

How farming and solar energy can go hand in hand

Solar farms are being built on agricultural land

Virtually all solar farms are built on agricultural land. This goes for both agrivoltaics and classic solar farms. With agrivoltaics, productive farming is practised under and next to solar modules. In classic solar farms, the sites must also be managed. Many farms want to secure their businesses by generating income from photovoltaics, while at the same time preserving the agricultural value of their land. By 2030, solar farms will occupy around 0.6% of agricultural land in Germany¹ – a small percentage compared to other forms of land use. Since it is conceivable that classic solar farms will account for the majority of the expansion and these will increasingly also serve biodiversity², measures need to be taken. It is important that solar farm expansion is better suited to agriculture in the future, even if the solar farm sites are professionally managed for the purposes of biodiversity.

All solar farm sites must be professionally managed

Besides generating cheap electricity, modern solar farms serve to promote biodiversity by enhancing the natural environment on these sites. To this end, ongoing professional site maintenance is required. It is necessary to manage the land in every solar farm – for example, to avoid scrub encroachment on the sites and thus loss of yield. When done correctly, the solar farms will be very biodiverse. The management methods are similar to those used in alpine farming. But there is a problem: this type of land management in solar farms currently does not legally constitute agriculture. There is a regulatory gap here in agricultural law.

¹Source: <https://sonne-sammeln.de/wie-viel-flaeche-brauchen-solarparks/>

²See <https://sonne-sammeln.de/biodiversitaet/biodiversitaets-studie/>

Virtually all solar farms use agricultural land.
Only some of them are agrivoltaic sites

80%
PV solar farms



20%
agrivoltaics



Solar plants mostly built on agricultural sites, low-mounted

Solar plants on agricultural land, elevated or low-mounted

Focus on energy generation. Mechanical site maintenance needed, possibly combined with grazing

Focus on yield-based farming (food, feed or animal production)

Professional site management by means of mowing or grazing

Conventional management or ecological farming methods

Provide shade and shelter for sheep when used for grazing

Provide protection for flora and fauna against weather, soil erosion and hail

Solar farm expansion pathway according to EEG: PV PPs approx. 80% of additional capacity (approx. 40 GW by 2030)

Solar farm expansion pathway according to EEG: Agrivoltaics approx. 20% of additional capacity (approx. 10 GW by 2030)

An overview of land management measures promoting biodiversity

The following recommendations apply to land management measures promoting biodiversity in solar farms with a focus on agricultural aspects:



Grazing

A rotational grazing system can be adopted as an alternative to mowing. Not all areas of the site should be used for grazing at the same time in order to avoid overuse.



Mowing frequency

The sites should be mowed no more than twice a year to promote biodiversity.



Dealing with the cuttings

The cuttings should be cleared away from beneath and between the panels with a view to promoting biodiversity.



No chemicals

Refraining from using pesticides, fertilisers or manure promotes soil regeneration.



Haymaking

Hay can be made on parts of the site not used for grazing in order to generate additional agricultural benefits.

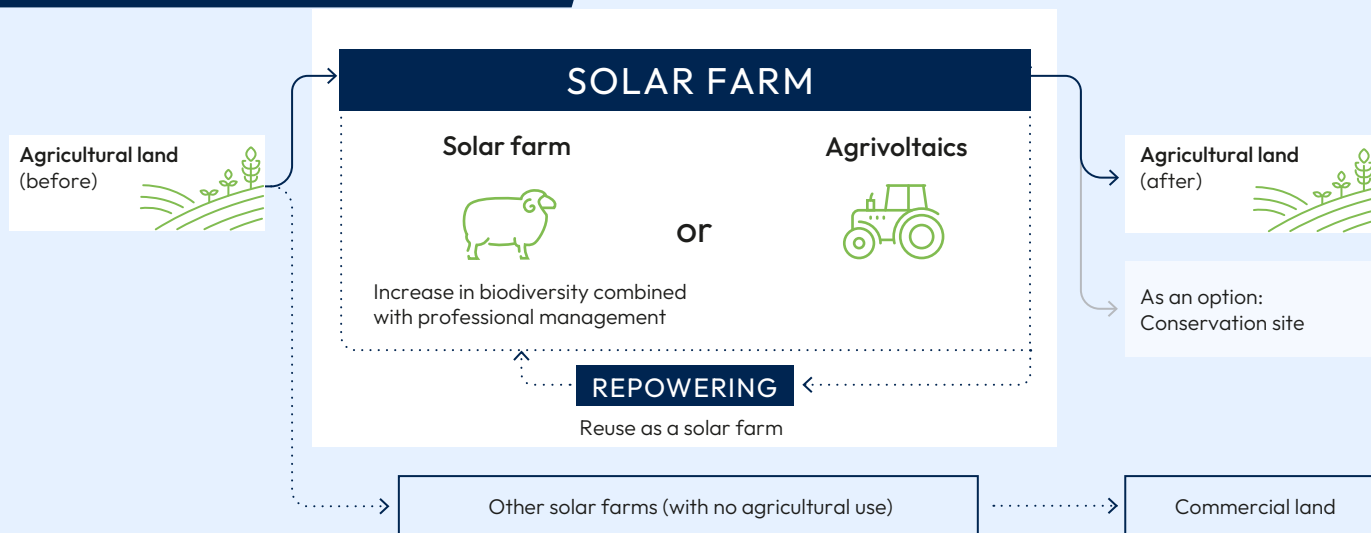
Solar farms: heroes of biodiversity

Biodiverse grasslands develop in well-planned and properly managed solar farms, significantly increasing the wide range of insects. This forms the basic diet for birds and other groups of species. An important habitat for animals emerges, secured for decades by the solar farm. Proper and professional land management is the key factor here. This kind of management can become the standard if it is well enshrined in agricultural law. Then farmers can be heroes of biodiversity in solar farms and play an active part in preserving biodiversity.

A time capsule from an agricultural perspective

If land management in biodiverse solar farms were recognised as agricultural use, many problems would be solved for farms. From the farm's perspective, these areas of land would enter into a kind of time capsule, being given over for agricultural use on an interim basis (biodiverse solar farm) before being used again for conventional agriculture. The sites would then retain their agricultural status and value. This also reduces tax risks for farms, but only in biodiverse solar farms.

Proposal: solar farm sites in a "time capsule"



Win-win-win situation for energy, agriculture and nature:

Climate-neutral, low-cost electricity generation on biodiverse land in the solar farm secures the farming business. When complemented by agrivoltaics, it boosts rural areas.

Enshrine solar farms in agricultural law

Besides agrivoltaics, other solar farms should also be better enshrined in agricultural law, not least because professional land maintenance represents agricultural use and must be legally recognised as such. This can be clearly inferred from the objectives of the EU's CAP³. There is a regulatory gap in German agricultural law here: land managed in suitable solar farms with the aim of boosting biodiversity should be considered as being used mainly for agricultural purposes from a legal perspective.



Solar farms an insurance policy for farming businesses

"For me, the solar farm is a secure pension plan and a stable foundation for the next generation. (...) It is a good feeling to know that the site, which has undergone so much change, now has a meaningful purpose for at least the next 20 years."
Holger Reimer, Farmer in Schleswig-Holstein

³Article 6(1) of the EU's Common Agricultural Policy (CAP) sets out important objectives such as protecting biodiversity, improving ecosystem services, preserving habitats and landscapes, mitigating climate change and promoting sustainable energy sources. Despite these comprehensive objectives, a regulatory gap exists in German agricultural law with regard to land management that promotes biodiversity in solar farms. This gap prevents the CAP objectives from being fully implemented in this area.

