For further explanation and purchasing information, visit preplo.org/electricity.

1. **Full electrification**. Installing solar panels with battery back-up and potentially an EV can give you full off-grid electrical support.
2. **Natural gas generator**. Can be expensive ($6000+) but hooks up to your gas line for continuous use. *Do not expect that natural gas will be available after the Cascadia earthquake*.
3. **Electric vehicle with bi-directional charging**. Ford F-150 Lightning, Nissan Leaf, Tesla Cybertruck, Chevy Silverado, Chevy Blazer and Cadillac Lyriq all offer Vehicle to Home bi-directional charging now. Tesla and the rest of GM's EVs plan to have it within the next two years. The home interface system can be expensive. Ford uses Sun Run and the total cost with installation approaches $9,000. The largest battery in a Ford F-150 Lightning is 131 kWh, comparable to about ten Tesla Powerwalls. Ford estimates that this will give you enough energy to power your home from 3 to 10 days depending on how your power is rationed.
4. **Tesla Powerwall batteries**. Each Powerwall provides 13.5 kWh and can run some appliances selectively for about a day. Running a heat pump would require multiple Powerwalls at around $8000 each. You can install up to ten Powerwalls which gives you the same capacity as the F-150 Lightning, but at that cost you might as well buy the truck!
5. **Generator switch on gas furnace connected to inverter battery or small gas generator**. Can power your furnace as long as the battery or fuel lasts. Batteries can be recharged from some EVs, solar panels or a location that has power. Cost: $1000-1900.
6. **Portable battery options**. There are several portable battery systems that can power a refrigerator for a day or two that cost between $500 and $4000 depending on how much energy you need. Some use small solar panels to provide extra energy.
7. **Do it yourself**. Select from off-the- shelf batteries, solar panels and gas generators. DIYers will figure out which components to use for their specific situation.
8. **Propane generator**. A propane generator can be installed as a permanent option with a large tank that will go for several days. Cost will range up to $5000. This is the same as option #2 but doesn't require a NW Natural account and doesn't rely on the gas grid being intact.
9. **Gas portable generators**. There are portable gas generators for a few hundred dollars that will keep selected appliances going for less than a day before it needs to be refilled.
10. **Wood stove**. Use for heat, cooking, heating water. No electricity. Toxic air quality can build up indoors and should be periodically vented. Make sure you have an adequate supply of wood!
11. **EV without bi-directional charging**. Provides periodic warmth, device charging, internet access.
12. **Gas fireplace**. Vented or sealed to prevent toxic gases from filling the house. Leaving gas stovetops burning to warm the house is dangerous from both a fire and a toxics standpoint