

Solar Power for Emergency Use!



We bought three 15-watt solar panels from Harbor Freight*, a tool store. They come with a PVC stand, a yellow charge controller, and some clamps to connect them to a 12-volt battery. You can use the battery with an inverter to produce some electricity for use at night if your home's electrical power is off.

You'd think three 15-watt solar panels would produce 45 watts, total. Maybe they would, oriented perfectly towards the sun. We couldn't orient them that well on the PVC stand. They produced 38 watts. The power from the panels goes through a "charge controller." It shuts off the power when the battery is charged.

If the controller dies, it's impossible to overcharge a lead-acid vehicle battery. Add power after it's charged - the battery bubbles. If the battery plates inside are covered with liquid, the battery can be charged. The battery needs to be in a vented area, since the hydrogen bubbles are explosive. So - charge the battery outdoors, and make sure that the battery fluid level stays higher than the plates.

To get the best charge rate, aim the panels toward the rising sun and re-aim every couple of hours. It takes longer to charge the battery in winter than in summer. Clouds cut the charging rate. And solar panels are no good at night!

Disconnect the battery and bring it indoors to use it at night with an inverter. (See the Tip "**Emergency Power from a 12-volt Inverter!**")

*FYI, some report that Harbor Freight solar panels lose wattage in use. I have not used these long enough confirm this. **Check other brands for emergency use.**