

**Next** **2** Sun

**Experiences with vertical  
Agro-Photovoltaic**

## **N2S vertical Agro-PV-concept**

Advantages in electricity production

Advantages for agriculture

Additional use case: Solar fence

Contact

# Vertical Agro-Photovoltaic (PV) concept by Next2Sun



1

Vertical elevation of the bifacial modules in east-west orientation

2

8-20 m land strips in between

# Next2Sun vertical Agro-PV systems allows agriculture and photovoltaic side by side



- A row spacing of eg 9m allows the use of conventional agricultural machinery
- 90% of the solar park area can still be used for agricultural purposes

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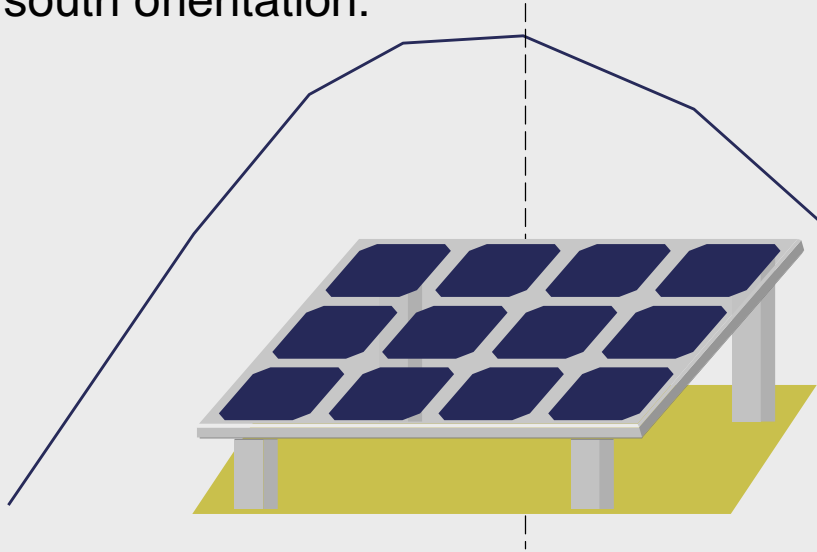
# Advantages of Next2Sun vertical bifacial Agro-PV systems in electricity production volume



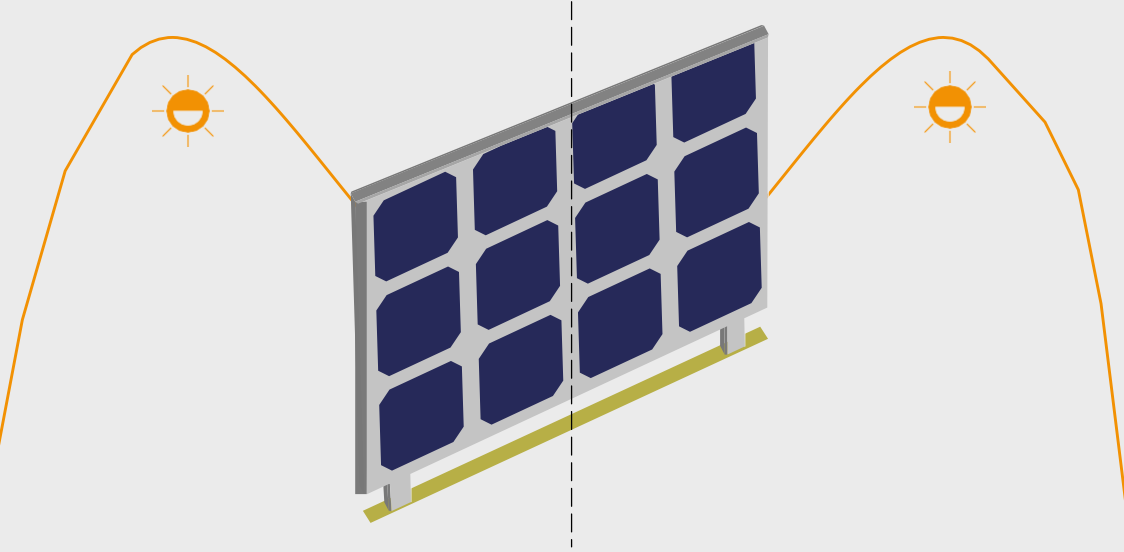
- Additional electricity production of 10-15% compared to conventional plants
- Avoidance of shadow-related production losses of conventional south oriented plants in midsummer
  - Full production on morning- and evening-hours
- Strong use of reflection (albedo-effect)
  - Also app. 20% electricity production at noon without direct irradiation

# Advantages of Next2Sun vertical bifacial Agro-PV systems in electricity production profile

Conventional flat-mounted PV systems with south orientation:



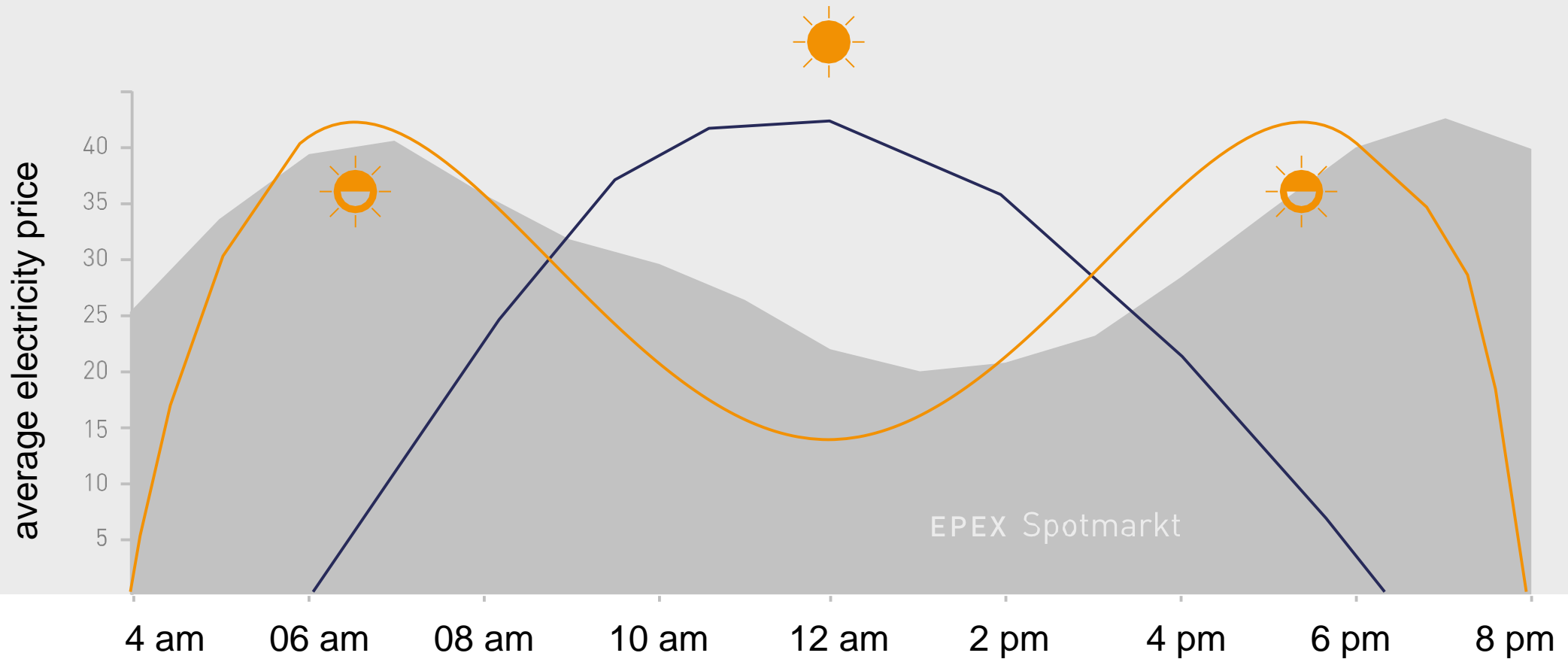
Next2Sun systems with east-west orientation:



- Beneficial production profile with peak production in the morning and in the evening hours
  - Production profile nearer to electricity demand
  - Together with conventional plants in place a very stable production profile on a 1:1 basis

# Vertical bifacial Agro-PV systems by Next2Sun benefits from scarce electricity supply and higher prices at off-peak times in Germany

Higher yield + higher market value = **20-25% additional revenue**





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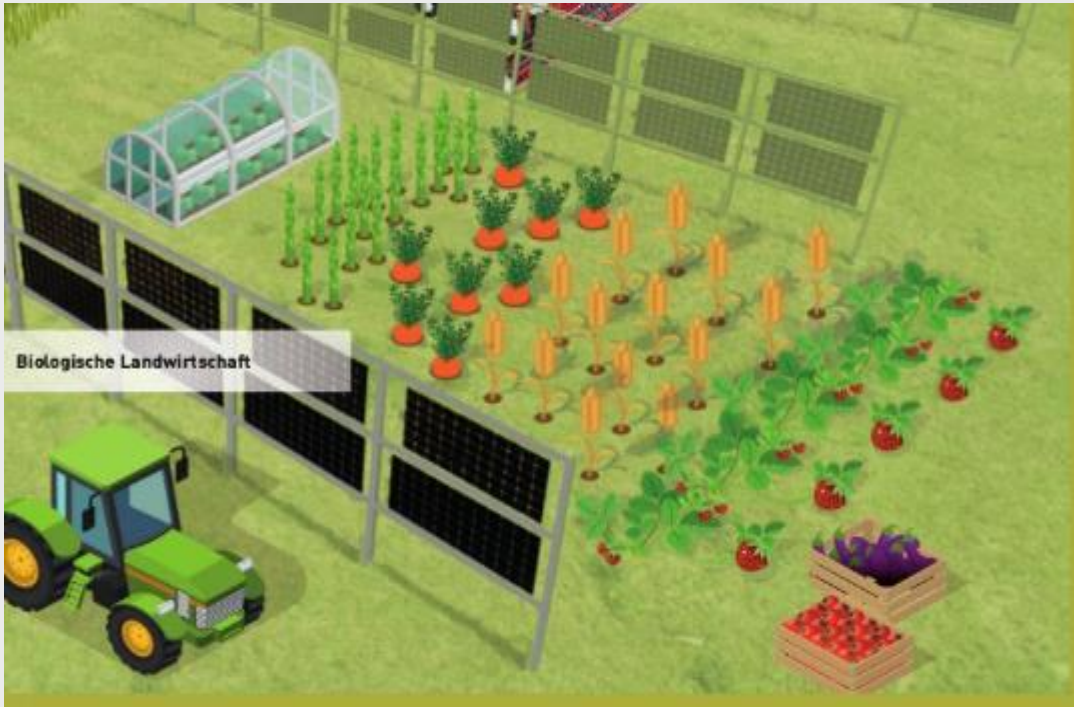
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# Vertical bifacial Agro-PV systems by Next2Sun offer a wide range of ecological and agricultural uses



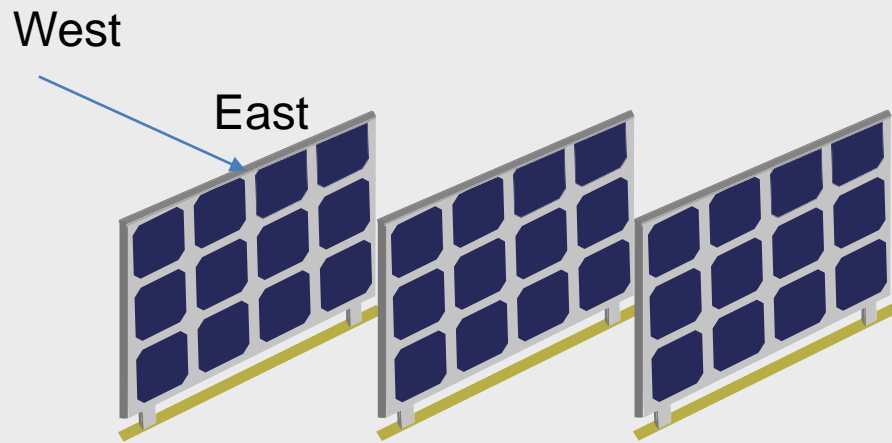
# Possible applications for crop production for vertical Agro-PV



The following types of crop production are possible, among others

- potatoes
- different types of beet
- carrots
- low-growing cereals and rice (up to 75 cm)

# Possible advantage: Reduction of wind erosion



- The north-south arrangement of the PV modules counteracts east- and west-winds
- Erosion more unlikely in areas with mainly east- or west- winds (e.g. northern Germany, also parts of India)
- Potentially also lower evaporation due to reduced wind exposition



# Possible advantage: Support of bio-diversity



Compatibility of sustainable electricity production and diverse flora:

- The creation of flower strips under the module rows (between agricultural used strips) supports biological diversity in the agricultural landscape
- Including year-round protection against erosion and the creation of habitats for fauna

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# The Next2Sun vertical Agro-PV product range also includes the bifacial solar fence



The innovative fence system with double function

- Combines durable fencing with solar power production
- Great flexibility in the choice of the lower fence element (wire mesh, bar grille, privacy panel)



# Next2Sun solar fence as additional use case for livestock breeding



Dual Use of Next2Sun Solar Fence:

- Fencing
- Electricity production

Additional advantage:  
Shadow for livestock



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# Further questions and/or interest in our products? Your Next2Sun contacts



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