

Home-Built Wind Turbine Pays Off

"I'm truly amazed that I haven't read about this company in your magazine before," writes Alvin Troop of Quill Lake, Sask. Since putting up a Breezy 5.5 Wind Turbine a year and a half ago, he has been extremely pleased with its performance - and the 25 to 35 percent reduction on his electric bill.

"I was exploring on the internet trying to get into wind turbines for four or five years," Troop says. "I'm getting up in years, and I wanted something that pays back quickly. I couldn't see spending \$30,000 to \$50,000. Then I found www.prairieturbines.com, which features a home-built turbine that costs less than \$4,000."

Timothy McCall and Alan Plunkett of Derby, Kansas, designed the 5,500-watt turbine that doesn't require batteries or an inverter. They sell a book and kits so anyone who's handy with tools can build their own.

"I made my own 73-ft. tower using pipes off an old Doepker harrow drawbar," Troop says. He added a gin pole and cable block and tackle for lowering and raising the turbine for maintenance - greasing it about every six months.

Prairie Turbines sells a how-to book (\$45) and a micro-controller (\$255) that ties the turbine to the power grid. Troop purchased the items and spent 80 to 100 hours of his spare time building the tower and turbine. The book explains how to cut blades out of 2 by 12 boards but Troop says he made the mistake of using one with a knot in it.

"The knot caused the blade to break. Then the turbine came out of balance and caused the breakage of two more blades before the whole thing shut down," Troop says. "So the lesson is: Don't put up blades with large knots in them."

Troop spent about \$7,000 for his turbine, but figures that if he had scrounged a little more he could have built it for \$4,500. Part of the higher cost was because he hired an electrician to do the wiring - which he really could have done himself, he says. The local power company tied the system into the grid for no charge and was great to work with.

"Every farm should have a turbine," Troop says. "We have three houses on our farm, a machine shop, cattle watering bowl and large water reverse osmosis system, so I need 100



Alvin Troop put up this 5,500-watt wind turbine, called the Breezy 5.5, on a homemade 73-ft. tower.



Wind turbine doesn't require batteries or an inverter. "They sell a book and kits so anyone who's handy can build their own," says Troop.

kWh a day. I'm averaging 25 to 35 kWh a day. I'm very, very happy with it. I'm thinking about adding a second one - a 10k unit."

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Rubberized Concrete Cuts Heat Loss, Noise

Car tire chips embedded in concrete boosts its insulation value and deadens noise as well.

Rubbercrete from Walltransform Ltd. uses rubber from car tires to replace sand or gravel. The novel mix boosts thermal efficiency by 83 percent over ordinary concrete and sound insulation by 66 percent.

"I saw the product at a local energy show," reports British FARM SHOW reader Andrew Sewell, who scouted out the product. "About 70 percent of the content is rubber crumb. They also have a special mix with 30 percent rubber that dries quickly enough to walk on in three hours."

Sewell reports that the main use of Rubbercrete is as flooring, but it can also be used as wall plaster. He says the product uses a special polymerized Portland cement. Independent testing has shown as little as 1/2 in. of Rubbercrete plaster on both sides of a wall provides significant sound reduction.

"I spoke with Glen Melvin, the managing director, and he said they use a neat process to get the rubber out of the tires," adds Sewell. "They freeze them in nitrogen to get them brittle, so they chip easily."

Melvin developed the product to utilize tire waste while reducing noise pollution. The



Bits of rubber from car tires, as seen on this block, boost concrete's insulation value and also deaden noise.

initial goal was to use it for home or apartment renovation as well as new construction. The product has been approved by the British Builder's Association, giving it international use approval.

"Melvin said he's interested in finding companies that would license his process and market the product in North America," Sewell told FARM SHOW.

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Mojave heater measures just 12 in. long, 9 in. deep, and 5 in. high. It plumbs into your vehicle's cooling system.



Small Heater "Installs Anywhere"

"It's small enough to mount under the dash of any vehicle or sometimes even under the seat, yet it puts out a surprising amount of heat. And it's priced right," says David Heutmaker, Flex-a-lite Consolidated, Fife, Wash., about the company's Mojave heater.

The Mojave heater measures 12 in. long, 9 in. deep, and 5 in. high and gets its heat from the fluid in your vehicle's cooling system. The unit's 3-speed blower draws 8 amps and moves 130 cfm through adjustable louvers. A 3-way switch and the wiring necessary to complete the installation is included.

"The Mojave's compact size and ease of installation make it a great replacement unit," says Heutmaker. "It works equally well as a replacement heater or as an auxiliary unit. You can mount the heater horizontally or vertically, or at any angle so it can fit into a lot of different locations. The double squir-

rel cage blower motor is quiet but blows a lot of air.

"It has been used in everything from jeeps to tractors to small airplanes and boats. It puts out 12,000 btu's which is about 3/4 of what's produced by a standard auto heater, so for its size it's a pretty potent little heater."

The heater can be fitted with an optional defroster plenum that snaps onto the front. A side opening in the defroster plenum provides a connection point for a defroster tube, which can be connected to the vehicle's existing defroster ducts.

The heater retails for \$160 plus S&H. The plenum retails for less than \$40 plus S&H.

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Interchangeable barrels allow this derringer-type handgun to shoot anything from a .410 shotgun shell to a full-size 45-caliber bullet.

"Big Blast" Handgun Shoots Shotgun Shells

"It's a hoot to shoot," says Gordon Bond, Bond Arms, about the company's premiere product, the Snake Slayer. With its 3 1/2-in. long barrel, the derringer type handgun shoots a .410 shotgun shell as well as an old-style, full size 45-caliber bullet. While many Bond Arms customers buy the small handgun for sport, others get it for serious business.

"Some of the people who carry it are out in the wilderness, working on pipelines or electric lines and use it for protection against snakes," says Bond. "They can't carry a shotgun and might miss with a rifle or handgun. One customer said he hit two Mojave rattlesnakes with one shot. They're a very aggressive snake, like the cottonmouth."

Others buy the Snake Slayer or one of five alternate models for a conceal-and-carry weapon where legal. With 14 twin chamber barrels with lengths of 3 1/2 or 4 1/4 in. to choose from as well as multiple grips, you can pretty much design your own. Barrels include the three most popular .45/.410, .357/.38 and the .22 long rifle, as well as a .357 Max, .45 ACP, .45 Colt, .45 Glock Auto, 44-40 Winchester, .40 S&W, 10 mm, 9 mm Lugar and the 32 H&R Mag.

Barrels can quickly be swapped with the aid of an L-wrench. The handguns feature an automatic extractor, a rebounding hammer on most barrels, retracting fire pins, crossbolt safety, spring loaded cammed locking lever, and stainless steel/satin poly finish.

The little guns are surprisingly accurate, with a range of 15 yards; however, the better the marksman, the greater the range. One nationally ranked skeet shooter uses a Bond Arms derringer with the .410 barrel. The handgun is also used in sharpshooter competitions.

"It's a substantial weapon made from solid stainless steel," says Bond. "If you've never picked one up, you'll be surprised when you do."

Suggested retail prices for Bond derringers range from \$389 to \$599 for the top of the line Ranger model, complete with custom leather holster and black padded carry bag.

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