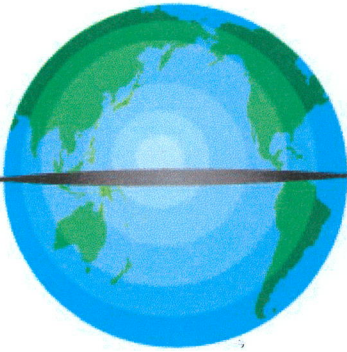


N13°



# PACIFIC SOLAR & PHOTOVOLTAICS

*a Division of Hagens Inc.*

## A Green Investment

**Solar Net Metering Saves Money and the Environment**

by Christine Restuvog

As advances in energy-efficient technology progress, the ability to use Guam's heat-bearing, bright sunlight for solar energy is now a reality. Pacific Solar and Photovoltaics, a division of Hagens Inc., has made available Guam's first net metering system to the public on Feb. 25. The U.S. Department of Energy's Energy Efficiency and Renewable Energy Web site defines net metering as an electric policy for consumers who own (generally small) renewable energy facilities such as wind or solar power or home fuel cells. It is generally a consumer-based renewable energy incentive. Pacific Solar and Photovoltaics is licensed to install solar panels onto Guam homes, which then become connected to Guam Power Authority's (GPA) grid. Any excess energy that the home does not utilize goes back to GPA and is taken off the home's power bill.

Scott Hagen, son of Pacific Solar and Photovoltaics owners Terry and Bill Hagen, is the first homeowner in Guam to have the net metering system installed. Scott's home in Barrigada Heights has a 48-panel solar array installed on the roof, which is rated as an 8 KV system. Under ideal sun conditions, the system should create 8 KV of direct current, which is equivalent to 8 kilowatts of power each hour.

The power produced by the solar array is "direct current," or DC, while the power produced by GPA and used by the home is "alternating current," or AC. During the process of converting the DC to AC, there is a certain amount of inefficiency, which is given off as heat, and the solar panels on the roof are also subject to temperature.

However, there are no moving parts, no fuel is consumed and there is no pollution given off. These benefits from the net metering system may well be the future of Guam's energy usage and act as a tool for all Guam homes to be environmentally conscious. Not only will residents be able to profit from generating their home's power, solar water heating panels are also available that produce an excess of hot water.

The cost of the solar arrays is \$7.75 per watt, which includes the cost of engineering and permitting processes. According to Pacific Solar and Photovoltaics, Scott will save \$340 per month on his household's electricity bill. Scott was not able to disclose an exact

amount because it varies for each home. He also wanted to avoid giving "sticker shock" for perspective net metering system owners. "This is an investment for homeowners and does not give you a quick return. This system is for homeowners who are not only looking to save money, but who are also looking to save the earth and go green," he said. Art Perez, GPA spokesman, agrees, "I think it is a great program, it is perfect for residents who can make the investment to use alternative energy."

Pacific Solar and Photovoltaics has worked with GPA and the Department of Public Works on the net metering system's installation permit, inspection and approval. The press release also states that electrical engineers in Guam worked on the final design calculations to ensure compliance with local conditions in terms of typhoon and other natural disasters durableness.

In addition to the savings on one's power bill by installing a net metering system is a Residential Renewable Energy Tax Credit. This tax credit is available for all systems installed after Jan. 1, 2009. If the



tax credit is not taken advantage of in the first year, it may be carried forward to the next year. Guam's Department of Revenue and Taxation has also confirmed this tax credit for homeowners in the island.

The net metering system is able to use power from GPA when skies are cloudy or it is night. This new energy-efficient capability for Guam's households makes Guam one step closer to lessening its reliance on fuel for electricity.

### For more information:

- Pacific Solar & Photovoltaics: 632-4002
- Tax credit information: Database of State Incentives for Renewables & Efficiency — [www.dsireusa.org](http://www.dsireusa.org)
- Solar Energy International, the leading educator in solar photovoltaics in the U.S.: [www.solarenergy.org](http://www.solarenergy.org)
- SunEarth, a pioneer of solar power in Hawaii: [www.sunearthinc.com](http://www.sunearthinc.com)