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Solar power pumps it up

By David Minton

Article Last Updated: 07/21/2008 10:20:55 AM PDT

For The Daily Journal

Kate Collins and Hardy Kuenzl live "off the grid" up near Laytonville.

That means their sole source of power is the sun.

Well, let's qualify that: The sun has to have the help of a photovoltaic system that converts its photons to electricity - panels that collect the sunlight, batteries that store the electrical energy, inverters that convert DC electricity to AC electricity and other equipment that makes the energy storable and usable.

But, according to Collins, "The difference between living off-grid and on-grid is huge. Living off-grid is life-changing.

"You become very much in touch with how much power you are using, and it allows you to see how much power can be wasted when you live on-grid" - connected to utilities companies.

Collins and Kuenzl own Gaia Energy Systems, based in Willits.

Gaia Energy Systems is a mission as much as a business for them. Talking with Collins, one gets the definite sense that solar power is as much about conservation of natural resources as about saving money on power bills.

"Going solar is about more than just placing photovoltaic panels on your home or business," she says. "It is about changing your attitude toward

energy consumption and the future of your world."

She goes on to say, "We do not believe you have to give up your current way of life to accomplish this."

The two have a very large sun-powered system that fuels not only their home but also Kuenzl's workshop, a hot tub and other downtown conveniences.

A brochure distributed by the company explains that the Gaia in Gaia Energy Systems was, in Greek mythology, Mother Earth. A sample of the text reads: "We believe deeply that if we work in harmony with the planet on which we live rather than at odds with it, we will all live healthier and more fruitful lives."

The subtext is this: The usual way of creating electricity and making it available to the masses involves a lot of destruction to the Earth - destruction that is, in some cases, irreversible. Solar energy is renewable and virtually inexhaustible. And cheaper.

While "going solar" is sometimes the only alternative for people living in remote areas - who need it to light their homes, to pump water for various purposes including filling domestic wells, irrigating crops, watering livestock and filling stock tanks - it can also help you conserve energy and cut down your utilities bills if you tie it into "the grid" (public utilities works like PG&E).

Collins will come to your home or business and tell you how you can conserve energy; then she will help you choose the sun-system that will help you conserve even more.

She looks around her own office and performs a mock evaluation: "If this were a client's business, the first step would be to look around and see that the lighting is OK, the air conditioner is ancient and

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needs to be replaced. I would ask if the power strips are turned off at night. Things like that."

She will then draw up the initial contract, get any necessary building permits, and generally "weed the way through the bureaucracies that often encumber renewable energy installations.

"I halved one customer's usage from 14,000 KWH to 7,000 with solar," she says proudly.

Collins knows what she's doing. After all, she's armed with a degree from U.C. Berkeley in environmental education (actually a double-major, the other being art history). Finding no jobs in environmental education, she decided to put her knowledge to work in the real world and partnered with Kuenzl five years ago.

Kuenzl is the hands-on man who oversees the design and installation of all the systems Collins and her staff sell. He started Gaia in 1994 and is a certified electrical contractor. He now has a staff of experienced installers and never uses subcontractors.

Collins notes that lots of people are still unsure about the benefits of solar energy or about how it can benefit them as well as the environment. "The main thing most customers want to know is how much money they're going to save," she says. "That depends on how much solar you want."

She notes that one misconception about solar-powered systems is that "people think it's green technology" - that is, totally ecologically clean. "The fact is, the energy is stored in batteries in off-grid systems so it can be used when needed. They're like big car batteries, they're corrosive and they contain toxic chemicals." But, she says, this is not as bad as what huge utilities companies do to the planet at large when they produce energy and fossil fuels.

She adds that "more systems are on-grid than off-grid overall, so the percentage of battery-based systems is small."

Collins notes also that sunshine is, obviously, essential. "These systems will work in low light, but they will not work in no light. Here in Mendocino County, where we get a lot of sun, that's not a real problem." But if you live way out in the boonies, you will need a supplemental back-up generator.

"The smoke is definitely affecting systems here," she said two weeks ago when there were over a hundred fires burning in Mendocino County. "It was like wintertime in Mendocino County. We'd hear our generator run maybe once a week for a few hours."

But there are ways even around this. "You can build a hybrid system, combining solar and wind, solar and hydro. Then you'll never hear your generator. You'll be completely independent."

[sidebar]

Gaia Energy Systems

Where: 107 N. Main Street, Willits

Phone: (707) 456-0881 or (877) 424-2776

Owners: Hardy Kuenzl and Kate Collins

Quote: "We engineer our jobs to be functional, cost effective and aesthetically pleasing to complement each client's lifestyle."

To find out more about Gaia Energy Systems, call 456-0881 visit them at 107 N. Main St. in Willits.

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