

# 1 solar power systems don't come off the rack

Rural populations are familiar with most products for everyday use, such as ploughs, cookware, and radios. They do not require explanation, since their benefits and drawbacks are obvious.

Solar power systems are another story. Only a very few have actual experience with the technique, whether firsthand or indirect, and have no idea how a photovoltaic facility functions, what sort of maintenance it requires, and what its limitations are.

From the customer's point of view, the salient features of a solar power system are as follows.

- Photovoltaic facilities supply clean and reliable electricity for lighting, and thus replace smoke-producing kerosene lamps. This means in turn a radical change in the customer's everyday life.
- Customers must initially be taught the benefits and uses of this new technology.
- A solar power facility is a long-term investment. Although it is expensive to procure, its maintenance costs are low, and it can last as long as 30 years. On the other hand, a solar power system requires regular maintenance if it is to function properly throughout its lifespan.
- Since customers typically have very little experience with solar power systems, they require particular care during and beyond the installation period.

- Customer service must also comprise special user training, including basic maintenance of the facility and a chance to practice the necessary activities.
- As a rule, customers do not know exactly how much electrical power they need, which is why solar power technicians must calculate and record this requirement before begin to size and install a facility.
- Because replacement parts for a solar power system (such as batteries, lamps, modules, and converters) are not for sale in all hardware stores, the operation of a facility requires specialized replacement-part management.

Solar power technicians must be aware of these features so as to ensure that

- they install the appropriate facility;
- the customer is satisfied over the long term;
- they can count on a solid and growing customer base.

## 2 common errors

### **improper sizing of system**

possible reasons:

- insufficient care taken when calculating loads to be connected
- faulty calculation by solar power technician
- worst-case scenario not taken into account for rainy season

The most common errors made by those implementing solar power projects and installing solar power systems in Africa.

### **lack of maintenance**

possible reasons:

- no one shown how to care for and maintain a solar power system, or indeed told that care and maintenance are necessary at all
- no one made responsible for the system's technical operation

### **use of low-quality products**

possible reasons:

- cost-saving measure
- solar power technician interested in short-term profit
- ignorance

### **faulty or minimal briefing of users by solar power technician**

- result: faulty or improper use causes more rapid wear and tear or defects
- This in turn leads to customer dissatisfaction and negative publicity for solar energy and the solar power technician in question.

### **no after-sale service**

possible reasons:

- solar-power technician only interested in short-term profit
- lack of customer awareness

### 3 what can be done?



**The three top criteria for lasting success with solar technology are**

- customer awareness
- quality
- after-sale service

Learn from past mistakes!

When selling a solar power system, therefore, a technician must pay attention to the following:

**customer awareness**

- Listen to customers and try to understand their needs or unspoken desires.
- Clearly explain to customers the benefits and drawbacks of a solar power system.
- Indicate to customers the conditions necessary for a solar power system to function properly.
- Inform customers of guarantee, service and maintenance features.
- Provide customers with some form of security. It is advisable to sign a contract with each customer setting out which solar power system he or she has purchased, its price and any conditions. If an existing template is used for such an agreement, the solar power technician should review it to make certain it contains all key information.

**quality: perform technically correct and professional work**

- In addition to all loads to be connected to the system, appropriate sizing also takes into account the worst-case scenario, involving reduced sunlight during the rainy season.
- When choosing components, go for quality. This is the only way to ensure a system's longevity, and thus customer satisfaction.
- Inform customers about energy-saving devices (such as radios, TVs, and refrigerators), which use less power and are thus more cost-effective.
- Ensure professional installation of the system in your customer's residence.
- Show customers how to use their solar power system and explain servicing he or she can do without aid (such as frequent cleaning of solar module). A 'passport' can be quite useful, containing technical data on the solar power system and detailing proper use and care.

**good after-sale service**

The work isn't done once a system has been installed! Regular house calls are needed to monitor proper operation of the facility. It may be a good idea to draw up a maintenance agreement with customers, setting out details and establishing a fair price for servicing.

After-sale service also includes noting down all information pertaining to operation of the system and documenting any maintenance and repair work that has been done.