

## Renewable energy saves on long-term utility bills *Homeowners pay more up front, but systems eventually reduce expenses*

**Hope Neilson**  
**Journal Staff Writer**

Using solar and clean-burning renewable energy is not just about saving money from shrinking electric or propane bills. It's also about cutting overall energy consumption - both the clients and owner of the Dolores-based Bishop Brothers Climate Control agree.

"We are trying to encourage Montezuma County to be a part of the solution to the global problem," said owner Ron Bishop, who installed four outdoor wood-furnace systems since he opened his doors last fall - some with "solar systems" attached to their roofs.

But these aren't run-of-the-mill wood-burning stoves.

"(The Central Broiler) is one of two units in the world rated by the Environmental Protection Agency as a clean-burning fuel service," Bishop said. "They meet the (EPA) 2010 clean air regulations and burn up to 70 percent less wood because of the way it is designed. It gasifies all the pollutants."



**a holding tank that uses wood to heat 400 gallons of water as part of a system that provides heat and hot water to Pierce's home on Friday afternoon in Arriola.**

The systems give their owners independence from propane and electric companies, Bishop said. They also pay for themselves in a few years while reducing the energy load, which is his company's ultimate goal.

"It takes so much energy for lighting and smaller loads like heating your house and water," he said. "When you look at the big picture, we need to reduce our electrical usage with renewable energy such as wood or solar."

Bishop entered the renewable business 21 years ago. He decided to base his fourth and newest company in Dolores and splits his time between his homes in Dolores and Nevada.

Bishop's Nevada projects included a 250,000-square-foot Las Vegas-area Nevada Power company building. He reduced the energy output 20 percent by installing an automated control system. A proposed solar system is budgeted for the building next year.

One of his local customers, Brad Pierce of Arriola, also has cut costs.

Pierce said he hasn't bought any propane since he installed the furnace last fall and is in the process of adding a solar thermal unit.

"The thing I like about it is when you're hooked up to propane or natural gas, you're paying what they tell



**Ron Bishop of Bishop Brothers Climate Control puts a wet finger to the hot tip of a solar collector on Friday afternoon at Brad Pierce's house in Arriola. Bishop estimated the collector reached a temperature of 200 degrees after being set outside in the sunshine for 15 minutes.**

you to pay, whether it's \$1.25 a gallon or \$3.25 a gallon. Between my house, garage and shop, I heat 4,800 square feet with no propane," he said.

Pierce likes not having to split wood, which he gathers from his 21 acres, tossing tree stumps and logs up to 6 feet long into the furnace.

Bishop said the highly efficient wood furnaces emit as much carbon as wood rotting on the ground and can burn wood killed by insects such as pine beetles.

"We need to do something with that wood anyway," he said.

Pierce said he uses two wheelbarrows of wood per day - one in the morning and one at night.

The furnace temperature is maintained at about 185 degrees with propane used only to back up the integrated system.

Pierce decided to install a solar system to heat his house and hot water instead of burning wood in the spring, summer and fall.

He estimated the \$12,000 he put into the system will pay for itself in would-be heating bills within three years.

For homes, Bishop said prices range anywhere from \$5,000 to \$12,000; however, adding the solar element can produce up to 30 percent in tax credits.

The city of Cortez, in conjunction with Empire Electric, is offering a Solar Rebate Program for city and rural county residents who choose to go solar.

With the help of the Colorado Governor's Energy Office and the Colorado Solar Energy Industries Association, \$40,000 is available for the installation of solar-domestic hot water within their home or business, according to the city's grants administrator, Chris Burkett.

So far, Burkett has four applications pending and has talked to a dozen people about the program.

As the EPA-sanctioned Energy Star service and product provider, Bishop is equipped to rate the energy efficiency of any building using the guidelines set and approved by the EPA.

Bishop owns the Nevada-based National Technical Institute, a postsecondary educational institution that provided certification to 300 students in facilities (engineering) and air conditioning and refrigeration last year. Renewable energy training is set for this fall.

Bishop Brothers Climate Control will have solar collectors and two central boilers at the 2009 Four Corners Agriculture Exposition at the Montezuma County Fairgrounds on March 19-22.

For more information, call Bishop at 882-8859 or Burkett at 564-4094.

Reach Hope Neilson at [hopen@cortezjournal.com](mailto:hopen@cortezjournal.com).

