

BAUER

SOLAR

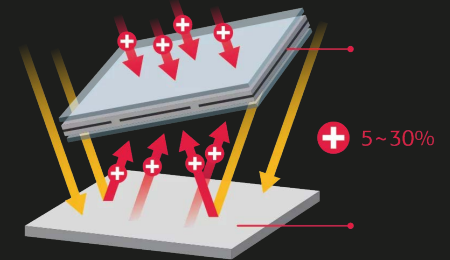
reliable like the sun

Bifacial solar modules

BAUER Solar uses modern N-type TOPCon bifacial half-cells for its double-glass modules. In comparison to single-sided, monofacial solar modules, bifacial modules can collect sunlight on their front and back sides and convert it into electrical energy. As a result, they achieve a higher energy yield per installed output and offer more efficient utilisation of solar energy. Our modules can therefore achieve an additional yield of up to 30 percent.

Functionality

The functionality of bifacial modules is based on the fact that they can utilise both direct sunlight and diffuse light. The front of the module collects the direct sunlight, while the rear side utilises the scattered light that is reflected by the surroundings, for example by reflective surfaces. This enables the bifacial module to achieve a higher energy yield, as it can produce energy even in poor lighting conditions. This also includes flat angles of light incidence, as occur in the morning and evening, which lead to optimum reflection on the back of the cell.

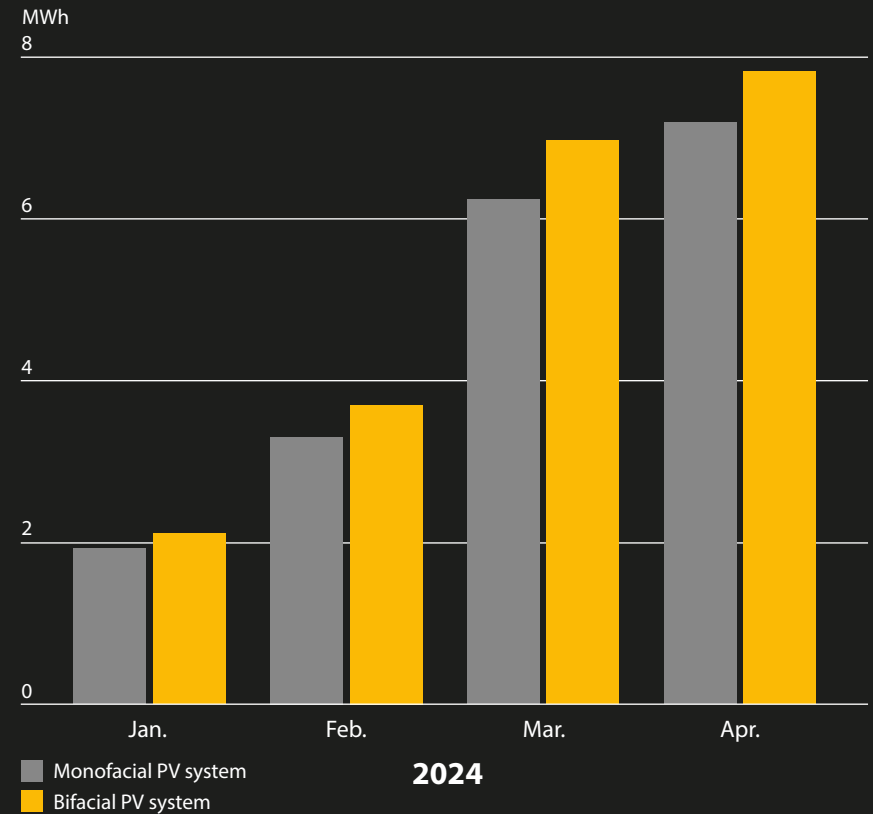
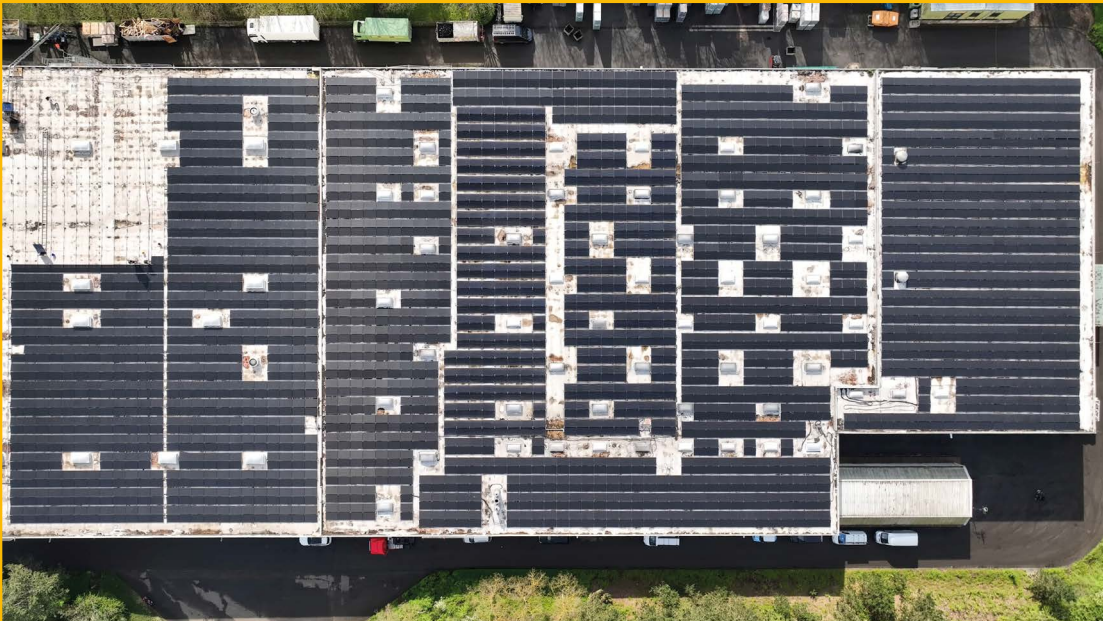


Your advantages

- Higher electricity yield due to active cells on both sides
- Faster cost amortisation of the system
- Longevity of the cells thanks to glass-glass construction

Case study – bifacial additional yield

In the following, we compare the yields of two photovoltaic systems from January to April 2024. One system is installed with monofacial solar modules, the other with bifacial modules. In this case, these are two commercial systems belonging to a customer in Rheinhessen, which were installed next to each other on the same large roof.



Results

The yield advantage achieved by the bifacial PV system at this location is significant. Compared to the monofacial system, the additional bifacial yield can be estimated at around 10%, even when the sun is at a low position in the winter and early spring months.

Bifacial cell technology is an efficient advancement on conventional solar cells and is used exclusively for glass-glass modules. The robust double glass structure also extends the lifespan of the solar cells. The areas of application for bifacial modules are diverse and range from solar parks to private households. Flat roofs and ground-mounted systems in particular are ideal areas for their application.

BAUER Solar is a manufacturer that has specialised in producing premium glass-glass solar modules and integrates bifacial technology into all its modules.

Request your non-binding offer now at www.bauer-solar.de