

Seattle Permits

— part of a multi-departmental City of Seattle series on getting a permit

Installation of Electric Vehicle (EV) Charger for Single Family and Multifamily Homes

May 4, 2017

This Tip is designed to help guide you through the process of establishing an electric vehicle charging infrastructure for your home. It provides general information on what you need to know before purchasing an electric vehicle, the type of equipment required to support an electric vehicle, and how to apply for a permit to install the vehicle charging station.

Electric Vehicle

An electric vehicle uses one or more electric motors for propulsion and runs on a rechargeable battery. Electric vehicles can have a positive impact on the environment as they release almost no air pollutants and they have less noise pollution than regular motor vehicles. There are a variety of makes and models for electric vehicles currently available on the market. The level of charging required for individual battery modules vary widely depending on the manufacturer of the vehicle. All charging equipment installed in the city of Seattle must be listed by a nationally recognized testing laboratory. Currently, there are several manufacturers producing listed vehicle charging stations.

Car companies and utilities are working together to develop communication capabilities between the cars and the power utility grid in the neighborhood to reduce the chance of overloading the electrical system. Charging your electric vehicle during off peak hours will further decrease the chance of overloading the neighborhood utility grid. Most charging stations or the vehicle itself will allow for a delayed charging time.

Things to Consider

You will need to evaluate the electrical service in your residence before purchasing an electric vehicle. We recommend using a state licensed and bonded electrical contractor.

Another factor to consider is where you intend to park the vehicle and the location of your charging station. Installing it may be a simple task, or it may be complicated and expensive depending on the location of your charging station. Some auto manufacturers will include the cost of this installation in the overall cost of the vehicle. Check with your dealership to determine if they are offering this incentive. Car chargers cannot be located in the public right-of-way.

Single Family Residence

For single family residences, it may be a simple matter of installing a vehicle charger in an existing garage or connecting it to your electrical service panel depending on your electrical service capacity. However, if your electrical service panel is in a location away from where you intend to charge your vehicle, you should consider the potential difficulty of the proposed installation. In some cases the cost of installation could be expensive and should be considered when making the final decision to purchase the electric vehicle.

Multifamily Dwelling

For multi-family residences, there may be physical issues as well as load capacity issues when considering the installation of a charging system. You will need to discuss your options with the owner of the property, condo association, or building management prior to purchasing the electric vehicle. The building owner/condo association has the authority to allow access to the electrical room and parking garage through the common areas of the structure. Be sure to get permission prior to making commitments for an electric vehicle if you intend to charge the vehicle at home.

www.seattle.gov/sdci



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Some of the challenges that you may need to address when installing vehicle charging stations in multi-family dwellings are:

- Does the building service equipment have adequate capacity for the additional power requirements of electric vehicle charging?
- How will the power to the vehicle charging station be supplied? Will the power need to be supplied by your service panel or will the power come from a panel controlled by building management/condo association?
- Does the electrical service room have sufficient space for the additional electrical equipment that will be needed to supply power to the garage? Will some other space in the multi-family structure need to be secured for the vehicle charging equipment?
- How will electrical raceways or cables be routed to the garage from the electrical service room or from the alternative location?
- Do you have designated parking spaces or will management/condo association need to dedicate parking spaces for vehicle charging?
- Will building management provide additional power?
- Will you need a subpanel that will provide electric power to an individual parking space and your residence?

Permit Requirements

In general, the person installing the electric vehicle charger needs to obtain the required permits. A homeowner of a single family residence may perform their own installation and obtain the permit. However, we recommend the work be done by a state licensed and bonded electrical contractor. You can apply for electrical permits online at www.seattle.gov/dpd/permits/permittypes/electrical/ or at our permit counter, located at 700 5th Avenue, Suite 2000. For permit information and hours, applicants can contact SDCI's over-the-counter permit counter at (206) 684-8464.

Electrical Permit

Electrical permits are required for all electric vehicle charger installations. There are three (3) levels of chargers associated with electric vehicles:

- Level I Charge – trickle charge overnight (120 volt outlet)

- Level II Charge – 4-6 hours to charge (240 volts, 40 amps continuous load)
- Level III Charge (fast charger) – capable of providing a full charge in less than 30 minutes (208 volts at 200 amps or 480 volts at 89 amps)

Electrical permits for a Level II Charger (40 amp) single family residence require no plan review and may be obtained On-line or over-the-counter at our Applicant Service Center (ASC).

Level II and III chargers may require plan review if being fed by services or feeders rated 400 amps or more. Visit this website for plan review requirements: <http://www.seattle.gov/dpd/permits/permittypes/electrical/default.htm>.

Permit fees will vary depending on the size and complexity of the system. Technical questions may be directed to our Electrical Technical Support line at (206) 684-5383. The flowcharts on page four of this Tip will assist you with the permitting process.

Seattle City Light

You will need to contact Seattle City Light (SCL) if your electrician determines that your electric service is not adequate. You must contact SCL before starting your project.

You will be required to complete an electrical service application package and submit it to SCL for approval prior to commencing any work.

After reviewing your request, SCL will provide you with information such as cost for the service connection, location of the service point and the work required to connect to the SCL system.

The following basic steps are required for upgrading or installing a new service:

1. Contact an electric service representative (ESR) for your location. North of Denney Way (206) 615-0600; South of Denny Way (206) 386-4200.
2. Complete and submit your electrical service application package.
3. Purchase a Permit from SDCI.
4. Install a new electrical service.
5. Schedule an inspection with a SDCI electrical inspector.
6. Notify your ESR once installation is complete and has been approved by an SDCI electrical inspector. Make sure all SCL connection fees are paid.

Other Important information

We recommend contacting SCL prior to beginning any work as codes and processes may change.

You must submit plans for review by the SCL engineering group due to the complexity of electrical services over 200 amperes and underground electric services. Please allow additional time for the review and for crew work.

Seattle City Light charges a fee for new service connections and electric service upgrades. The fee is based on size of the service and the complexity of the installation. Large services and underground services are the most expensive

All new or upgraded services must be inspected by both a SDCI Electrical Inspector and a SCL ESR. Please ensure you contact your ESR once the SDCI electrical inspector has provided you with a final approval for your service installation.

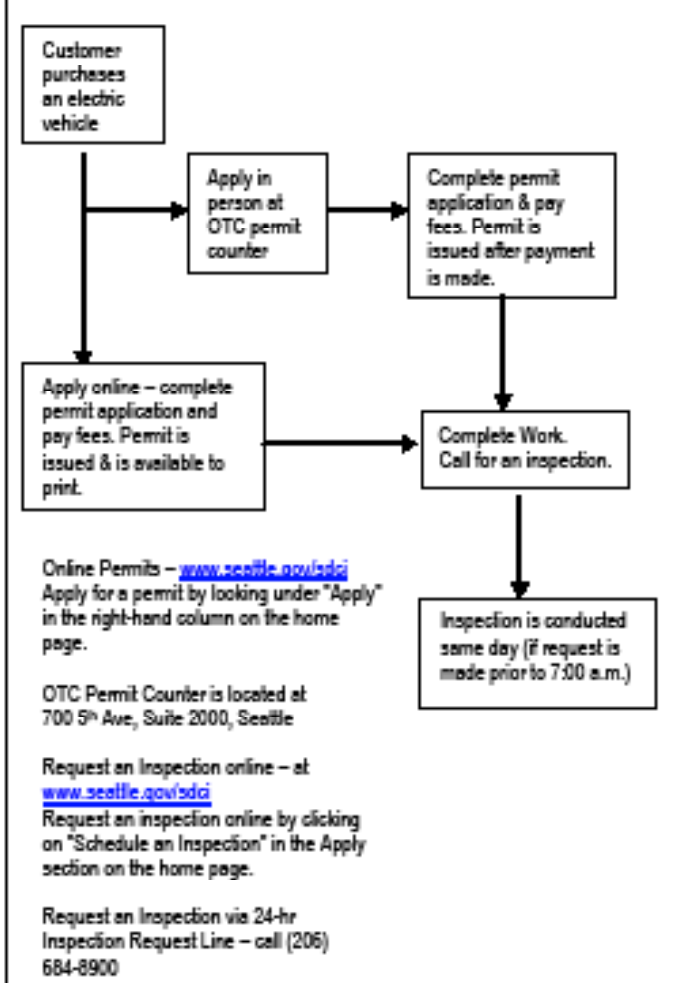
Contact SCL at (206) 615-0600 north of Denny Way; or (206) 386-4200 south of Denny Way. You can find additional information, including a copy of the electric service application the SCL website at www.seattle.gov/light/electricservice.

Seattle City Light is committed to providing the highest level of customer service; please contact them and they would be happy to assist you with any questions you may have about this process.

Access to Information

Links to electronic versions of SDCI **Tips, Director's Rules**, and the **Seattle Municipal Code** are available on the "Tools & Resources" page of our website at www.seattle.gov/sdci. Paper copies of these documents are available from our Public Resource Center, located on the 20th floor of Seattle Municipal Tower at 700 Fifth Ave. in downtown Seattle, (206) 684-8467.

Over-the-Counter (OTC) Permit Process (no plan review) for Level II Charger (40 amps)



Plan Review Level III Charger and Sub Panel 400 Amps or Larger

