



SOLAR ENERGY RIGHT WHERE YOU NEED IT.

Stand-alone photovoltaic systems from IBC SOLAR.

Become your own power supplier

Where there's no power grid there's IBC SOLAR

Whether in the mountains or on the highway, on an open plain, in the middle of the jungle or even out on the open sea, IBC SOLAR's stand-alone photovoltaic systems are your reliable power supplier anywhere in the world where access to a public grid is not available. Our high-performance solar modules have up to 25-year performance warranty and can supply reliable, environmentally-friendly energy under the most diverse range of climatic conditions.

These custom-made systems permit a completely self-sufficient power supply. Once installed, these systems will power all electrical consumers either directly with direct current from the solar modules or with alternating current by way of an inverter. High-performance batteries ensure a reliable supply even when the sun isn't shining.

No matter what your solar needs, IBC SOLAR has the right photovoltaic system for you.



Solar Home Systems

Basic supply for individual cabins

Residential Systems

Supply for individual homes or even entire villages

Industrial Systems

Supply for radio towers, street lights, water treatment plants, monitoring devices, etc.

Backup Systems

Reliable emergency supply during public power outages

Do-it-yourself power generation made easy

The solar modules convert sunlight into direct current which is then either consumed directly or stored in a battery for later use. You can also set up a conventional AC grid by employing an additional inverter.

NECESSARY COMPONENTS:

1. Solar modules

Our solar modules are leading the global market in terms of energy yield, reliability and quality. Thanks to flexible mounting systems, they can be installed on almost any rooftop, open space or free-standing mounting structures.

2. Battery

Energy which has not yet been consumed is stored in special batteries and then used to supply power during the evening and night hours when no sunlight is available. We exclusively use high-performance batteries whose high cycle stability guarantees a long service life.

3. Charge controller

The charge controller protects the battery from deep discharges, features sophisticated charge management for maximum battery life and informs the operator of important operating data on an LCD or LED display. It is also capable of controlling a diesel generator.

4. Inverter

High-performance inverters transform 12 V, 24 V or 48 V direct current into alternating current and let you connect all conventional electronic devices.

Stand-alone photovoltaic systems ensure a reliable power supply even in hard to reach locations.

Solar Home Systems

Self-sufficient basic supply of individual homes with direct or alternating current

The Solar Homes Systems from IBC SOLAR are small stand-alone systems that ensure a basic supply of electricity and are not connected to the public power grid.

With the help of these stand-alone systems, even the most isolated of houses in the most desolate of regions can be supplied with power. Especially in some areas of Southeast Asia, South America and Africa where no area-wide coverage or functional public power grid is available, the stand-alone systems facilitate access to education and health care or serve as an energy source for electrically operated water transfer pumps.

Compared to other solutions such as diesel generators, photovoltaic systems have an extremely long service life.



Residential Systems

Stable power supply of multiple consumers or entire villages

IBC SOLAR Residential Systems are large stand-alone systems that centrally supply electricity to a self-sufficient power grid for multiple consumers and are not connected to a public grid.

They provide a decentralized, self-administered energy supply structure which delivers power to houses with large AC consumers or even entire villages. By employing special high-performance batteries and, if necessary, in conjunction with wind power, hydroelectric power or diesel generators, you can easily endure heavy loads or periods of bad weather.

In addition to solar modules, the following components are required for battery charge and inverter systems:



Battery charge and inverter system

The inverter features intelligent battery and load management to ensure maximum battery life. It monitors the charge state, is durable and reliable with a long service life, and is used to set up an AC power grid.

Power distribution (AC)

Once the alternating current has been converted by the inverters, it is distributed to the individual consumers over an independent power grid.

Depending on whether alternating current (AC) or direct current (DC) is needed, two systems are possible.

1. AC-coupled system:

- ❑ Solar modules
- ❑ Battery charge and inverter system
- ❑ PV inverter
- ❑ Batteries
- ❑ Power distribution

2. DC-coupled system:

- ❑ Solar modules
- ❑ Charge controller
- ❑ Battery inverter
- ❑ Batteries
- ❑ Power distribution

Industrial Systems

Reliable power supply for municipal and commercial systems

Industrial Systems from IBC SOLAR are custom-made stand-alone systems for the supply of industrial energy consumers that are not connected to a public power grid. Due to the low maintenance requirements and supply costs (for instance, no diesel generators are needed), IBC SOLAR Industrial Systems are generally a more economical solution than power grid expansion. They are also ideal for use in remote and particularly hard to reach areas.

Industrial Systems are suitable for powering:

- Signaling devices
- Water supply
- Relay stations
- Monitoring devices
- Measuring stations
- Street lights



Backup Systems

Reliable emergency AC power supply during public power outages

Backup Systems from IBC SOLAR are custom-made grid-connected photovoltaic systems that feed generated solar energy into the public power grid during normal operations. In the event of a power outage, they automatically switch within milliseconds to stand-alone operation, thus guaranteeing an almost uninterrupted power supply to all current collectors. Already existing grid-connected photovoltaic systems can easily be upgraded to include Backup Systems.

Alongside solar modules, batteries, a PV inverter and, if necessary, a battery charger and inverter system, Backup Systems also require the following components:

Switching device – from power grid to stand-alone power without fail

The automatic switching device ensures a switch over from a public power grid to an independent power supply within 30 to 50 milliseconds in accordance with the appropriate standards. In this manner, consumers are guaranteed an almost uninterrupted power supply.





IBC SOLAR AG
Am Hochgericht 10
96231 Bad Staffelstein
Germany
Phone +49 (0)9573-92 24 0
Fax +49 (0)9573-92 24 111
info@ibc-solar.de
www.ibc-solar.com

Your competent IBC SOLAR specialist partner:

To find an IBC SOLAR specialist partner in your area,
call: +49 (0)9573-92 24 0

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