



## Backup Power

As you may be aware of, FEMA has declared September as “National Preparedness Month.” This brings to focus a MARS member’s truism: “we can’t depend on the national power grid 24/7/365”, as you are all well aware.

There is almost an endless array of alternative power sources and machinery on the market and some that are still in the R&D stage. Nearly every day we can find a new gadget or system coming on line, in fact if you do a “Google” search “alternative power” you will garner over twenty three million hits! I’ve picked several of the more common backup power methods that we are familiar with and then included a couple that may well be in the future.

I think, and this is often stated, battery power is the least expensive and easiest to put together, with a fair number of “add-ons.” So that’s my first item on the list. And here are several URL’s where you can get an idea of some of the methods in use.

<http://www.marsregionone.org/Temp/Power/Alternative-Power-AFA1HS.pdf>

Floating Charge Powerpack:

<http://www.kr1st.com/powerpack.htm>

Of course, as we all know, gasoline powered generators have been a mainstay in the alternative power field, dating back to the early 1900’s. Currently there are several hundred different makes, models and output voltage/current available on the market. If you research the DRMO pages you might well find something you can use, as well. And, if used is okay, there are a number of companies that regularly sell their used generators, such as many of the telephone and utility companies.

There are a number of safety issues associated with power generators and if you have or are thinking about this method of alternative power, you must make yourself aware of these issues. First and foremost is powering up the house wiring by “back-powering,” that is plugging the output of the generator directly to the house via an electrical outlet. Bad idea. The power doesn’t stop at your house, rather it travels back to the power grid. That’s bad enough, since someone, somewhere is probably going to get hurt, then there’s the “big bang,” when commercial power is restored – directly into your generator. I don’t recommend this method. The safest way is to isolate your power through a commercial isolation power box. Next is simply to power the items you require directly from the generator, using a heavy duty (#10) extension cord and power distribution outlet strip. That brings to light that if you are operating a generator it is always best to operate it in an open area, away from doors and windows. These units produce exhaust which can be deadly, as you are no doubt aware of.

The American Red Cross has an excellent web page on power generators which covers just about every aspect of these units:

[http://www.redcross.org/services/disaster/0,1082,0\\_565\\_,00.html](http://www.redcross.org/services/disaster/0,1082,0_565_,00.html)

Here’s an excellent site that discusses generators, as well:

<http://www.hamuniverse.com/emergencygenerators.html>

Of course gasoline powered generators is no longer the least expensive way to go. You might consider natural gas or propane power as an alternative to gasoline or diesel. These units have come down in price in the recent past and are available almost everywhere. If you want to research that avenue you might consider converting your present gasoline unit to propane:

<http://theepicenter.com/tow102899.html>

Otherwise almost every outlet for gasoline powered generators now offers propane powered units, as well.

Solar and battery power:

Solar power technology has come a long way in a short time and continues to develop. There are a myriad of solar units and types out there and the price, while still not inexpensive, is not totally out of sight. As you explore solar power you will probably conclude, as I did, that this method, along with battery power, might well be the way to go.

Here are a couple of URLs that you can explore to that end. The first one is from AFA1HB, who is using solar/battery power:

<http://www.marsregionone.org/Temp/Power/AFA1HB-Solar-Power.pdf>

Here's another discussion on solar power for the ham:

<http://www.hamradio-online.com/1995/nov-dec/solar.html>

Wind Power.

This technology is probably the "greenest," well, if you discount the fact that it is visually intrusive. Until recently these units were pretty much out of reach for the regular individual but believe it or not you can purchase a 400 watt generator from a department store. Here's the on line add that "TARGET" has:

[http://www.target.com/gp/detail.html/601-9665153-5664916?ASIN=B000C1Z2VE&AFID=Froogle&LNM=B000C1Z2VE|400Watt\\_Wind\\_Generator&ci\\_src=14110944&ci\\_sku=B000C1Z2VE&ref=tgt\\_adv\\_XSG10001](http://www.target.com/gp/detail.html/601-9665153-5664916?ASIN=B000C1Z2VE&AFID=Froogle&LNM=B000C1Z2VE|400Watt_Wind_Generator&ci_src=14110944&ci_sku=B000C1Z2VE&ref=tgt_adv_XSG10001)

And while the price is a little more than the average person can afford, it's not out of sight.

Here is a real good discussion regarding Wind Power using the On Line Encyclopedia, Wikipedia:

[http://en.wikipedia.org/wiki/Wind\\_power](http://en.wikipedia.org/wiki/Wind_power)

Fuel Cells:

Now we can explore the exotic alternate power sources. NASA has been using hydrogen fuel cells since the late 1960's and that technology has been getting a lot of attention from the vehicle manufacturers in the past few years. In fact there are already a couple of production model vehicles using fuel cells; don't ask what the price is.

Here's a very good discussion of fuel cells as an energy source:

<http://www.cleanfuelcellenergy.com/>

Air Power.

Yes, that reads correctly: Air Powered alternative power source. You don't believe it? Check this out:

<http://www.youtube.com/watch?v=voU3aRzOY7o>

Or you can look at the Wikipedia encyclopedia pages on this subject. Then you can join me in asking "why haven't we seen this being used?"

[http://en.wikipedia.org/wiki/Angelo\\_Di\\_Pietro\\_%28inventor%29](http://en.wikipedia.org/wiki/Angelo_Di_Pietro_%28inventor%29)

I hope this discussion has peaked your interest in the subject of Alternative Power Sources. If you have or are using an alternative power source, please share your information with us. Drop me an email with the information and pictures, if possible.

73

Bob

AFF1W/AFA1HS