



IBC SOLAR at a glance:

IBC Solartechnik was founded in 1982

Company headquarters: Bad Staffelstein

3,7 GW implemented worldwide

Around 365 employees worldwide

Regional companies worldwide: Germany, Netherlands, Turkey, India, Singapore, Japan and South Africa

Turnover

2014	€ 200 million
2015	€ 263 million
2016	€ 266 million
2017	€ 344 million

IBC SOLAR

IBC SOLAR is a leading global provider of energy solutions and services in the photovoltaic and energy storage system sectors. The company was founded in 1982 by Udo Möhrstedt in Bad Staffelstein and offers complete solar solutions. It covers the entire range of services from planning to the turnkey handover of photovoltaic systems. Udo Möhrstedt is considered a pioneer within the solar industry and leads the international IBC SOLAR group as its CEO.

IBC SOLAR is represented across the globe with 7 regional companies (Germany, the Netherlands, Turkey, Japan, Singapore, India and South Africa) and currently has around 365 employees. The group is managed from the company headquarters in Bad Staffelstein. IBC SOLAR has implemented photovoltaic systems worldwide with an output of 3,7 gigawatts to date. The scope of these systems ranges from solar parks, which feed electricity into the grid, and self-consumption systems for business owners and private households, to off-grid PV systems and large-scale storage systems.

In 2017, IBC SOLAR generated a group turnover of 344 million euros and sold a module output of 404 megawatt peak.

Photovoltaics and the energy market

Photovoltaics (PV) is a technology used for the direct conversion of sunlight into electrical energy by using solar cells. In times where there is an impending energy shortage, PV is one of the most environmentally-friendly ways of generating energy. In contrast to fossil energy sources, solar energy is available in large volumes in the long-term, and will therefore also be a reliable energy source in the future. Market researchers expect the installed PV output to reach up to 900 gigawatts by 2022.

The forecasts for the domestic PV market in Germany are still positive thanks to the trend toward solar self-consumption. Solar power is a profitable option for private households and business owners to make themselves more independent from energy suppliers and significantly reduce electricity procurement costs through self-sufficiency. The German Renewable Energy Act (EEG), which pays for the feed-in of solar power into the public grid, will continue to promote the dissemination of photovoltaics in Germany. Storage solutions hold additional benefits for households and businesses, as they make solar electricity available around the clock thereby increasing self-consumption rates.

Areas of use

PV systems for grid feed-in (complete or excess feed-in) convert the generated electricity directly into alternating current or three-phase current using the inverter, and this electricity can either be fed into the public power grid or be used to supply electrical household devices by means of self-consumption. The inverter works in a grid parallel operation where the voltage and frequency of the generated electricity are aligned with those of the public grid. This means that the electricity produced from sunlight can be fed into the public grid without any complications.

By combining the **PV system and solar power storage system**, private households and business owners also have the option of consuming the self-generated electricity at any time of day. The unused solar electricity is stored in a battery and made available again when needed. Solar electricity that is not used directly or saved feeds into the public grid. The proportion of self-consumption increases significantly with a storage system, and even less energy is needed to be purchased from the electricity operator. Owners of a storage solution will therefore save money and in the long-term become more independent of the constantly increasing electricity prices.

Off-grid PV systems are not connected to a power grid. They generally require batteries for storage. The energy generated during sunshine hours is stored and this ensures a continuous power supply. The off-grid power supply can be used in a number of ways, ranging from traffic management systems, mountain huts, schools and health facilities to entire villages. It is now also employed in industrial-scale applications, such as the self-sufficient office and workshop complex *EnFa – The energy factory* in Neuenstadt am Kocher (Baden-Württemberg), which was awarded the Intersolar Award 2015.

Product portfolio

The PV solutions of IBC SOLAR range from planning to the turnkey handover of solar energy systems. The product portfolio comprises of a broad range of modules for both solar energy systems, which will feed into a power grid, and completely self-sufficient systems for an off-grid power supply.

As a manufacturer-independent system service provider, IBC SOLAR sells all components required for photovoltaic electricity generation, such as modules, inverters, charge controllers, mounting systems, cables, plug connections, display and measurement technology. In addition to components from renowned manufacturers, IBC SOLAR also sells its own product lines of modules, mounting systems, monitoring and battery storage systems.

The IBC SOLAR product range is installed for private and industrial customers and farmers through the network of more than 1,000 solar installers, electricians, roofers and sanitary and heating system installers worldwide. IBC SOLAR is represented in more than 30 countries with regional companies, Premium Partners and partner companies.

System service provider for energy solutions

IBC SOLAR offers customised solution packages for energy providers, public utility companies, business associations and providers of photovoltaic concepts. Depending on requirements, these range from lead generation and e-commerce to component deliveries and mounting services.

Large-scale projects

As a project developer, IBC SOLAR develops, implements and markets its own major projects worldwide, as well as arranges the financing. As a general contractor (EPC – Engineering Procurement Construction), IBC SOLAR creates large installations for investors and project developers. This involves detailed technical planning and construction preparation, turnkey construction and initial operation, as well as a comprehensive range of consulting services, which includes funding and financing consulting, subsequent monitoring and technical management. To date, IBC SOLAR has implemented around 400 megawatts in major projects in Germany alone.

Solar parks of IBC SOLAR supply numerous countries throughout the world with environmentally-friendly electricity, in order to meet the increasing demand for renewable energy. IBC SOLAR put a PV power plant with an output of 13.2 megawatt peak into operation in Spain as a partner of **Enercoop**, and this plant has been supplying electricity in the Alicante area since 2008. The company has operated the second largest solar park in Bavaria since 2012, the **Jura Solarpark**, which has a total output of around 43 megawatt peak. IBC SOLAR Energy built the company's largest solar park to date in 2018 in **Odisha, India**, with an output exceeding 27 megawatt peak.

Hybrid power supply

IBC SOLAR implements off-grid energy solutions throughout the world. In cooperation with the Seychelles Island Foundation (SIF), the company has ensured the environmentally-friendly power supply of the **Seychelles atoll Aldabra** since March 2012 through a photovoltaic hybrid system, which combines solar power with a diesel generator, resulting in a 98% saving of diesel fuel. Nine groups of islands in **Malaysia** have been supplied with renewable energy by IBC SOLAR systems since 2012. The photovoltaic diesel hybrid system here supplies a total of 3,500 people, nine rural clinics and nine schools with clean energy. 1.5 megawatt peak of solar energy with a 6.8 megawatt storage capacity and 18 diesel generators now ensure the islands' independent power supply.

Cooperations

IBC SOLAR is committed to numerous international projects. As a partner of **dena** (German Energy Agency), the company has planned and implemented international flagship projects. These include photovoltaic systems for German schools in Rome and Lisbon, as well as for the Goethe Institute in Bangalore.

IBC SOLAR installed the first large-scale storage system with a nominal capacity of around 200 kilowatt hours (kWh) in a low-voltage grid together with **SWN Stadtwerken Neustadt b. Coburg**. If photovoltaic systems produce more electricity on site than is required, this electricity is stored temporarily in the storage system and fed back into the power grid with a time delay. This stabilises the low-voltage grid and prevents it from being extensively expanded. An additional IBC SOLAR large-scale storage system with 660 kWh was connected to the grid in 2015 as part of the project **Smart Grid Solar of ZAE Bayern e.V.** Its operation is being scientifically monitored and evaluated at the University of Erlangen-Nuremberg.

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