

SCE Electrician* FAQs

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*The term “electrician,” as used throughout this document, includes entities such as independent electricians, electrical contractors and 3rd parties offering end-to-end EV services.



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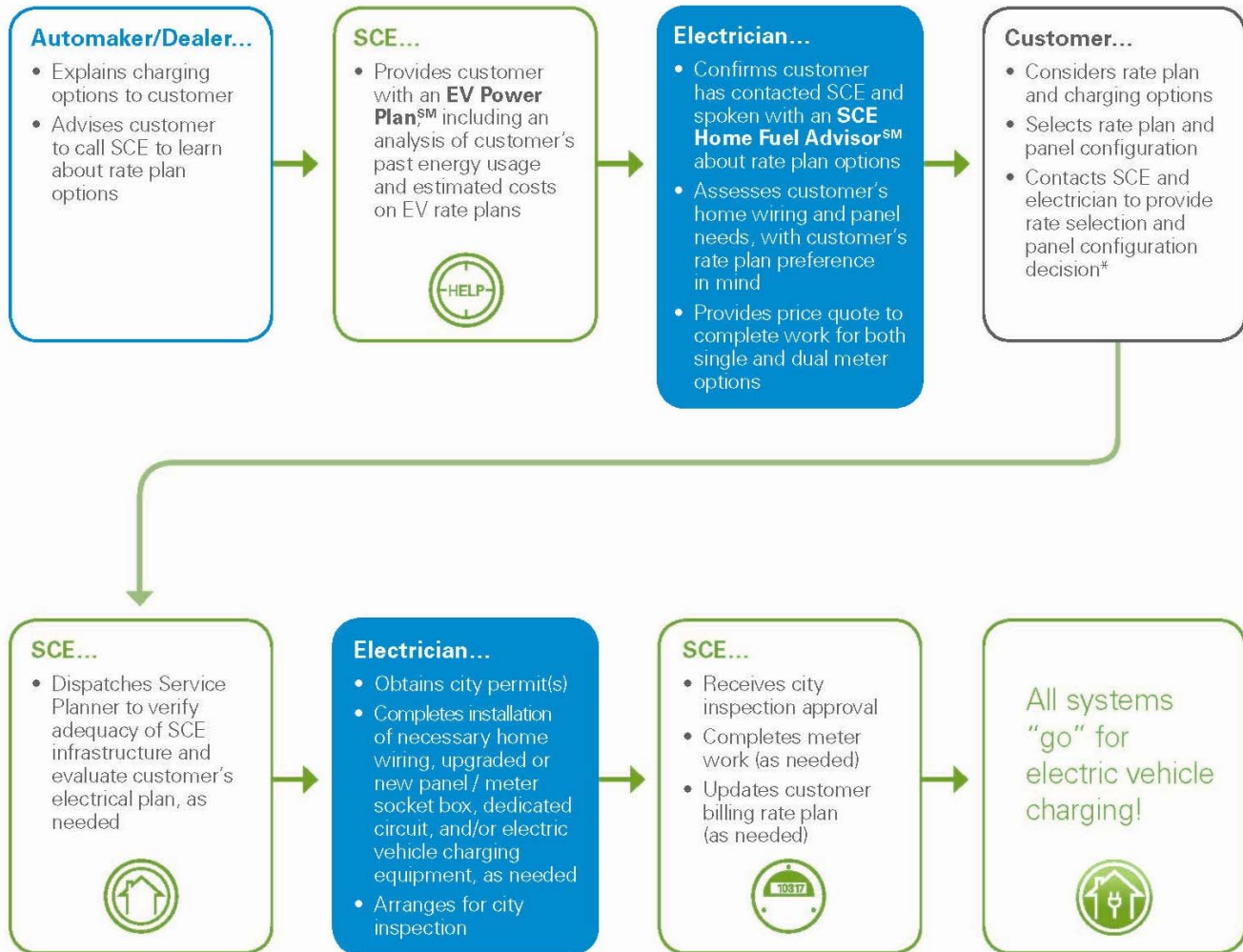
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Preparing a Residence for an EV

What is the process a customer goes through to prepare the home to charge an EV?



PEV Rate Options

What are a residential customer’s EV rate options, and what type of electrical work may be required for each?

Rate Plans	Rate Description	Panel Choices		
		Use Existing Panel	Add 2nd Panel or Meter Socket Box	Upgrade Existing Panel
Residential Plan (Your Current Rate) <i>Single Meter</i>	Your Current Rate Home and electric vehicle loads measured together	 Option #1 (no meter change)	N/A	 Option #2 (meter may need to be replaced)
Home & Electric Vehicle Plan (TOU-D-TEV) <i>Single Meter</i>	Time-of-Use Tiered Rate* Home and electric vehicle loads measured together; rates higher during the day and lower at night	 Option #3 (meter may need to be replaced)	N/A	 Option #4 (meter may need to be replaced)
Electric Vehicle Plan (TOU-EV-1) <i>Two Meters</i>	Time-of-Use Rate Electric vehicle load metered separately from home load; home remains on current rate and meter; electric vehicle rate is higher during the day and lower at night	N/A	 Option #5 (panel upgrade or addition must take place before second meter is installed)	 Option #6 (panel upgrade or addition must take place before second meter is installed)

See page 4 for detailed panel configurations.

How do customers determine which EV rate is best for them?

SCE provides a personalized **EV Power PlanSM** to customers interested in charging an electric vehicle at home. This plan includes an analysis of the customer's past energy usage and estimated costs on the EV rate plans (which is based on the customer’s historical electricity usage information for the past 12 months) and the customer’s planned EV usage information. Customers can request an **EV Power Plan** by calling SCE at 1-800-4EV-INFO. An **SCE Home Fuel AdvisorSM** will ask a few simple questions, prepare the analysis and send it to the customer via the method of his/her choice.



SCE will need the following information to perform an EV rate analysis:

- EV make and model
- Vehicle charging level (120 Volts / 240 Volts)
- All electric miles expected to be driven each day
- Number of days vehicle will be driven each week
- Expected charging start time
- Expected charging end time

Should I provide a quote for every rate option detailed in the customer's EV rate analysis?

SCE strongly suggests electricians provide customers with cost estimates for both single and two-meter installations. Two estimates will allow the customer to compare the total cost and payback period for each rate option and make a final decision. Additionally, a significant percentage of SCE's EV customers change their mind while preparing their home for an EV. They often call SCE to cancel their initial EV rate request to select one of SCE's other available EV rate options. Initially providing the customer with two estimates will help ensure you do not have to make a second visit to prepare a second estimate for the customer. Providing two estimates during the initial visit eliminates delays and potential frustration if a customer changes his/her mind.



Installation Costs

Does SCE charge customers to install a second meter or to replace an existing meter?

SCE does not charge customers to change a meter from one to another, if necessary, or to install a second meter. (Note: the cost of a second meter is included in the EV-1 rate.) To support EV charging, however, a home may require electrical system modifications such as panel or wiring upgrades. The customer is responsible for the cost of these upgrades.

Does SCE offer any rebates or incentives for the cost of upgrading an electrical panel, adding a second panel, or installing electric vehicle supply equipment (EVSE), also known as a charging station?

SCE does not offer any rebates or incentives for home electrical work needed to charge an EV. Customers can check with their personal financial advisor as well as government websites for such rebates and tax incentives.

Visit www.sce.com/EVInstall to learn more about available rebates and incentives.

Are customers responsible for paying to upgrade the SCE infrastructure (transformer, service drop, etc.) that serves their home?

All residential customers are provided an allowance for any necessary upgrades to the SCE electrical infrastructure at their site. An SCE Service Planner can provide specific information about the allowance amount a customer may be eligible for and any additional costs the customer may incur.



Installation Process

Does SCE require the acquisition of any permits before electrical work can be completed?

SCE does not verify the acquisition of permits for home electrical system upgrades; however, local codes and regulations should be followed and city permits, if required, should be obtained before work is initiated.

Can I schedule the Service Planner to participate in my assessment of the customer's home to better understand the impact SCE's Electrical Service Requirements (ESR) may have on my estimate?

SCE has studied this question and has concluded that it is not possible within the current EV process to coordinate the Service Planner's participation in the electrician's home assessment. SCE strongly recommends that the electrician become familiar with SCE's Electric Service Requirements (ESR)¹ before providing the customer an estimate and seek Service Planner approval, as necessary, before proceeding with the installation.

Will SCE provide authorization when it is safe for me to perform electrical work?

Yes. When a customer makes an EV rate selection, SCE will send a Service Planner to visit the customer's site and ensure the neighborhood electrical infrastructure can safely handle the new load associated with EV charging. The Service Planner will contact your customer when the assessment has been completed and it is safe for the customer to initiate any necessary electrical work.

Where can I go for more information about how to help an SCE customer to prepare for EV charging?

Information about electric vehicle charging at a customer's home can be found in SCE's Electric Service Requirements (ESR)¹. The ESR is updated quarterly and should be reviewed for any EV updates.

¹ SCE's Electric Service Requirements may be found at www.sce.com/EVInstall



Specific information about EVs can be found in Chapter ESR-1 “General Information” >> Section 5.0 “Plug-in Electric Vehicles”; however, other sections of the ESR may contain important information for the necessary electrical work. For example, Chapter ESR-5, figure 5-4 illustrates the separation requirements of meter assemblies for electric and gas services.

For more general information about EVSE, installation and procedures you should consider public sites such as www.goelectricdrive.com. In addition, many EVSE manufacturers and third-party electric vehicle service providers (EVSP) have similar information available on their web sites.

If I am only installing a dedicated circuit for EV charging, do I still need to get a city inspection?

Please check with your city for applicable requirements and procedures before initiating any electrical work.

Does SCE have any rules regarding where a second electrical panel or meter socket box can / cannot be installed?

Where at all possible, the second panel or meter socket box shall be placed at the same location and directly adjacent to existing metering.

Examples of various panel configurations for second panels / meter socket boxes with both overhead and underground electric service can be found in SCE’s Electric Service Requirements² in Chapter ESR-1 “General Information” >> Section 5.0 “Plug-in Electric Vehicles.”

Other relevant sections of the ESR may contain important information about requirements and should be reviewed. For example, ESR-5 “Meters – EXO Installations” >> Section 5.0 “Metering Equipment Installations” specifies, “The centerline of any meter socket shall not be more than 6’-3” or less than 4 feet above the standing and working surface...,” as well as additional meter socket location requirements.

Are cities allowing customers to install 2nd panels?

Yes, but SCE suggests consulting with the local authority to determine if there are any specific requirements.

² SCE’s Electric Service Requirements may be found at www.sce.com/EVInstall



Are 2nd panels required or can customers also install meter socket boxes and disconnect devices?

Customers can choose to install a meter socket box and a disconnect device, but SCE suggests consulting with the local authority to determine if there are any specific requirements.

Does SCE require a certain size for the 2nd panel or meter socket box serving the 2nd meter?

Customers can choose the size for their 2nd panel or meter socket box, but they should consult with the local authority regarding any possible requirements. SCE has established maximum panel sizes for residential customers and minimum load requirements for available voltages specified in Tariff Rule 2 (<http://www.sce.com/NR/sc3/tm2/pdf/Rule2.pdf>).

Can SCE require the customer to move a new or upgraded panel, even after inspection, if the panel is not compliant with SCE's Electrical Service Requirements (ESR)?

Yes, if the panel is not compliant with SCE's ESR. However, it is SCE's goal to educate and work with you to keep this from happening. Ultimately, it is your responsibility to ensure compliance with SCE's ESR.



Miscellaneous

Who can I call with any questions I have?

If you have questions about installing EV charging equipment, you can contact the EV supply equipment manufacturer directly. A list of equipment manufacturers and vendors can be found at <http://www.goelectricdrive.com>.

If you have questions about a particular installation and whether or not it is in compliance with SCE's Electrical Service Requirements (ESR), please contact a Service Planner at your local SCE Service Center. A list of all the Service Centers and their contact information can be found in the ESR³ in Chapter ESR-1 "General Information" >> Section 2.0 "Edison Office Locations, Phone Numbers & Community Index."

Does SCE have a list of recommended electricians?

SCE cannot recommend a particular electrician. Customers have the option of choosing to work with the electrician of their choice or contacting the vehicle manufacturer to see if it has a recommended charging infrastructure installation partner.

Will SCE inspect a residence's electrical system?

When a customer selects a rate and panel option, SCE will send a Service Planner to check the SCE infrastructure at the customer's site. SCE will not inspect the electrical infrastructure on the customer's side of the meter. However, if a second meter panel or meter socket box is going to be installed, a Service Planner will review the plans to ensure the installation follows the guidelines found in SCE's Electrical Service Requirements (ESR).

Who is responsible for requesting an inspection?

Either the customer or the electrician may request an inspection from the city or other local authority having jurisdiction in these matters. SCE will not coordinate requests for inspection.

³ SCE's Electric Service Requirements may be found at www.sce.com/EVInstall



Is the customer able to receive a second service drop?

No, SCE provides only a single service line for all residential panel configurations, regardless of whether one or two panels are installed.

What are the major differences between available charging levels the customer can choose?

There are different EV charging levels or voltages, for you and your customer to consider. Higher voltage levels mean the vehicles “fuel” faster, but there may be associated equipment and infrastructure costs to consider.

Please remember you can always contact an **SCE Home Fuel Advisor** at 1-800-4EV-INFO for any questions on these charging levels.

- Level I Charging — at this level, cars can charge on a typical 120-volt outlet. Upgrades or modifications to the property’s main electrical infrastructure may not be required. There may be some costs associated with installing additional 120-volt outlets and/or “dedicating” parking spaces for EV charging use.
- Level II Charging — this level requires a 240-volt charging station and may also involve making upgrades to the property’s electric panel or circuits. There may also be additional costs associated with providing “dedicated” parking spaces for EV charging use.

