

Camano Island man rids himself of power bills

By Tim Nelson

CAMANO ISLAND – When Richard Clise decided to put his roof to good use by installing solar photovoltaic panels, he called me at Fire Mountain Solar. I designed a system to meet most of his power needs year-round. After doing a survey of the site and an analysis of Richard's electricity consumption, I designed a system that includes 40 200-watt Sanyo HIP-200BA3 solar panels. These panels feed two SMA America Sunny Boy 3800U inverters, which convert the solar power into 240-volt household power. The system generates 8,000 watts of solar power.

The system installation was done by Guy Knoblich, owner of Banner Electric Inc. in Mount Vernon. The installation took five days. Banner was founded in 1999, and Guy had always been interested in solar electricity. His first venture into the solar world came with this opportunity to help a concerned citizen who wanted to be more self-sufficient through a joint venture with Fire Mountain Solar.

The final results were exciting. When the solar was first turned on, the PUD's meter began spinning backward, despite the partly cloudy sky. At that point, Richard was using solar in his home and had extra to put back into the utility grid for credit. He had become his own power company.



Richard asked me why solar panels are not up on everyone's roof. I said that it is all about education. Most people think that solar electric does not work in this part of the state because of our cloudy weather, but in reality we get only one less average solar-hour gain than Los Angeles. And while the quality and efficiency of solar panels has come a long way since the 1970s, cost is a factor, too. In the '70s, the cost of installed solar was over \$20 per watt. Now the cost is just over \$7 a watt installed. And the equipment has a great warranty.

Solar cells operate on the principle that electricity will flow between two different semiconductors when they are put in contact with each other and exposed to light. By linking a number of these cells together, a useful flow of electricity can be generated. Such a collection of these PV cells constitutes a PV module.

Each day more energy falls to the earth from the sun's rays than the total amount of energy the planet's 6.6 billion inhabitants would consume in 27 years. This power is substantial. Just think about it: We could be free from all of the world's polluting electrical-generating fossil fuel and nuclear plants if we used our heads and created more solar and wind plants.

The cost goes down even further with a \$2,000 tax credit from the federal government, and our new state incentive program is great. Not only do you get back a minimum of 15 cents per kilowatt-hour produced, but there is no sales tax on solar equipment or installation over 200 watts. So you get 15 cents back from the state, plus 8 cents average per kwh saved from not using the PUD's power. And if you sign up for the Green Tag program, you'll get another 5 cents per kwh produced. So the potential is to receive 28 cents per kwh while the equipment is producing power. That's a substantial incentive. ☀

Tim Nelson operates Fire Mountain Solar. He has lived off grid on solar power for more than eight years. He can be reached at 360-422-5610.