

## Mecklenburg County ARES<sup>®</sup>

### Emergency Generator

“When it comes to emergency power for the ham radio station there are two types of operation: generator and battery.

This article assumes there is no commercial power for an unknown period of time.

When that battery runs down, and it will, what is left to charge it? Enter the generator and a good charger!

The most economical way to supply power to that charger or any other electrical equipment during a power outage for your ham radio station or your home is to use a portable generator of the appropriate wattage for your needs (at least 4000 Watts for starters) and run extension cords into the shack or home to power your equipment. A safer system is to have an electrician install a power transfer switch, connected to the shack's main electrical panel. Just fire up the generator, run a single extension cord into the transfer switch and power the circuits you need through the main circuit breaker. This eliminates the risk of electrical back feed injuring utility workers repairing downed power lines.

Small portable gasoline-powered electric generators can provide power for ham radios and station equipment, computers, TVs, small kitchen appliances, lights and other comforts of civilization when you are out roughing it in the woods or in an emergency situation at home. If cell and land line phones are out, you won't be! If power lines are down, odds are the land line telephone is dead also.

Portable generators can be put to work on sites that have no electrical service, providing clean, reliable power to operate the Amateur Radio station and other desired survival equipment. Most are gasoline-powered, a few run on diesel, and some models have multi-fuel capabilities, running on gasoline, propane or natural gas. These are generally full-featured machines with engine idle control, GFCI receptacles and 120 Volt full power switch.

Emergency home (shack) standby generators can automatically restore power to your house in about 20 seconds. When the power goes out, the generator automatically starts if it is auto starting and continues to run until power is restored. You can choose a generator that delivers enough power for the entire house (including air conditioning) or go with a smaller unit and power a few selected circuits, like the ham equipment, refrigerator, sump pump, furnace fan or heat and several lights for basic survival plus your ham equipment under emergency power situations. It all depends on your budget and how well prepared you want to be.

These all-weather generators are installed outside the home and are wired through an automatic transfer switch usually sold separately to the main electrical panel. The use of an automatic transfer switch is required when generators are connected to home wiring.

Home standby systems can be fueled by natural gas, LP gas, diesel fuel or gasoline. Most Amateur Radio operators use the gasoline models. Many models can be connected to the home's

natural gas line, eliminating the need to fill fuel tanks. Standby emergency power system capacities range from about 6,000 Watts up to 40,000 Watts and more, and start automatically-even if you are not home.

Depending on the fuel supply, size of generator, and the power generated, you can run for hours, days or even weeks! Your running time all depends on the amount of fuel you have either on hand or access to. If there is a massive power outage over an entire grid due to severe storms, earthquakes, floods, etc you won't be able to get fuel from commercial sources.....their power is out too!

Plan on enough fuel to last under worst case emergency situations. ”<sup>1</sup>

<sup>1</sup><http://www.hamuniverse.com/emergencygenerators.html>

<http://www.arrl.org/emergency-alternative-power>

<http://www.eham.net/reviews/products/74>

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