UNLIMITED POWER

5 CHEAP OR FREE ENERGY SOURCES FOR A CRISIS

Alternative Energy Solutions That Don't Cost a Fortune

People rely on the electricity provided by the utility company for just about every aspect of daily life. From mobile phones and computers to lights and refrigerators, there are very few things that do not require electricity in the modern age. Like many things in life, people often take the luxury of electricity for granted. Yes...electricity is a luxury that people in many less developed countries are not fortunate enough to experience. The sad truth is that many, if not most, people are not capable of surviving a life that even their grandparents probably lived to some extent because of their dependence on modern conveniences. Even worse, many of these people do not even entertain the possibility of widespread grid failure or make preparations for it.

The fact that you are reading this guide means that you have at least a basic understanding of the imminence of societal collapse. Terrorist attacks, global nuclear war, economic meltdown, or biological contamination are just some of the many reasons why the lights could go out for a very long time. Storms often damage parts of the power grid and leave residents without power for a few days at most. Although inconvenient, these situations are usually not very serious. But what happens if the power goes out and stays out, for weeks, months, or even years?

Considerations for Long Term Power Outages

When the power grid fails following some sort of disaster, there are a few things you need to consider if you expect to live a successful life in the post-catastrophic era. Heat is required in nearly every environment in the world. Even in the desert, temperatures frequently drop near freezing after the sun goes down. Without proper planning, humans cannot survive prolonged exposure to cold. Heat is even more of a concern in colder climates. In addition to providing warmth for the body, heat is also required to cook food. The human body is not equipped to process raw foods on a regular basis. The bacteria in raw meat can kill a human with relative ease. Cooking will be another serious concern in a world devoid of public utilities.

Electricity should be another consideration. Cooking, lighting, and sometimes heating are all dependent on a constant supply of electric current coming into the home. When this stream of power ceases to exist, refrigerators will no longer function. Lights will not come on. Cell phones and radios will not work. These things as well as many other modern conveniences will cease to exist. Fortunately, there is hope for those armed with a little knowledge and the will to survive.

Once you have determined that things will not be returning to normal anytime in the near future, it is important to realize that everything you know about power and other "essentials" is wrong. In most cases, it is impractical to try replacing the energy grid for your home. Although generators, large scale solar panel arrays, and wind turbines are effective ways to produce alternative energy they typically present huge initial costs that are not feasible for most people. Generators add an extra challenge because they are not sustainable. All generators require some

type of fuel and this fuel will be hard, if not impossible, to obtain after a disaster. By understanding that standard energy generation methods are not practical, you can begin looking for new ways to survive and maintain some degree of normalcy in your life.

Lights and Other Electrical Appliances

Lighting is a concern for people accustomed to working in the dark places or at night. The simplest fix is to use the natural cycle of daylight to accomplish as much work as possible. Even just this simple change can have a dramatic impact on the amount of light required. Opening windows in the day can almost eliminate the need for artificial light all together. By maximizing the amount of work you accomplish using natural light you significantly reduce the amount of artificial light you need to generate. You will quickly learn that conservation is an integral part of survival without power. Anything you can do to save power or resources will pay for itself many times over as the weeks turn into months and years.

When additional light is required, flashlights are a viable option because they do not require much power. Rechargeable batteries can power flashlights indefinitely. These batteries can be charged using very small (and inexpensive) portable solar panels. Rechargeable batteries can be used to power many other devices as well. Radios and other small electronics that typically run on batteries will also benefit from this simple power source.

LED powered flashlights can really extend the life of your batteries. LED technology uses much less power than traditional bulbs and the cost is about the same for the equipment. Better yet, there are LED flashlights that do not require batteries at all. A hand crank charges an integrated battery and can eliminate the need for external batteries altogether. These flashlights can be a little more expensive initially but those costs are quickly recouped because you are not spending money on batteries or charging setups. Cranking the handle for as little as one minute can provide hours of light.

Many of the normal media outlets will be disabled by lack of power but having a small, battery operated radio can keep you up to date with any changes in the situation or any additional threats you may have to consider. Short wave two-way radios could become one of the only reliable means of communicating across any distance. Your rechargeable batteries can be used to power these devices as well.

Candles are another method of lighting your home that has been all but forgotten in modern times. Not too long ago many people relied on candles as a primary light source. They are inexpensive, extremely reliable, and provide hours of light at a time. A good practice is to store candles in a box somewhere in your home. Try to acquire a decent supply of them. Not only will they light your home but they could become a valuable trade asset in the months following large scale collapse as many people will not have thought about the value of candles before a disaster strikes.

There is a slight risk inherent to using candles because of the presence of open flame. Many house fires have been caused by unattended candles tipping over. Although this should be of concern the benefits of using candles far outweigh the risks as long as some basic safety precautions are taken.

Kerosene or oil lamps are another alternative lighting source that can last for a very long time. There is some risk of fire but because the flame is enclosed it is less dangerous than using open flame candles. Most oil lamps can operate using either kerosene or specially made lamp oil although lamp oil tends to be more expensive. Storing some kerosene in an airtight container is less expensive and just as effective for use with oil lamps. If you choose to use oil lamps, make sure you also have a supply of wicks available to replace used ones as necessary.

Refrigeration

Keeping perishable items cold without power can be a more difficult task than any other single task when power is not readily available. The constant power draw of a refrigerator is especially taxing when you are responsible for making your own power. Keeping your current refrigerator functioning without grid power requires an extensive alternative power generation strategy that is often not possible due to budget constraints or lack of proper materials.

If you insist on using your standard refrigerator after a crisis, you will need to generate power somehow. When the compressor motor starts, the power draw is significant but once started the refrigerator does not use that much power. The least expensive way to operate this important appliance is by using solar power. Generators can also be used but these rely on fuel which will not always be available after a catastrophe. Completely outfitting your home for solar power is very expensive but luckily you can purchase small or slightly damaged solar panels meant to provide power for one or two appliances relatively inexpensively. Although it would nice to power your entire home in this manner it is often not practical. Instead, consider purchasing a couple of small solar panels and a second hand inverter that are sufficient to power your refrigerator for a few hours a day. Even just a couple of small solar panels is enough to charge a modest battery bank and provide enough electricity to run a couple of appliances sparingly.

If you keep the door shut as much as possible, a refrigerator does not need to be plugged in 24 hours a day. You can get away with running it for only a couple hours each day and still manage to keep food cold without putting a heavy load on the solar system you set up. A second hand solar power system can be constructed for a few hundred dollars. This system will not power your entire home but will provide some household power for necessary items.

Another idea is to use a refrigerator designed for use in an RV. Although smaller than their household counterparts, RV refrigerators operate on DC (and sometimes propane) and typically require much less power. Since these appliances run on DC there is no need for an inverter in your solar power system that converts the DC current produced by the solar panels

into AC used by most household appliances. Not only does this save money on the costs of your budget solar system but it also makes it more efficient. The design features inherent to inverters means that a substantial portion of your generated power is converted to heat and wasted. A DC refrigerator eliminates the need for an inverter and could make running the appliance all day more practical.

Unfortunately many people will not get around to installing even a basic solar powered system before disaster strikes. This does not mean that all hope is lost. Remember that refrigerators did not become mass-produced until the early 20th century. Prior to that, people had to figure out alternative methods to keep things cool and these same techniques still work today.

Cooling techniques will vary depending on the climate in your location. In some parts of the country, snow can be found for half the year or more. In these areas, collecting snow and using it to keep items cold or frozen is effective. The snow can be brought inside and stored in the turned off refrigerator basically converting it to an old fashion ice box. Alternatively, items can be stored outside in these colder climates whether or not snow is available.

If you are not fortunate enough to live in an area with snow or consistently cold weather there are other techniques available as well. Keep in mind that even in the desert the temperature often drops down significantly after the sun goes down. You may be able to store items outside at night to keep them cool and then store them in an insulated box or non-functioning refrigerator during the day.

Evaporative cooling works well especially in warmer climates. This technique has been used successfully for centuries and works because of the cooling properties of evaporating water. A simple way to make an evaporative cooler is to purchase two terracotta planting pots making sure that one is larger than the other. Place the smaller pot inside the larger one and fill the area between the two pots with a medium material such as sand. By saturating the sand with water, you can place items in the smaller pot and they will be cooled as the water evaporates from the sand medium. Make sure to cover the smaller pot so the cooling effect is not lost to the outside air. Although this technique will not get cold enough to freeze items, it will definitely keep them cool for much longer than would otherwise be possible.

Regardless of what climate you live in, natural water supplies can also be used to cool items. Especially moving bodies of water such as streams or rivers that often receive cold snow melt runoff from the mountains, perishable items can be floated in a waterproof container to keep them cold or sometimes even frozen. If you use this technique make sure you secure the container carefully so you don’t accidentally lose your entire supply due to strong water currents or debris floating down the river.

The purpose of freezing food is to store it for the long term. Unless you live in an area where the ambient temperature hovers around freezing for much of the year freezing food will be

difficult to accomplish. However, there are many other ways to store perishable food items for long periods of time that do not require cold temperatures. Meat, vegetables, and fruit can all be stored using various methods and these options should be considered as a much more practical solution to food preservation.

Knowing that freezing and sometimes even refrigeration are not possible it is important to understand other food storing techniques to ensure a year round supply of edible food. Smoking meat is an easy and effective way to save meat for long periods of time. A simple smoker can be constructed from a saplings and some tarp to keep the smoke in. Meat is draped over crossmembers in the frame of the smoker and a fire is lit at the bottom. Be sure to use green wood so the fire does not burn too hot and cook the meat. After a few hours the meat will be smoked thoroughly and can be stored for months when refrigeration and freezing techniques are not effective. Canning is another popular technique that can be used for meat as well as produce. Canned products can last for years on a shelf and still be perfectly healthy and edible.

Cooking

Cooking is another concern when the power and natural gas lines stop providing energy and fuel. Your conventional stove may rely on either gas or electricity to operate. Both types will be extraordinarily taxing on your resources. Natural gas or propane can run out quickly and may not be replaceable. Electric stoves draw large amounts of power and quickly strain any alternative energy generation system you may have in place. However, there are many low cost options available for cooking food. Combining a few of the techniques outlined below will often be the best solution depending on the situation.

Propane is an excellent fuel source because it is relatively inexpensive and can be stored safely for long periods of time. Like other fuel sources it is not sustainable but if used in moderation it can cook large amounts of food with minimal fuel stores.

Propane camping stoves are small and use fuel very efficiently. If at all possible refrain from using a propane grill because they waste lots of propane compared to camping stoves that are often designed for use with smaller propane tanks. You can save money by purchasing a few of the 20 pound propane tanks and a small attachment that allows you to fill the small camping size tanks easily. Propane is much less expensive when purchased in bulk and a few of these 20 pound tanks will keep the smaller camping tanks filled for quite some time when used sparingly.

Since you are not able to predict the availability of propane in the future, having a variety of other cooking methods available is essential. Canned fuel sold under brands such as Sterno offer numerous benefits. Most importantly, you can store canned fuel indefinitely. It is also inexpensive and therefore easy to stock up on. Although not required to function, stoves are available that are specifically designed for use with canned fuel. Usually these stoves are very small and inexpensive but they do provide a nice platform to place your cooking pot or pan while using canned fuel. The only drawback to canned fuel is that it is not sustainable either. You can

only store so many cans of this fuel. Granted they are small and you can store hundreds or even thousands of them pretty easily but you will run out eventually since you can't just run to the store and pick more up.

Old fashion wood fires are another excellent cooking method. If you live in an area where wood is plentiful, wood can provide cooking fuel indefinitely. There is labor involved in cutting wood and bringing it back to the home but the likelihood that you will run out of your wood supply is slim. Open fires are by far the least efficient means of cooking but it certainly works. If your home is equipped with a wood stove for heat, it is also an excellent place to cook. The surface of the wood stove gets very hot and the heat is not lost to the surrounding air like it is with open fire cooking.

For truly sustainable cooking, consider using a solar oven. Solar ovens can be made from almost anything once you understand the basics of how they work. In its simplest form, a solar oven can be made from a box that is painted flat black on the outside and lined with aluminum foil on the inside. A piece of glass or clear plastic is placed over the top to allow sunlight into the box. To be truly effective, a solar oven also needs a separate reflector plate sitting next to it. A reflector plate can be as simple as a piece of cardboard covered in aluminum foil. This helps to collect sunlight and direct it into the oven for better heating.

Another type of solar oven can be made from a large black inner tube like the ones people sometimes use when floating down a river or as a pool toy. By sandwiching the inner tube between two pieces of glass to seal in the heat, food can be placed in the middle of the tube and it will cook fairly quickly. Like the other design mentioned, this solar oven also requires the use of a cardboard reflector.

The advantage to both of these designs or any similar design that you may come up with is that the food does not have to be constantly attended. Although solar ovens get hot enough to cook food, they do not get so hot that you have to worry about burning the food. Place a piece of meat in the oven in the morning and by dinner time you have a nice hot meal.

There is another type of solar oven that does require a little more work but allows you to cook pots of food easily. Known as a parabolic solar oven, it is often constructed from an old satellite dish that is covered with reflective aluminum foil. A pole hanging above the dish is used to suspend a pot in line with the concentrated solar rays reflected by the dish. The sunlight focused right on the bottom of the pot is very similar to a conventional stove top. For maximum efficiency, you can also wrap the pot in an oven cooking bag to minimize heat loss from the surrounding air. The drawback to this setup is that the satellite dish needs to be rotated once or twice an hour to keep it in direct sunlight. The other two oven designs mentioned do not need to be moved and will get good exposure to sunlight throughout the day.

Heating

Heating your home without power or fuel supplies is arguably one of the most important considerations you will have after a disaster. Furnaces require fuel which will be in short supply or completely non-existent. Electric heaters use huge amounts of power and are not practical unless you are generating an enormous amount of alternative energy through a combination of solar panels, wind turbines, or hydro electric systems.

One of the key things to realize about living in a world without power is that there is a significant difference between comfort and survival. In other words, it is much better to put on a sweater or use a blanket if you are cold instead of turning up the heat in the home. Regardless of what heating method you use, resources will be used so it is important to distinguish between convenience and necessity.

A wood stove designed for inside use provides heat and a way to cook food indoors. Wood is available in most areas of the country making it a nearly sustainable fuel source for warmth. If your home is not equipped with a wood stove already, you should consider purchasing one even if you choose to store it until it may be needed at a later time. Obviously this is not always possible but it would be ideal. A fireplace can also be used to heat a home but unfortunately fireplaces are one of the most inefficient heating methods available. Heat escapes through the chimney and cold air can sink down into the home especially in fireplaces that have been designed more for aesthetic value than functionality. However, a fireplace is still a viable heat source if no other options are available.

Propane heaters work very well as a supplementary heat source during the coldest parts of the year. Using the small camping propane tanks also used for cooking is an efficient way to make use of this fuel. Small heater attachments can be purchased for these tanks that can provide a small area with adequate heat. Again these types of heaters should only be used when the temperature is intolerably cold otherwise you will burn through your propane supplies very quickly. Using the filling adapter mentioned previously you can save a lot of money on propane stores by purchasing 20 pound tanks and refilling the smaller tanks as needed.

Another heating method involves the sun. Known as passive solar heating, the idea is to open all your shades during the day to allow sunlight into the home. The sunlight will warm the home naturally during the day and with proper insulation it will take some time for the heat to dissipate after the sun goes down. If your home is well insulated this technique works very well and some people use this as a primary heat source even with grid power available. The problem with passive heating is that it is fully dependent on the intensity of the sun. If it is a cloudy day you will not receive much benefit from doing this. Also, the method works best when the majority of your windows are exposed to sun throughout the day. If the windows are small, shadowed by trees, or only receive light for a couple hours per day, passive heating is not a reliable heating method.

Like everything else in a survival situation, the best solution is usually a combination of techniques dictated by the specifics of the situation. Burning wood is certainly one of the simplest methods to stay warm and has allowed humans to survive for thousands of years but wood supplies may be scarce or only accessible during certain times of the year. Powering your existing heating system is definitely possible but requires a large investment in alternative energy generation before becoming feasible. If you rely on fossil fuels for your furnace you have to consider that the supply of these fuels is surely to be interrupted at some point. Even propane heaters run out of fuel and it may be impossible to replace your propane reserves as a disaster-stricken area struggles to heal itself.

Living for long periods of time without modern conveniences may seem like a struggle. Initially, it will be difficult but over time it becomes second nature. The sooner you can begin planning for an event that could cause widespread grid failure the better off you will be. You can begin storing necessary supplies now and put yourself in a much better position when a catastrophe actually occurs. Simply by reading this guide you are more prepared than many of the people who will have absolutely no idea what to do in an emergency situation. Adopting these techniques makes living without power an achievable goal that ensures your survival no matter what happens.