

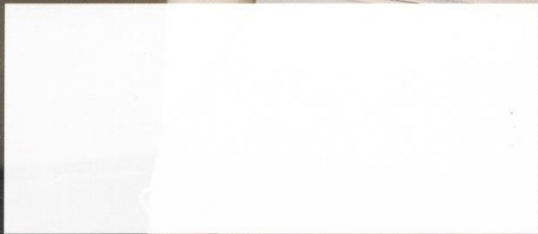
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PUBLIC SAFETY POWER SHUTOFFS: GET READY

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What Works



Watt Wagon solar power trailer (Lisa Rose Photography)

Power Options When the Grid Is Down By Chaz Peling

Summer is here and fire season is, too. Are you ready for another wave of power shutdowns? The recent disasters in the North Bay and around the world have brought some glaring truths around the reliability of the main electrical grids in many communities. These disasters will only accelerate with trends in global warming.

While emergency responders, cities and counties are doing their best to educate people with town hall meetings, their advice boils down to creating a personal preparedness plan. Education, awareness and advanced planning can help you and your family through these chaotic and uncertain times.

Three key steps to prepare

Whether the grid is off from a Public Safety Power Shutoff, a fire, a weather-related disaster, earthquake or flood, there are three key steps you should take to be ready.

First, determine what's most essential. When the power goes out, many people will need power for essentials such as medical devices, refrigerators/freezers, lights, cell phones, computers, TV and Internet connection. Each of these devices consumes a different amount of energy for a specific period of time.

Second, assess your energy demand. Your cell phone, for example, is one of the smallest uses of energy, while your refrigerator/freezer needs to keep its cool 24/7. The main questions we ask our customers who are looking for a solar backup solution are: How much power do you need? How long do you need to run the power? What's your budget? Do you want this portable or fixed to your house?



SolMan 3000 Solar Generator (Lisa Rose Photography)

And finally, design a solution that best meets your needs. Once you've answered the questions and determined your power load, it's time to choose a backup generator. Typically, people tend to opt for a fuel-based generator. However, fuel generators emit toxic fumes and access to fuel for gas generators may be limited during blackouts and emergencies. Having a nonfuel-based power source helps ensure you have electricity, even if the fuel runs out.

Solar-battery backup power

After spending more than a decade designing and installing off-grid systems, we've found that a hybrid of solar, plus battery and fuel will ensure all your essentials are powered up and ready to go, no matter what happens to the grid.

The advantage of solar, plus battery backup means that devices, such as your cell phone, laptop, internet modem and lighting, plus fridge, which require small consistent loads of energy, will remain charged and functional. This is where your solar-and-battery backup can really step in. For the larger loads, such as well pumps, electric heating/cooking, a fuel generator can provide power, and also charge the batteries if the sun isn't keeping up with the loads.

How did we get to this place where millions of roofs across the U.S. are dotted with solar systems, but non-operable when the grid goes down? While California is the birthplace of the solar revolution, all original solar designs were off-grid by definition. These solar systems always included batteries, so energy could be stored and used at night.

By 2005, the U.S. saw the greatest shift in solar when houses were installed with solar panels tied directly into the grid. This eliminated the use of the batteries since the grid became the battery, until the grid went down for multiple days for millions in the North Bay.

The solar-hybrid emergency backup power is designed for consistent electricity that can always be on for all regular off-grid use. Or, it can be used in a place where utility is difficult or expensive to get, and for emergency backup power.

We cannot stop natural disasters, but we can be prepared with knowledge and systems that make life easier when the power goes out.

Chaz Peling is founder and owner of SolSolutions, Portable Power and Lighting specialists. For more than a decade, he has been providing solar generators, off-grid power and lighting solutions for outdoor events and festival in the North Bay. For more information, visit sol-solutions.com. To get an emergency assessment, contact Chaz at (707) 515-6783.

