

“WE ARE COMMITTED TO VERTICAL BIFACIAL PV AS THE BEST SOLUTION FOR AGROVOLTAICS”



As the global demand for clean energy and food production grows, agrivoltaics — the combination of agriculture and photovoltaic energy generation — has emerged as a promising solution. Within this field, vertical agrivoltaics represents a particularly innovative approach. In this interview, Pablo Cuesta from Simply Solar explains to us the benefits of Vertical Agrivoltaics, as a new frontier for Sustainable Energy and Agriculture.

About Simply Solar

The spin-off of Praxia Energy is a company dedicated to Solar Carports & Agrivoltaic solutions, such as vertical systems.



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What are the main advantages of vertical agrivoltaics?

One of the most important advantages of vertical agrivoltaics is its ability to **maximize land productivity**. In many regions, agricultural land and energy infrastructure compete for space. Traditional solar farms require large areas, often leading to conflicts over land use. Vertical installations, however, occupy **minimal surface area**, enabling simultaneous use of land for farming and energy generation.

Because the panels stand upright, they cast narrower shadows than tilted arrays. This allows sunlight to reach crops during most of the day, supporting photosynthesis while still generating clean electricity. Moreover, the **shading patterns can be beneficial in hot climates**, where excessive solar radiation can stress plants or dry soils. In such conditions, partial shading helps preserve soil moisture, reduce irrigation needs, and improve crop resilience.



Another advantage lies in the generation profile of vertical agrivoltaic systems. Since panels face east and west, they produce **more power** in the morning and late afternoon, rather than concentrating production at midday. This profile often **aligns better with electricity demand patterns**, particularly in rural or agricultural areas where energy use rises during early and late working hours. Furthermore, the bifacial technology commonly used in vertical agrivoltaics captures light reflected from the ground on both sides, improving total energy yield. In regions with high surface reflectivity — such as snow-covered fields or light-colored soils — this effect can significantly boost energy generation compared to traditional installations.



And what about the Mechanical and Operational Benefits?

From an engineering perspective, **vertical installations are easier to maintain and less prone to dust accumulation**, since rain can clean both sides more effectively.

This translates to **lower cleaning costs** and **higher long-term efficiency**. The upright configuration also facilitates farm machinery movement, allowing tractors and harvesting equipment to operate without obstruction.

Additionally, the absence of large mounting foundations reduces soil compaction and land alteration, preserving soil health and making the system easier to dismantle or relocate — a key consideration for sustainable rural development.

What is the potential of vertical agrivoltaics in the world?

The potential of vertical agrivoltaics varies **depending on geographical, climatic, and agricultural factor**.

In countries like Germany, the Netherlands, and Denmark, where agricultural land is valuable and sunlight varies seasonally, vertical systems can provide an effective dual-use solution. East–west orientations help spread energy generation throughout the day, reducing grid congestion from midday peaks. These regions also benefit from bifacial gains due to light-colored soils and snow reflection in winter.



In **Spain, Italy, and Greece**, vertical agrivoltaics can address water scarcity and heat stress in crops. Strategic shading from vertical panels reduces evapotranspiration and protects sensitive plants, such as vegetables, berries, or vineyards. Moreover, east–west arrays maintain airflow between rows, minimizing the risk of fungal diseases often associated with dense shading.

In **densely populated countries** like **Japan, India, and China**, where agricultural land is limited, vertical systems offer a way to co-locate energy generation with food production. In India, for example, vertical bifacial panels can be installed along irrigation canals or field boundaries, avoiding disruption to farming operations while supplying local power.

In **northern latitudes** — Scandinavia, Canada, or parts of the U.S. — vertical arrays benefit from low sun angles, allowing them to capture oblique sunlight more effectively than horizontal arrays. In snowy regions, vertical panels also shed snow naturally, ensuring consistent winter production.

Vertical agrivoltaics not only supports clean energy expansion but also strengthens rural economies. Farmers can diversify income by selling electricity or leasing land to solar operators, while maintaining crop production. The shared land use reduces pressure to convert natural habitats or forests for energy purposes, aligning with biodiversity and climate goals.

Furthermore, the visual impact of vertical panels is often less intrusive than that of large horizontal arrays, making them more acceptable to local communities and easier to integrate into agricultural landscapes.

What is the future of Vertical Agrivoltaics?

Vertical agrivoltaics represents a **smart and adaptable approach to the global challenges of energy transition**, food security, and sustainable land use. By merging bifacial solar technology with agricultural productivity, it enables a truly synergistic use of land.

Its advantages — efficient land sharing, improved energy profiles, reduced water use, and easier maintenance — make it particularly valuable in regions facing land constraints, high temperatures, or water scarcity. As renewable technologies advance and policy frameworks evolve, **vertical agrivoltaics is poised to become a cornerstone of climate-smart rural development and a vital bridge between the energy and agricultural sectors.**

Following our engineering and production experience with PV mounting systems and carports, with experience in 47 countries worldwide, we strongly believe that **Vertical Bifacial Photovoltaic solution is a cost-effective and attractive option. We can reach 100 countries with distributors because it is a standardized solution for us.** We are offering a two-year payment option with the support of CESCE, along with a 25-year product warranty and a very attractive price

Simply Solar (officially Innovative Simply Solar, S.A. is listed on the BME Scaleup market in Spain under the ticker SCSS.

