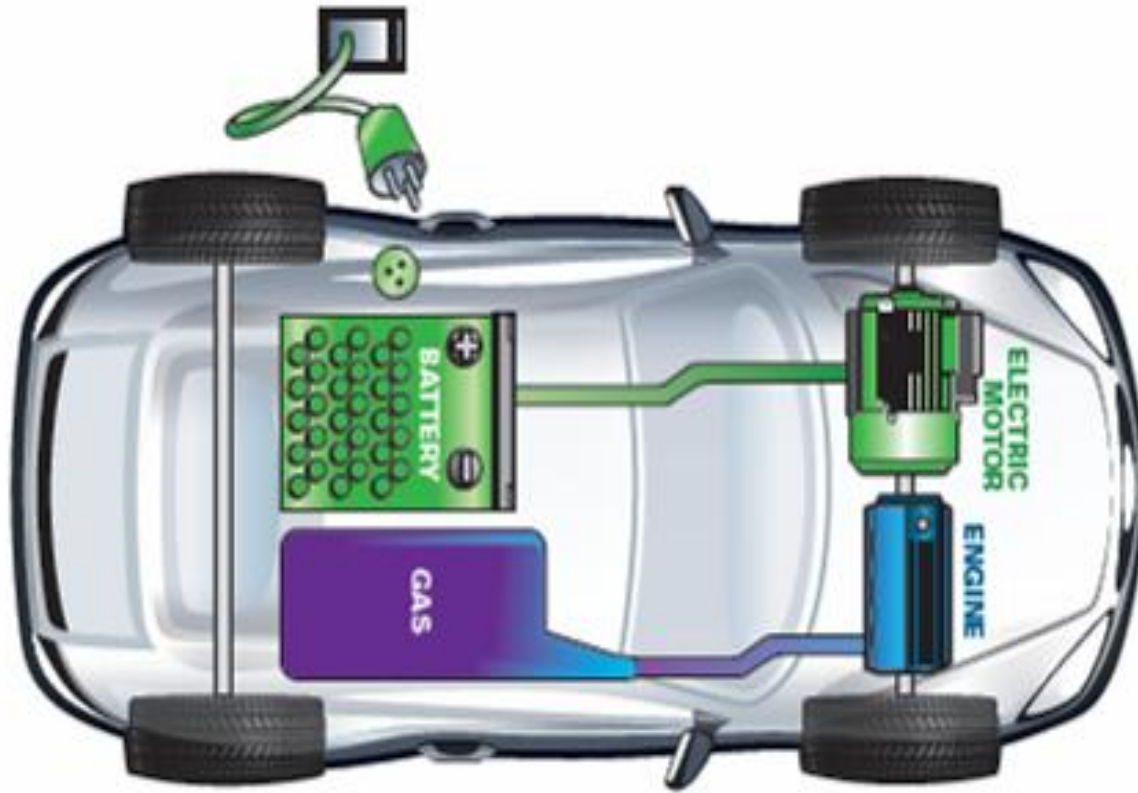
Internal Combustion Engine Vehicle (ICE)



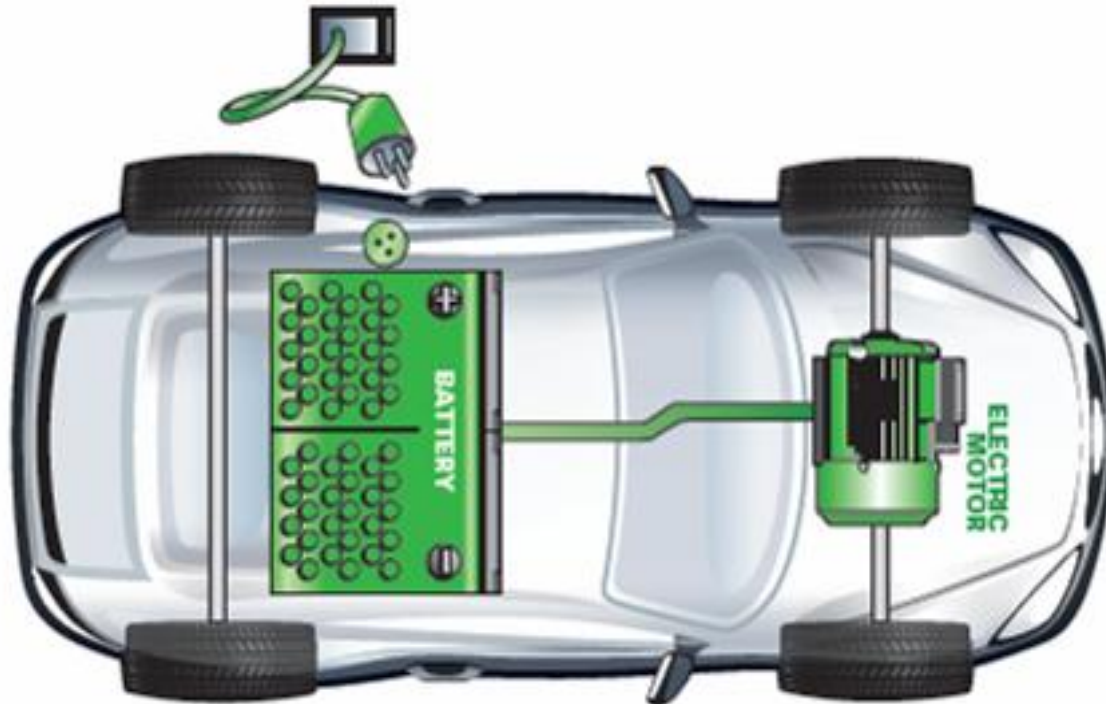
Hybrid Electric Vehicle (HEV)



Plug-in Hybrid Electric Vehicle (PHEV)



Battery Electric Vehicle (BEV)



How fast do you
want to charge?

BEV



Level 1 Charging
(120v 15 amp)
– 12 to 18 hours

Level 2 Charging
(240v 40 amp)
– 4 to 6 hours

PHEV



Level 1 Charging
(120v)

– 6 to 8 hours

Level 2 Charging
(240v)

– 3 to 4 hours

Charging Stations



PEV Charging: Standard Plug

Aerovironment: L2 Home Wall Mount (240v)

Step #2

CHOOSE A RATE PLAN

Residential Plan (D)

Single Meter

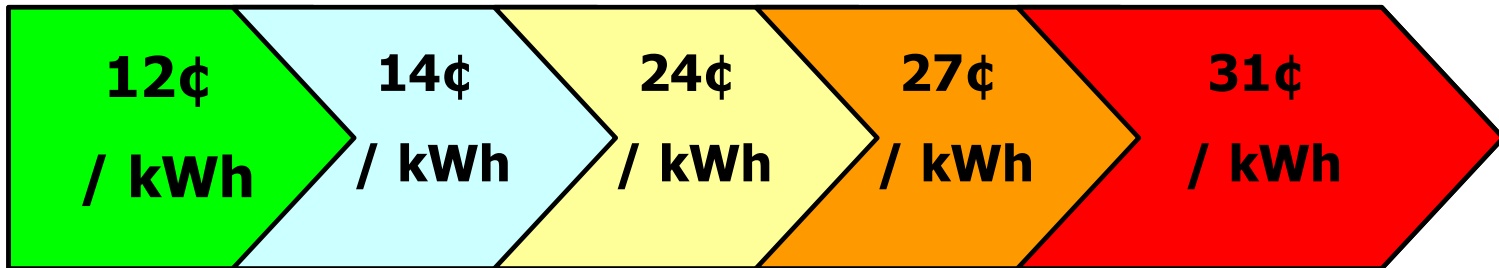
Tier 1

Tier 2

Tier 3

Tier 4

Tier 5



Peak Times

No hourly differentiation

Home & Electric Vehicle Plan (TOU-D-TEV)

Single Meter

Season	Summer		Winter	
Tier	Tier 1	Tier 2	Tier 1	Tier 2
On-Peak	19 ¢/kWh	56 ¢/kWh	13 ¢/kWh	26 ¢/kWh
Off-Peak	13 ¢/kWh	25 ¢/kWh	12 ¢/kWh	23 ¢/kWh
Super Off-Peak	10 ¢/kWh	16 ¢/kWh	10 ¢/kWh	16 ¢/kWh

On-Peak: 10 AM – 6 PM (weekdays)
Off-Peak: All other hours
Super Off-Peak: Midnight – 6 AM

Electric Vehicle Plan (TOU-EV-1)

Dual Meter

	Summer	Winter
On-peak	28 ¢/kWh	22 ¢/kWh
Off-peak	11 ¢/kWh	11 ¢/kWh

On-Peak: Noon – 9 PM

Off-Peak: 9 PM – Noon

How much will it cost to
charge?

Get a customized
Rate Assessment

Call: 800-4EV-INFO

You can also use SCE's Rate Assistant tool to compare rate options & vehicle choices



The image shows a screenshot of the SCE Plug-in Car Rate Assistant tool. The interface is set against a dark green background. In the top left corner, the Southern California Edison logo is displayed, featuring a sun icon and the text "SOUTHERN CALIFORNIA EDISON" with "An EDISON INTERNATIONAL Company" below it. To the right of the logo, the title "Plug-in Car Rate Assistant" is written in a light gray font. Below the title, the heading "Find your rate plan" is shown in green, followed by a sub-heading in gray: "Use this quick and easy tool to choose the right rate plan to save on your electricity bill when purchasing a plug-in car." On the left side of the interface, there is a 3D rendering of a yellow plug-in car with a charging cable plugged into its side. To the right of the car, the text "Enter Your Zip Code" is displayed above a white input field. Below the input field is a green button with the text "Get Started" in white.



Get a Home
electrical
assessment
from a
contracted
electrician

Step #3

PERFORM UPGRADES

Authorize the
electrical
contractor to
obtain required
permits and
complete desired
electrical work



Obtain
required city
electrical
inspections





**Bring your
car home
and plug in!**

Accommodating PEVs in the Electric Grid

- We do not expect any system-level issues in the early rollout of EVs, but early analysis and monitoring are essential
- Some localized impacts are expected in neighborhoods where PEVs are clustered, but can be addressed with proper notice
- SCE has managed load growth for over 100 years, and EVs will be no different with proper attention and planning

Now

*Detailed system modeling
Updated design standards
(transformer, etc.)
Monitoring metrics for grid*

As Cars Arrive

*Inspection of local grid
components for known EVs
Transformer upgrades by
vehicle delivery date*

Down the Road

*Distribution system planning
procedures for EVs
Vehicle communication R&D
DSM pilots for EVs*

Accommodating PEVs in the Electric Grid

YOU CAN HELP – HOW?

Early notification of PEV purchase to utility helps SCE plan for potential Grid upgrades

- Let SCE know of your intention to purchase a PEV
- SCE will inspect the Grid infrastructure in your neighborhood
- Ensures safe, uninterrupted, quality service for you and your neighbors

Thank You!