



Weir home: 1. Wood stacked outside the front door will heat the house all winter. 2. A window in the kitchen overlooks the property. 3. A garden in the basement of the home, where some of the vegetables are grown. 4. A stone oven. 5. Solar panels charge these batteries, when powering the house.

water pump to run the water system.

Further from the house is the larger array of solar panels. The steel roof of the house was constructed to have the solar panels placed there, but the couple were advised that it would be better to have the solar panels in a location where they could be reached and cleaned off. Whenever snow or ice accumulate, Ms. Allan treks out and cleans them off. She says it would have been possible to go one step further with them, and have them set up so that they would rotate to always face the sun, but that option was not chosen.

There are 16 batteries used to collect the solar energy at the straw-bale home. An inverter is programmed to activate the generator if not enough solar power is being collected. The generator is housed in a 10-foot-by-10-foot straw-bale shed which was the practice project Mr. Weir and Ms. Allan undertook before deciding to construct their house using straw bales.

Built on the side of a south-facing hill, the house has a walk-in cement-block basement. A greenhouse is located along the south wall, and greens can be grown all winter long there. It has not frozen yet, says Ms. Allan, noting that the basement walls have five inches of insulation.

The opposite wall is painted black to absorb the heat from the sun shining through the basement's south-facing windows. Foil insulation along the ceiling of the basement benefits both the basement by reflecting heat back in, and the main area of the house, by providing insulation.

Outside, for those warm summer days, there is a bake oven overlooked by a large screened porch.

The cost of constructing the house was about the same as constructing a traditional home, says Ms. Allan.

"The materials are cheaper, but it's labour intensive," she explains.

"If you are young you can do it all yourself very cheap," says Mr. Weir.

Mr. Taylor explains that solar panels work by creating energy in the panels. The energy is funnelled by wires into the controller/regulator.

"Because the voltage of these is so much greater than 12 volts, it is necessary to convert it down," he says. "If you didn't, it would overcharge the batteries. From there, the power goes to the batteries, then to a fuse panel inside and from there the wiring goes all through the house to run the lights and plugs."

The windmill provides the same service, he says.

The home started out as a 16-foot-by-16-foot structure which Mr. Taylor extended.

There was always a wood stove, a propane fridge and a propane cook-stove, he says, noting that an electric fridge uses a lot of battery power.

Energy generated from the solar panels and the windmill are used mainly for lighting. Twelve-volt lights are placed low at locations where they are most needed, providing enough illumination to see. Lanterns provide

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