

COLUMN FOR AUGUST 13, 2005.
HEADLINE; EMERGENCY POWER

Q; We have some concern about the power supply this summer; we have a family member who must have medical equipment operational. We are considering a generator, can you give us some information about buying and installing one of these.

A: Over the past couple of months I have received a surprising number of requests for information about private power systems, of which generators are the most common. It is no secret that our hydro system is poorly managed and this blistering hot summer has really brought this problem to the forefront.

Generators Manufacturers offer a wide variety of sizes and fuel types. Gas operated being the most popular. However, as home standby units become more common, natural gas and propane are gaining in popularity. They are hooked up directly to the fuel supply, no gas storage or handling involved. You should first establish what you want the generator to do. If it is to run some lights at a camp then an 800-watt unit will run about 8 100-watt light bulbs. One manufacturer produces an inverter generator. They are limited in wattage size but are compact, quiet, very efficient and supply a stable output for electronic devices. Our reader should probably be considering something larger, at minimum a 2500-watt unit. If it is to be wired into the home electrical panel, I suggest a minimum of 3000 watts. When you are buying a generator, pay attention to the actual operational output. Some companies advertise a 6500-Watt generator, in actual fact this is peak load, the unit will only supply 5500 watts on a constant basis.

This brings us to rating your usage. There are a number of charts available to help you determine your actual needs. You should calculate the number of household operations you want to maintain. For example, four lights, 400 watts, a frig will need about 700 watts to operate, however some will need nearly 2200 watts to start up. If your gas or oil furnace has a ¼ hp motor it will need 600 watts to run, again though it will need 1000 watts to start up. When you do your calculations, figure in for the TV, clocks, and telephone answering machine. Check the label to see how much power they use on their “standby mode” This is where estimating your needs becomes difficult as all appliances will not start up at the same time and most generators have a surge capacity or peak load as it is also called. Two companies that have excellent wattage calculator charts available on the Internet are www.onan.com and www.hondapowerequipment.com.

Once you have your total wattage calculated, start shopping around for your generator. This is an industry where you really do get what you pay for. During the ice storm a couple of our neighbours bought 5500 Watt generators for 1500.00. However by the time our power was restored both of these units had failed. One was repaired under warranty, after waiting some length of time for this to be done. The second one had their warranty refused as the manufacturer claimed it was abused. Ask the store who services their generators and how long is the warranty. One year is common, a couple of manufacturers offer two years. If you are buying a propane-fired unit I know of one manufacturer that drops their two-year warranty to one year if you buy a propane model. One of the big box stores has a local service company for gas generators, but if your buy one of their propane or natural gas models they have one service company for the entire province.

The most common sizes for a home standby system are the 5000 to 6500 Watt generators. They will allow you to run a 240 Volt installation, like a well pump for example. This would give the average home enough electricity for most furnaces, frig or freezer, the microwave, TV, video games and some lights. You can expect to pay anywhere from 2500.00 to 3500.00 for a reputable brand. During operation the generator should be located outside, they discharge carbon monoxide like any gas engine. They are also noisy so find a spot away from windows or doors. Make sure a wheel kit is installed or available, these units are heavy. Hooking up a generator is not for the amateur electrician. The supply cable should be brought in to a fixed transfer switch, either by hard wire or correctly sized weatherproof soft cable. There are two main styles, the soft cable type is generally wired to 4-8 circuits and the hard-wired style can have multiple circuits. I have seen them with a dozen circuits for example. Contact a reputable licensed electrician and discuss the alternatives for this installation. Storage of

gasoline is the next consideration. On average 5-8 hours is the generator run time for a tank of gas. If the tank holds two gallons for example and the power is out for two days you will need 10-12 gallons of fuel. Proper secure storage is important; a ventilated locked metal cabinet is worth considering.

You can spend a lot more on a generator; units with capacity to run an entire home are available. They have fully automatic transfer switches to start themselves even if you are not home. These generators usually run on diesel or propane/natural gas. I have seen these installations run close to 10,000.00 installed. You are buying a private power system, take your time and shop around, have a chat with your electrician, most of these gentlemen have some experience installing generators.

Now the answer to last week's question. What are girths? The answer was A) blocking fitted between framework for alignment. Now this week's question? What is an Air Gap? Is it A) a dead air space between layers of insulation. B) The distance between panes in a double glazed window. C) The distance from the lowest point of a tap inlet to the full fills height of a sink. The answer in next week's column.

Cam Allen L.I.W. RHI can be reached at cam.allen@sympatico.ca