



Next2Sun

We stand for energy transition.

Agri-PV: a double harvest from agriculture and solar energy



In densely populated countries, competition for land is becoming increasingly fierce between the energy and agricultural industries. The Next2Sun agrivoltaic system, introduces a compelling solution by utilizing only 1% of land, leaving 90% available for conventional agricultural use. Moreover, approx. 10% of non-agriculturally usable land beneath the modules will be

dedicated to establishing ecologically valuable habitat structures.

The system's anti-cyclical generation profile, facilitated by vertically mounted modules, not only optimizes energy production but also circumvents grid bottlenecks. This feature contributes to accelerating the overall expansion of solar power production.

The solid steel construction consists of mullions and crossbeams. Two mullions and three crossbeams hold two vertically stacked bifacial glass-glass modules. The total height of the bifacial mounting system can flexibly be modified and usually has a height of about 3 meters above the ground. The racking system design is developed for an easy and flexible mounting as well as a long lifetime. Combined with the glass-glass modules used in the system, this leads to a very long lifetime for the whole system. It is designed for high strength requirements, especially resulting from wind loads.

Variable row spacings of at least 8 meters enable versatile agricultural utilization concepts. Furthermore, the freestanding system is suitable for grazing cattle or chickens. The considerate handling of the resource soil leads to high acceptance. The Next2Sun concept achieves an appropriate balance between agriculture and electricity production of sun power. Up to 90% of the

solar park area can still be used for agricultural purposes. The space of at least 8 meters between rows enables the use of conventional agriculture machinery, securing efficient work management. This further reduces excessive land consumption.



Depending on the type of use, the machinery used for farming as well as the photovoltaic plant itself will be technically adjusted to enable optimal use of the area. (Examples: protection against stone chipping or protection against cable bites in pasture farming).

Due to the linear structures and the low degree of overbuilding, high-quality natural grass areas are created in which specific habitat structures can be established in addition. In addition to agricultural use, the large spaces between rows also offer scope for agri-environmental or compensatory measures. Due to the vertical arrangement of the module areas, the value of the ground area is hardly affected:

- Insignificant level of overbuilding: less than 1% of the ground surface, no sealing, no foundation
- Almost unchanged water supply: no change in the distribution of rainfall
- Only minor changes in insolation: just about 10% to 15% of the annual solar radiation is being used by the photovoltaic plant



This results in very low influence on the vegetation growth. Thus, habitats can be created on either whole plant area or parts of it, as well. Habitats, which have become very rare in today's monotone agriculture landscape can be created:

- Grass and flower strips, e.g. for insects and butterflies
- Deadwood areas, e.g. for birds, fungi and beetles
- Piles of stones, e.g. for reptiles

In addition to linear habitat structures, flat habitat structures such as wildflower meadows can be created on the entire park area or on partial areas. The system concept thus allows for the specific project and site requirements to be met.

While the optical long-distance effects are comparable to conventional photovoltaic plants, the appearance at close range is less technically characterized as there are no module back panels with visible junction boxes and cables. The low overbuilding is a huge advantage especially for birds, as seen from the bird's-eye view the ground surface remains almost completely open.

Furthermore, dazzle effects outside of the solar plant are almost impossible as any reflections of the vertical constructions due to physics can only go to the ground.

Next2Sun solar fence: the fence that pays for itself

Fences are often vital on commercial, industrial or agricultural property – with the bifacial solar fence from Next2Sun, they can become a source of power or cover the own power requirements. A solar fence can play a key role in generating the energy needed and can increase self-sufficiency from external suppliers. There are various design options for solar fences: as well as being an enclosure and offering protection against intruders, a fence can also provide privacy or serve as a high-end decorative element.



Next2Sun – your partner for innovative energy solutions

Next2Sun is the inventor, innovation and technology leader in vertical bifacial photovoltaics. The basic concept of vertically installed, bifacial solar modules shifts solar power production to times of usually low availability and avoids the overbuilding of agricultural land. For the success of the energy transition, this means fewer conflicts of use, better coverage of electricity demand and lower storage requirements. Next2Sun has developed a wide range of products based on the vertical bifacial system technology and the patented racking system developed for it, and brought them to market maturity, in particular the vertical bifacial Agri-PV system and the bifacial solar fence. As a result, Next2Sun today offers solutions for a variety of applications for the agricultural, public, commercial and private sectors as a multi-award-winning market and technology leader.

Our solutions enable cost-effective, sustainable, environmentally friendly power generation by combining innovative multiple use with optimized generation profiles. We want to work with you



to expand the use of renewable energies, combat climate change and help protect the environment and the natural world. And we have the right team to do it: thanks to many years of experience in renewable energy sources and the variety of professional backgrounds across

every member of our team, we are able to continually develop our skills and strengths and thus build up solid expertise. As your trustworthy innovation partner, we are bringing the energy revolution – in more ways than one.

We look forward to hearing from you!

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