

Workshop Title: Solar Power for Under \$500

Speaker(s) & their titles: Bonnie Kerr, The Green Life Farm

Executive Summary

Bonnie Kerr is a market gardener and artist in Bridgetown, NS. She believes that a root cellar is a good way to start down the road to self sufficiency- and that it can be lit using solar power!

Ten years ago she started with solar power in Hawaii, however she didn't have to deal with heating-and had much more abundant sunlight to work with! However, she still uses that original \$50 solar panel- and has a monthly power bill of just \$14, which she attributes mainly to her use of power tools.

Detailed Notes:

Bonnie began this presentation by asking each member of the audience to introduce themselves and speak to why they were interested in this topic. Whether their reasons were founded in general self sufficiency and homesteading or water pumping and power assistance for farming activities, it seemed that all kinds of people from all over are curious about inexpensive solar.

She feels that the biggest obstacle to people using PV panel technology is the marketing tactic. There is a common misconception that these systems are extremely complicated and aren't user-friendly. It is not as simple as putting a plug in the wall- but all it really takes is connecting a few components together. For this particular workshop Bonnie was demonstrating 'how to start simple with solar'. Setting up a basic photo voltaic system. 'Take back the power' by being able to do it yourself!

The biggest energy suckers in a home or on a farm are those that require heat or need cooling. This system is small, and is better suited to power lights and perhaps charge the battery of a small gizmo.

The system she demonstrated required just a few components that can be purchased from Canadian Tire or a local distributor:

- 1)A 12 volt, 15 watt battery charger PV panel, cost: \$100, which has a lifetime of 20 years
-Place outside on a well anchored stand in a south facing un-obscured location
- 2) A deep cycled 12 volt battery, \$100, lifetime=10 yrs

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Best to get one that matches the voltage of your charger. Bonnie had an Energizer, the kind used to power an electric wheel chair. These batteries are designed to be discharged regularly, but can also be damaged by being completely discharged.

3) A charge controller, the 'Fang Psum' cost \$125

This component ensures that the battery isn't overcharged. Make sure that it also monitors the power usage and has an auto shutdown so that the battery doesn't empty completely.

Bonnie gets her equipment from a distributor in Annapolis Royal, Glen Rhyno: 902-532-7192

Once these components are purchased, apparently it is as apparently as simple as connecting them with small battery cable like wires. This power source can run to LED light bulbs, about 5 per battery, which can run for up to 8 hours. Or, they can be connected to an inverter (\$35) to charge a laptop. The inverter changes the voltage of a battery- the cords must run in this sequence:
panel>controller>battery>controller>inverter.

So, there we are- a solar power system for approximately \$400!