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AGRI-PV“SONNENFELD”IN BRUCK AN DER LEITHA, LOWER AUSTRIA

Solar power generation with minimal land use and priority for agricultural land use is the focus of Agri-Photovoltaics.

The multiple use of the field not only brings us closer to achieving national climate goals and the energy transition, but the harmonious coexistence of food and electricity production also strengthens biodiversity and increases regional self-sufficiency in energy and food. Maximum electricity yield with minimal land use is the goal.

Thanks to the elevated, movable modules, agricultural use is possible even with large agricultural machinery. The panels, which track the sun's position, deliver the highest possible solar power yield.

The expansion of Agri-PV guarantees energy security, independence, and price stability.

The solar field:

80% arable land for food
18% wildflower strips for biodiversity
2% land use for mounting structures
100% solar power

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AGRI PV vs. Standard PV

AGRI-Photovoltaic

PROS

- Dual Land Use (Food&Power)
- Increased Crop Yield (Shade)
- Animal Shelter
- Biodiversity Promotion

CONS

- Higher Initial Cost
- Complex Management
- Reduced Light for some Crops
- Visual Impact

Standard Ground - Mounted PV

PROS

- Lower Initial Cost
- Simpler Installation
- Maximized Energy Output

CONS

- Single Intid Use
- Habitat Destruction
- Heat Island Effect
- Les Future-Proof

ECONOMIC & SCALING COMPARISON

SCALING EFFECTS

- **AGRI PV**: Greater land efficiency allows larger projects at lower costs.
- **Standard PV**: Cost per MW decreases (economy of scale), but land acquistion becomes a limiting factor.

FUTURE OF RENEWABLE ENERGY & AGRICULTURE

Agri-PV Oberer Herzogberg

Fam. Scherr in Cooperation with Energiepark Bruck an der Leitha

Operator:
PV Oberer Herzogberg GmbH Co KG

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Special feature of sheep grazing:

On an area of approximately 5 hectares, the sheep, currently more than 50 animals, take care of natural lawn maintenance. They enjoy protection and shade under the pv modules.

number of modules: 13.234

module type: JA Solar, 445Wp

module orientation: 235° & 195°

inclination: 15° & 20°

inverters: Huawei 330W & 185W

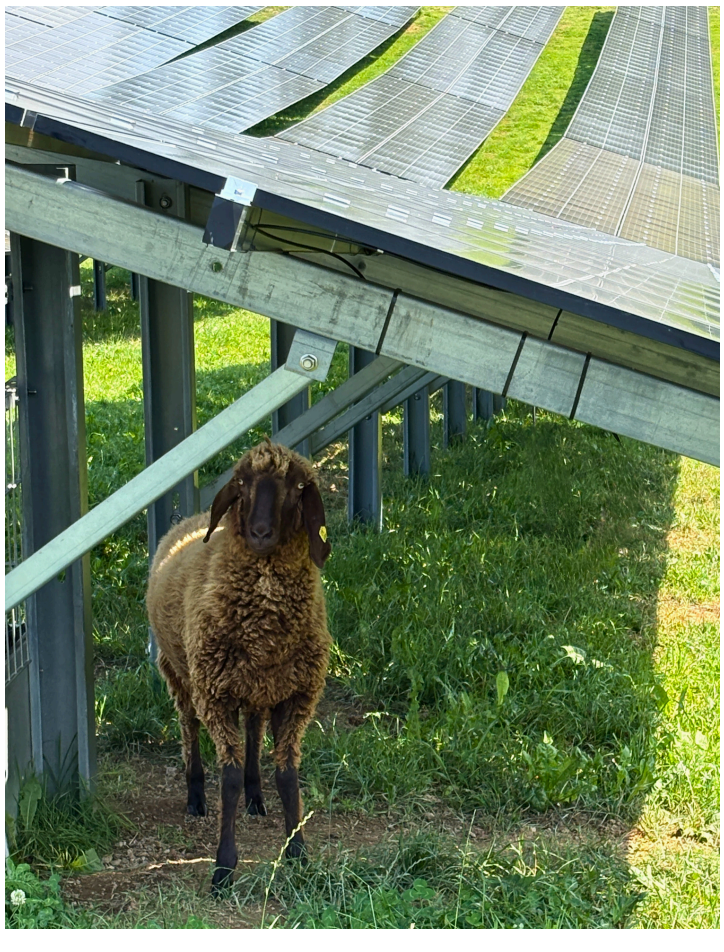
power: 5.889,13 kWp

annual yield: approx. 6.5 mio. kWh

supplied households: 1.500 (with an annual consumption of 4500 kWh)

funding: Oemag market premium

commissioning: 10.01.2025



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Hardfacts Sonnenfeld Bruck/Leitha

- Area: 5.5 ha
- Construction period: Groundbreaking May 2022, start of operations November 2022
- Capacity: 3.03 MWp
- Modules: 5,560 x 545 Wp
- Electricity yield: for approx. 1,000 households
- 8 research zones:
  Elevated: south, southeast, east/west
  AGRI PV cultivation row: 6m, 9m, 12m
  One reference area without modules
- 3 years of research by the University of Natural Resources and Life Sciences (BOKU) on half of the area (blue area)
- Farming: BOKU part conventionally, the remainder by various organic farmers
- Pre-construction estimate: AGRI PV 20% higher electricity yield than south-facing installations was achieved (see diagram below)

Crops 2023	Crops 2024
Millet	Winter wheat
Potatoes	Poppies
Soybeans	Soybeans
Poppies	Cereals
Soybeans	Soybeans
Sunflowers	Cereals
Cereals	Soybeans
Cereals	Cereals
Corn	Soybeans