



# Town of Portola Valley

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## Green Building and Building Electrification Frequently Asked Questions

1. What does an all-electric building mean?  
**An all-electric building has no natural gas or propane plumbing installed within the building, and that uses electricity as the source of energy for its space heating, water heating, cooking appliances, and clothes drying appliances. An all-electric building does not include any gas infrastructure and gas-fired amenities such as outdoor kitchens, grills, pools, spas, fireplaces, firepits and outdoor heaters are not allowed.**
2. When is an all-electric building required?  
**An all-electric building is required for all new construction and newly constructed buildings.**
3. What is the definition of “New Construction” or “Newly Constructed”?  
**A newly constructed building is a new building constructed from the ground up. It also refers to additions, alterations and additions that include alterations to existing buildings for which building permit(s) have been issued within any 12-month period that collectively exceeds more than 50 percent of the existing floor area, 50 percent of the existing wall area or when the combination of the percentages of affected floor area and affected wall area exceeds 50 percent – the “[50 Percent Rule](#).”**
4. Is a new ADU required to be all-electric?  
**Yes, a new ADU is required to be constructed as an all-electric building. An ADU is considered the same as a single-family home and is subject to all Building code requirements unless specified otherwise.**
5. Is there an exemption from complying with the CalGreen Code amendments?  
**If an applicant believes that circumstances exist that make it a hardship or infeasible to meet the requirements of the adopted CalGreen Code amendments, the applicant may request an exemption in writing at the time of application. In applying for an exemption, the burden is on the applicant to show hardship or infeasibility.**
6. If I am installing a new pool, do I need an electric heat pump pool water heater?  
**If the new pool is being built in conjunction with the a newly constructed primary building (such as single-family home, townhomes, office building, ADU, etc.), then a heat pump water heater is required for the pool. If the pool is being built on a site with an existing primary building, then the pool heater is not required to be a heat pump water heater though that is encouraged.**

7. If I build a new outdoor kitchen can I have a gas stove and barbeque?  
**If the new outdoor kitchen is being built in conjunction with the a newly constructed primary building (such as single-family home, townhomes, office building, ADU, etc.), then gas stove and barbeque is not allowed. If the new outdoor kitchen is being built on a site with an existing primary building, then a gas stove and barbeque is allowed.**
8. If I am remodeling my kitchen, do I have to install an electric kitchen?  
**No, as long as there have not been building permit(s) issued within the previous 12-month period to the Building permit application that would exceed the [50 Percent Rule](#).**
9. What is a heat pump water heater?  
**Heat pump water heaters use electricity and refrigerant to move heat from one place to another instead of generating heat directly. While a refrigerator pulls heat from inside a box and sends it into the surrounding room, a stand-alone heat pump water heater pulls heat from the surrounding air and transfers it -- at a higher temperature -- to heat water in a storage tank.**
10. If I am replacing my water heater or furnace does it have to be a heat pump based system?  
**No, you can replace existing equipment like for like but heat pump equipment is encouraged.**
11. What is a heat pump space heater?  
**Heat pumps transfer heat from one place to another. A heat pump absorbs heat energy from the outside air (even in cold temperatures) and transfers it to the indoor air. When in cooling mode a heat pump and an air conditioner are functionally identical, absorbing heat from the indoor air and releasing it through the outdoor unit.**
12. Why am I required to use a heat pump when I am installing a new or replacing my existing AC condenser?  
**The installation of a heat pump when replacing or installing a new AC condenser maintains the current buildings heating (gas fired furnace) and cooling configuration while providing for an easy conversion to a heat pumped based space heating and cooling system when the existing gas fired furnace reaches the end of its life.**
13. What does EV ready mean?  
**An EV Ready parking space is a space with an electrical branch circuit, and necessary raceway and wiring to accommodate EV charging terminating in a receptacle or a charger. The branch circuit is required to be a minimum 40-ampere 208/240 branch circuit to accommodate a level 3 EV charger.**
14. What is a level 2 Electric Vehicle charger?  
**A Level 2 EV charging station delivers an electrical current from an outlet or hardwired unit to the vehicle via the connector, similar to a standard-issue charger.**
15. What am I required to do if I am upgrading my main electric panel?  
**The panel is required to be able to accommodate:**
  - a. **The electrical capacity for and reservation of breaker space in the panel to accommodate the existing single-family electrical load and**

the future electrification of:

- An electric stove and oven if the current stove and/or oven are gas;
  - An electric clothes dryer if the current clothes dryer is gas;
  - One level 2 electric vehicle charging equipment (EVCE);
  - Photovoltaic panels (PV); and
  - For a 240-volt circuit capable of providing electricity to operate a HPWH of comparable size to the existing gas fired water heater but a minimum of 30 amps per water heater.
- b. All reserved breaker spaces shall be permanently marked as “For Future EVCE, PV and HPWH use”.
- c. A dedicated 240-volt branch circuit shall be installed within three (3) feet from the existing water heater location and shall be rated at 30 amps minimum. Both ends of the unused conductor shall be labeled with the word “spare”, be identified as 240 V ready.

***Remember to check with the Planning & Building Department about utility undergrounding requirements.***

16. If I am adding photovoltaics to my house and need to upgrade my electric panel, do I need to have it sized to accommodate the electrical loads discussed in the answer to question 14?  
**Yes. The intent is to prepare the existing house for future electrification by taking advantage of the opportunity presented when the new main electric panel is being replaced.**
17. I currently have solar panels and in the future would like to add a battery storage system in my garage. My garage is not habitable but it is attached to the house and there are 2 bedrooms above it. Will I be allowed to do this?  
**Yes. The change made to the code was to ensure a Battery Energy Storage System (BESS) is not installed in the living space of the house. The garage has a rated wall/ceiling between it and the living area which provides the life safety protection needed in the event of a fire.**
18. I am looking at getting a portable Home Storage Battery backup system where you connect the portable power station to the breaker panel via a transfer switch. My breaker panel is on the first floor – this floor is habitable, but the breaker panel, water heater and furnace are all at the back in a separate area walled off from the habitable area. Will I be able to do this?  
**Yes. The systems you are talking about are portable systems and not governed by the Building codes. The installation of the transfer switch will require a Building permit.**
19. What do I need to do in order to get a final inspection/occupancy on my newly constructed building project?  
**Prior to final inspections and occupancy for the project, a qualified Green Building Specialist shall provide documentation verifying that the project complies with all CalGreen Code measures. Upon receipt of this documentation, the Building Division will review the documentation and once approved, the final inspection may be scheduled.**