

DANKOFF SUNPAPER

January 2004

A Service to our Distributor and Dealer Network

Paul's Update

A new year and new excitement in the renewable energy industry. Happy New Year to all of you. As you face the challenges and triumphs in 2004, all of us wish you every joy and success in this new year.

There's no doubt that 2004 will provide ample opportunity for success and challenges. Rebates are changing. Some states are expanding their rebate program while others, facing budget challenges, are reinventing theirs in.

Commercial energy users are seeing the value of renewable energy like never before. We see some incredible opportunities for our dealers to pursue this business and broaden their customer base. We at Dankoff are committed to helping you to bring these projects into your shop.

The manufacturing and distribution processes for BP Solar modules have become more streamlined. For our customers, this means new pricing that is trending downward. This truly represents a win-win situation. You and your customers win with lower prices that bring money

toward your bottom line and makes product more affordable for end users.

On another note, a new year reminds me of how Dankoff Solar was started. In 1983 Windy Dankoff pioneered technology to introduce a solar powered water pump. Our pump business has grown steadily over the years. In response to this growing market we have created a new position, that of National Pump Salesperson who will service our welldriller and pump dealer friends. In addition, this position will introduce the SuncentricP, our new solar powered pool pump. This product is perfect for our on-grid customers where energy costs are expensive. Please help us welcome Buddy Fritz to this interesting new position.

And finally, I'd like to thank all of you for helping make 2003 a great year.

Paul Benson, President

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Dankoff Solar Acquires BP Solar BOS Inventory

Dankoff Solar Products proudly announces its acquisition of the BP Solar BOS inventory.

"We saw an incredible opportunity, to serve our customers that we just couldn't pass up," commented Dankoff president Paul Benson. "The needs of our customers are our number one priority. When we saw this opportunity,

"...we felt it was our responsibility, as a reliable source of BOS products, to make this acquisition."

we felt it was our responsibility, as a reliable source of BOS products, to make this acquisition," Paul added.

The BOS segment has been one of the largest segments of Dankoff's overall product mix. This acquisition greatly expands the ability to meet the needs of the marketplace. Without the acquisition, many felt there would have been a void in the supply process.

Paul went on to say, "Our customers have come to rely on us for their BOS needs and it is our mission to deliver satisfaction. We're also hoping dealers, who can no longer purchase BOS products from BP, will turn to us as a reliable source. We welcome their business as we strive to fill the supply void.

Dankoff Solar has expanded their warehouse again to accommodate and maintain inventory for the BOS needs of new and existing customers.

Dankoff Solar Shop is now ETL listed

We have received our ETL Listing and as a result can now assemble Power Panels. Call us today for a price quote on this marketable product.



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Solar Saves Home from Wildfires in San Diego

When Roger Smith built his home in San Diego County he installed a grid-tied backup PV system with 2 stacked Xantrex Inverters and a battery bank. This supplied power for the house, and well and booster pumps feeding a water storage tank and a sprinkler system surrounding the house.

Roger and his wife lived on the property enjoying minimal utility bills, not expecting that one day the PV system would pay for itself by saving their property and his wife's life.

When the San Diego wildfires broke out on Saturday, Nov. 1, 2003 they spread 40 miles in the first 20 hours catching many residents in the direct path by surprise with little or no time to evacuate. The fire took out the power poles interrupting utility power for thousands of San Diego residents – including the Smiths.

With Roger away at the time, Mrs. Smith found their road blocked by the fire which she knew had already burned a couple to death in their car. She returned home

feeling that her chances of surviving with the firebreaks and the sprinkler system were at least as good as trying to run through the fire in a car (Mrs. Smith is partially disabled.). The well pump and booster pump running off the inverter/battery worked her sprinklers normally, watering her perimeter which consisted of moist iceplant and no dry tall vegetation.

Fortunately, the pumps ran long enough so that the only substantial damage to the property was to vehicles outside the protected perimeter. The only other surviving home also had a PV system.

Roger attributes his system with saving his property and his wife. He is obviously someone who plans and executes projects carefully. While he could not have anticipated the fire that left more than 1000 people homeless, he was prepared. Having now had so vivid a demonstration of the importance of energy self-sufficiency, he is today adding a backup generator.

–Martin P. Learn
Home Energy Systems,

Sunny Boy for 3-phase systems: It's your choice

Tech Tip

For Sunny Boy PV systems that require 3-phase power, you have several options in your choice of inverter. Here are some notes that will help in the decision-making process.

Since the Sunny Boy family of inverters are built to be rugged, reliable, and flexible, they can be used for both residential single phase and commercial 3-phase applications. If you have a 3-phase project, there is a Sunny Boy inverter to meet your needs. The Sunny Boy 2500U can be used in a 240Vac or 208Vac 3 phase configuration, depending on the requirements of the site. If you have a 3 phase delta, with 240Vac line to line across all 3 phases, the standard 2500U can be used out of the box without making any changes to the inverter. Be sure to read the 3 phase design and installation technical note on the SMA web-site. If the system is a 208Vac Wye, you must order the Sunny Boy 2500U configured for 208Vac operation. Because of the internal voltage parameter changes that were made to the Sunny Boy 2500U for operating at 208Vac, the recommended power input and output levels will change – the String Sizing program on the SMA web-site will guide you in selecting array size. The output of the 2500U when operating at 208Vac is limited to about 2100W. Measure the site voltage to ensure that you order the correct inverter.

The Sunny Boy 1800U and 700U, which both have an output of 120Vac, can also be used out of the box for 3 phase systems -- both 240Vac and 208Vac. Simply connect the inverters in a balanced line to neutral fashion. Once again, be sure to measure and verify line to neutral voltage for each phase at the site before sizing or ordering inverters. The Sunny Boy 1100U, with an output of 240Vac, can only be used in systems that have 240Vac.

For large commercial 3 phase applications, you may want to consider the 125kW Sunny Central inverter, which recently received its UL listing.

So, in some cases, it may be a better choice to use the Sunny Boy1800 for 3-phase systems, rather than re-configure a standard 2500U for 3-phase. Since one is not taking full advantage of the capacity of the Sunny Boy 2500 when it operates on 208Vac, it may be more cost effective to use Sunny Boy 1800 inverters on a 3-phase system. When you are deciding whether to use the 1800U or the 2500U, make sure to select Sunny Boy 2500U (208) from the String Sizing drop-down menu on the SMA web-site.

The Xantrex SW Plus 2.5kW inverter is currently available from Dankoff. Xantrex expects to release the 4.0kW and 5.5kW models of the SW Plus in the 1st quarter of 2004. The SW Plus is not able to sell power back to the grid, but Xantrex projects that it will by the end of June 2004, using the GTI. The SW Plus contains numerous changes and improvements over the standard SW line. Following is a summary of the changes outlined by Xantrex; more information is available at: www.xantrex.com.

The SW Plus is equipped with non-volatile memory, so the programmed settings are saved even if power is disconnected from the inverter. The inverters are also FCC Class B Compliant. The AC wiring has been made easier with a larger wiring compartment that is accessed from the front of the inverter. A battery temperature sensor is included standard with every inverter and is connected at the DC end of the inverter for easier cable routing. All vent holes are now screened for improved reliability. The thermal performance of the inverter has been improved, providing for full power output at 40C ambient temperature (rather than the standard 25C testing conditions). The surge capacity of each model of the SW Plus series inverter has been greatly improved: As an example, you can achieve 80A RMS for 5 seconds with 2.5kW SW Plus unit.

–Lance Kirmeyer

New Face at Dankoff

Buddy Fritz has recently joined Dankoff Solar to serve the needs of our pump and pool pump dealers nationwide. A native of Denver, Buddy has extensive experience helping industrial customers and has proved to be a quick study with regard to pumps. Buddy has a can-do attitude and is customer oriented. Join us in welcoming Buddy Fritz to the Dankoff Solar family.



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