



## **Preparedness - How to Keep your Cell Phone Working During a Power Outage**

When the power goes out during a storm, we rely more on our cell phones and smart phones to stay in touch with emergency responders, neighbors and relatives. Unfortunately, without a backup charging system, portable phones and mobile devices can be useless just when we need them the most.

A basic cell phone may last 4 – 5 days on a charge if used conservatively. Smart phones and tablets are mini-computers and need daily charging. If you live in an area of frequent power outages, keeping a simple prepaid cell phone for emergencies may be the simplest way to ensure cellular communication. And having a phone with removable batteries and a supply of extra batteries charged beforehand is simple and reliable.

**Here are some tips for conserving and resupplying power in your cellphone during a power outage:**

### **1. Leave an outgoing message and turn the phone off to conserve power.**

If you have no access to power or charging methods, you can leave an outgoing message stating your location and situation, then turn the phone power off. Check periodically for return messages. Frequent on-off cycling also uses up cell phone power, so keep the check-ins to intervals of several hours or longer, as your circumstances allow.

### **2. Use SMS Text Messaging**

SMS text messaging will go through cellular networks easier than a voice call. SMS is the 140 or so character mode used for brief messaging. If you exceed the SMS text maximum, it becomes an EMS or MMS message, thus needing to connect to the data network and use more battery power.

Another tip is to go into settings and turn off your network wireless data services. Data services quickly drain devices since many have ghost apps such as GPS running in the background.

### 3. Turn on “Airplane Mode”

Cell phones use a lot of battery power transmitting and connecting to different cell towers. By turning on “Airplane Mode” or an equivalent mode on your phone, you will stop your phone from transmitting and receiving, which will extend your battery life immensely and allow you to still use the other features of your smartphone such as camera, video recording, notes etc.

### 4. Use a Backup Battery or Charger

#### Juice Packs

There is a range of small, portable battery chargers which provide a limited amount of charging capacity for mobile devices. The PowerGen 5200 mAh external battery pack, for example, provides 2 charges for an iPhone 4 (with 1429 mAh battery), and costs \$30. It takes about 5 – 6 hours to recharge the PowerGen. Juice packs are great for convenient short-term battery recharging, but during a prolonged power outage the juice pack requires frequent recharging which may not be available.



#### High Capacity External Batteries

Although more expensive, you can purchase very efficient, high capacity external batteries to have on standby to recharge your devices. HyperShop has a line of external batteries that can recharge your iPhone or even power your laptop, ranging from \$70 to \$450. We tested a \$170, HyperJuice 60watt external battery and found it quite effective. A little larger than the size of a deck of cards, the battery was able to power our laptop an additional 20 hours, and recharge an iPhone 14 times.

#### AA Battery Chargers

Available online or at electronics outlets, look for a USB Emergency AA Battery Charger for Mobile Phones. You may also need a short USB cable that has the proper connector for your cellphone. For very low cost this will power your phone as long as you have spare AA alkaline batteries. Don't try to charge your phone-just leave it plugged to the batteries.

## **Portable solar powered battery chargers**

**A small solar powered battery charger will recharge a phone, tablet or Kindle in about 2 – 3 hours in sunny conditions. The Premium Solar Charger, for example, is charged using a USB cable to an electric outlet or from the built-in solar panel. The solar panel charges the internal lithium-ion battery in about 5 hours of direct sunlight. Once charged, this unit can be used to charge your cell phone, smart phone, Mp3, Bluetooth headset and more via USB. The unit will only charge up to 50-60% when using the solar charging however, and solar devices are inefficient in cloudy, stormy weather. Chargers which rely on solar power need to be charged during clear weather.**

## **Car chargers**

**Most cars have some form of battery charging available which can draw power from the main battery. In older model cars, the cigarette lighter doubles as a charging station. Many portable devices are supplied with a charging plug designed to fit the cigarette lighter socket, or these adaptors are available in stores which sell electronics. Most late model cars have specific charging ports for laptops and phones which provide standard AC outlets.**

**The capacity of a car battery far exceeds that of a small phone, so it's likely you'll find a ready source of available power without needing to start the engine. If you become concerned about draining the car battery, the engine can be run to top it up, but be sure to pull the car out of the garage, or any enclosed space, before running the engine. This is to prevent exposure to carbon monoxide.**

**Car battery "jump starters" will also charge your electronic devices, and won't draw from your car battery. These jump starters weigh about 18 pounds and are overkill if you only need a cell phone charged, but many car owners keep these on hand for emergency charging of the main car battery.**

## **Power Inverters**

**If you need to power up something a little bigger than a phone, a power inverter might be a useful tool. If you want to be able to use a laptop or desktop computer during an outage, this may be the way to go.**

**The inverter can be used to convert DC power from your car battery into AC juice for things usually plugged into a wall outlet.**

**Places like Batteries Plus, as well as most computer stores, usually have these around in a wide range of power.**

## **Hand-crank cell phone chargers**

**There are a variety of inexpensive cell phone charger dynamos (hand crank) available today. The WR-111A emergency solar hand-crank cell phone charger, for example, doubles as a weather alert, flashlight and am/fm digital radio. This unit costs about \$40 and offers a choice of self-charge, solar and external recharge power options. Comes with USB adapter for charging your smart phone. Hand crank chargers may sound primitive but they are effective**

and reliable. The amount of cranking is reasonable for the power generated, but you would not want to rely on a hand-cranked charge on a daily basis. These units are very useful however during power outages.

#### **BioLite – energy generating compact camp stove**



This clever device is intended for campers and hunters who want to keep their mobile devices charged in locations where there is no power to draw from. The BioLite is a lightweight, portable camp stove which doubles as a charging device. The only fuel needed is a handful of short pencil-thin twigs which are placed in the heating chamber and lit. (The deep chamber makes it easy to start a fire even in windy conditions.) The attached battery-powered fan “super charges” the fire for cooking, and the heat from the fire recharges the battery. A USB port is provided on the charging unit and any device with a USB plug can be charged. Cell phones, smart phones, tablets, and even small battery chargers can be topped up readily. Aside from its initial charging after purchase, the BioLite never needs an external charge. And you can heat up a cup of tea or cook dinner while charging your device!

#### **5. Draw power from your laptop**

Your laptop computer, assuming it is fully charged, can be used to charge a portable device such as a cell phone. Simply plug your phone or tablet into the USB port of your laptop to access the available power. However, charging a phone from a laptop takes a long time and of course this reduces the available battery life of the laptop. Charging from a laptop is a short-term solution only.

#### **6. Use Apps to Save Power**

Several free apps for both Apple and Android devices have been developed to help you extend your phone’s battery life. One such app is Carat, which observes how you use your smartphone and makes personalized suggestions about which power-sucking apps you might delete.

#### **7. Other Power Saving Suggestions**

Some apps quietly run in the background even when you’re not using them, causing your battery to drain faster. Wi-Fi and Bluetooth are two examples, but there are plenty others.

**Turning down your screen's brightness will also help conserve juice.**

**Set the phone to ring, not vibrate. It takes more out of your battery to make the phone vibrate than it does to make it ring.**

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**Having a fully charged phone is a responsible preparedness measure but is no guarantee that you can place calls through your cell network. Cell towers can become damaged, overloaded or powerless during a storm or emergency. In the aftermath of Superstorm Sandy, approximately 25% of cell networks were down. But phone users accessing the 75% of functioning cell networks were surely grateful to have their phones in working order during the prolonged emergency.**