



Hybrid Solar Generators

Mobil offices, Remote Homes, Farms, Eco-Tourism, Disaster Relief



1800 pW, PV Array on Full Size Shelter



1,200-watt system

1,800-watt system provides up to 11KW of continuous power and 2-3 time that for surge, at 120/240 VAC, 50/60 Hz, and/or DC power, 24/7 with the least amount of maintenance and fuel over other systems and technologies.

Simple Operation

The system derives most of its energy through the solar Photovoltaic (PV) array. The PV array supplies DC power to an inverter during the day and at the same time charges a bank of batteries. The inverter converts the DC power into AC at 120/240 Volts as required to operate appliances, tools, office equipment and more. At night time the batteries supply power to the inverter thereby providing reliable power 24 hours a day. A back-up generator is built in to the equipment shelter to charge the batteries during heavy energy usage or periods of cloudy weather.

Completely engineered as a system

A solar electric system has many factors that should be incorporated into the final product. An engineered system design maximizes reliability and efficiency along with lowering maintenance requirements.

Can be shipped and installed anywhere in the world

The Complete Solar Electric Hybrid System can be shipped either assembled or on pallets ready for assembly. The enclosure is constructed of a 2" x 2" steel frame tubing and steel C channel, and sheet metal bonded o plywood. The base frame is welded 4" C channel for unitized strength. The entire base is then hot dipped galvanized to protect the welds and metal from corrosion. For the flooring we fasten 14 gauge galvanized sheet metal to the top of the base. The roof section is constructed of welded 2" x 2" steel square tube. The roof and base section are joined by 2" x 2" square tube columns. Painted galvanized sheet metal is bonded to plywood and these structures form the walls and secure the base, roof, and columns. The PV array supports are also constructed of hot dipped galvanized 2" x 2" steel square tube.

SYSTEM FEATURES

Temperature regulation for longer component life

A combination of passive and forced ventilation keeps the inverter, batteries, and generator running cool. For each 10 degrees over room temperature the life of the batteries is decrease by one half. In addition hot enclosures decrease inverter capacity and reliability along with increasing the generator's oil maintenance requirement. With conventional shelters, even in cool weather, the heat from equipment operation can raise the shelter temperatures to unacceptable limits.

Simple and concise wiring meets National Electric Codes

Wiring on a production bases (as opposed to custom installations wired in the field) provides better documentation, cleaner wire runs, and greater immunity to lightning surges. Wires are numbered on each end for easier troubleshooting, optimum wire gages are used with the correct circuit breaker capacities. The wire used is the very best very long life insulation materials. Humidity, temperature, battery acid, engine oils and fuels can break down many of the lower cost wire insulation materials. Detailed wiring schematics are provided.

Adjustable tilt on the PV array structure

Simple to adjust array tilt maximizes solar energy output season to season.

Easily transported to site

The systems can ship completely knocked down (*knocked down shelter adds slightly to the cost*) or completely assembled. This facilitates remote installation via smaller helicopter or truck. The PV array mounted on the shelter will fold down small enough to allow a completely assembled system to be trailed and dropped off on site with out road permits. Unlike other shelters, the very rugged frame design allows transportation without twisting or warping of the structure.

Spacious interior

The more difficult the maintenance tasks the less likely they will be performed. With this in mind, the shelter is designed for convenient access to all components. The shelter has 80 inches of interior height so you are not working on your knees. There is plenty of floor space so you can have your tools right next to you and you can service the parts inside the shelter out of bad weather or bright sun. 8' L x 4' W x 6' H

Applications:

- Construction site power
- Power for mobile office space
- Disaster relief
- Remote resorts, homes and farms
- Temporary power for fairs and special promotional events
- Remote research stations
- Uninterruptible Power Systems

Options

- Direct drive heat pump
- Exhaust heat recovery
- 2,400, 1,800, 1,200 and 600 watt solar arrays
- Custom design to meet customer requirements

