Communicating Without The Power Grid

Introduction

Although this document is intended primarily for Amateur Radio (Ham) operators, it is applicable to anyone who may be operating radio equipment under emergency conditions. If the people involved in providing these services to their community are going to be effective, they must first be confident that their families are safe and secure. This topic is discussed in another document in this series called *Personal Emergency Preparedness*.

Power Failure Considerations

Often the need for emergency communications occurs concurrently with a power failure. During emergencies, radio equipment is used non-stop for hours or days at a time. This will place a severe strain on the backup power resources that we have at our disposal. The general consensus is that we can run the equipment from our vehicle battery. This is true in the short term but it is not practical for more than a few hours. Every Amateur Radio operator should review the power requirements of their station.

Simple?

It is recommended that each of us perform our own power fail exercise. Running your station on a 12 volt battery system sounds so simple that most of us feel that an exercise such as this is a waste of time. Believe me it is not! I can guarantee that it will take longer than you expected to get back on the air and that you will be find flaws in your plans when you actually perform the exercise! As radio Amateurs, when we think of such things, we think "radio" but that is not enough.

Working Conditions

If you can't see to operate the equipment and to write messages, there is little point in even being on the air. In fact, you might be more of a hindrance than good if you are trying to handle messages in the dark when someone else who is better equipped is sitting idle waiting for a chance to help.

Heating

What about your heating system? Consider what would happen in the winter when your heating system (gas, oil or electric) failed due to the power failure. Would you have to abandon your station or do you have an adequate back up heating system? What provisions have you made to heat your home if there is no power to run your furnace?

Water Supply

Do you have a supply of drinking water in storage? You will need about a gallon per person per day just for drinking (and more if you talk a lot!) All that coffee, tea and other beverages that you drink adds up to a minimum of a gallon per day. This volume does not include water used in the bathroom and for washing dishes. Think about these things and fix the discrepancies as soon as possible. Don't procrastinate. Tomorrow could be too late!

Power Failure Exercise

Let's try it tonight. After dark, turn off the main circuit breakers in your house. Don't just unplug your radio power supply. Kill all the power so that all the lights and even your soldering irons are dead! Activate your emergency lighting then put your station into operation on both HF and VHF.

If you weren't already set up for this type of operation, you'll be surprised at how long it can take to get back on the air! You may find it advantageous to do this exercise simultaneously with other amateurs in your area and discuss it on the radio as part of the exercise. The sharing of ideas during the test may prove interesting.

***Caution**: Mixing candles with a desk full of paper could dramatically add to the excitement!*

After you have been operating in this mode for at least an hour, continue the exercise by connecting any emergency battery charging equipment that you may have whether it is a power plant or a cable run to a vehicle. Is your reserve fuel supply adequate for your backup heating system, lights, and power plant? Is it stored in a locked building well away from your home and garage and out of the sun?

Related document:

Surviving A Heating And Power Failure
What Is An EOC?
An EOC Communication Room