





Why the tracker is now the defining decision in utility-scale AgriPV

In utility-scale AgriPV, the tracker is no longer just a component. It is the decision that shapes long-term performance, reliability and profitability. With more than 500 MWp installed, IDEEMATEC is helping set the standard for tracker technology built for the future of dual-use solar.

When it comes to utility-scale solar, most component variables have stabilized. Module efficiency has plateaued into predictable increments; inverter technology is mature, bankable and standardized across projects. Supplier preference? No longer connected to product quality, but reliability in delivery. Even EPC processes are optimized, repeatable and increasingly commoditized. In short: the core building blocks of large-scale PV have converged.

One critical component, however, has not: the tracker.

The key role of trackers within utility-scale solar goes beyond mechanical performance. It directly affects the economic output of a project after commissioning due to market-based electricity pricing. It's not as simple as how much energy can be generated; instead, timing matters. A midday peak, when fixed-tilt and rooftop systems produce the most simultaneously, creates an oversupply and prices plummet. The result: maximum production at a time of minimal gain.

Tracker-based systems, as the name implies, follow the sun over the course of the day, producing more energy at higher-value times such as early morning and late afternoon. The tracker optimizes not only for the sun but for the market. A powerful side effect: a more even power supply relieves pressure from grids and markets that suffer from capacity pressure.

Those who understand the tracker as an economic optimizer realize it's not a means to

an end; it's the strategic tool. And this tool can become key when land becomes the next critical project variable.

A market at a turning point

The next growth phase of utility-scale solar might be dangerously close to running out of viable land. The same project typologies that dominated the past decade are becoming scarce, while demand soars. Previously attractive spaces along infrastructure corridors such as highways, train tracks and pre-approved zones are no longer sufficient to meet accelerating demand, grid constraints and land-use pressures.

Within the broader site selection process, agricultural land has proven to be an inevitable and strategically relevant option: Agri-Photovoltaics (AgriPV) is quickly establishing itself as a structurally different growth segment. The driving forces behind this development are strategically powerful.

- 1. Location flexibility:** agriPV decouples solar from restrictive land classifications by enabling dual-use: agricultural productivity and energy generation on the same acreage. This dramatically expands the viable project footprint.
- 2. Proximity to demand:** instead of developing projects where land is permitted, developers can begin to prioritize where energy is needed, closer to industrial loads, decentralized grids and regional

consumption centers. This reduces transmission losses, eases grid bottlenecks, and improves overall system economics.

3. Regulatory momentum: policy frameworks are increasingly aligned with dual-use solutions. In markets like Germany, upcoming regulatory structures, including signals tied to EEG 2027, are expected to further incentivize AgriPV deployment by prioritizing efficient land use and grid-relevant generation.

All these aspects point to a clear realization: AgriPV is not a niche. It is a structural expansion of the solar market.

The tracker decision becomes strategic

From an Independent Power Producer (IPP) perspective, the shift toward AgriPV fundamentally reframes investment logic.

Traditional solar project decisions have often been CapEx-driven. Optimize upfront costs, secure predictable yield, de-risk through bankability, and execute. But that model assumes a relatively static system in a relatively controlled environment. AgriPV breaks that assumption.

Projects are more dynamic. Agricultural use cases differ. Land conditions are heterogeneous. Operational requirements extend beyond pure energy production into coexistence with farming practices. Most importantly, however, the financial horizon remains unchanged: 25 years or more. A lot can happen over this time. Crop patterns shift, regulatory frameworks change, market dynamics reshuffle the value logic over multiple policy cycles.

In this environment, the decisive factor is not the system itself, but its ability to adapt in operation. A fixed-tilt system is mechanically and operationally locked in from day one. A

tracker, by contrast, can continuously adjust its positioning, tracking logic, and stow strategies in response to changing agronomic needs, regulatory conditions, or market incentives. This operational flexibility directly translates into a more resilient business model, enabling AgriPV systems to remain economically and functionally relevant across decades of change.

Unlike modules or inverters, components with little to no differentiation among various suppliers in the market, the tracker is a one-time decision that defines the mechanical backbone of the project for its entire lifecycle. It directly impacts yield, maintenance, operational complexity, and system resilience. In AgriPV, the tracker must follow the sun while enabling land use, adding to the long list of desired capabilities.

OPEX over CapEx: a shift in thinking

For IPPs, this leads to a fundamental shift: from CapEx optimization to lifecycle optimization. A tracker system that appears marginally cheaper at installation can quickly become expensive if it introduces higher failure rates, complex maintenance requirements or limitations in agricultural usability.

Conversely, a high-quality system that ensures reliability and operational stability over decades reduces downtime, simplifies maintenance and protects yield. OPEX, not CapEx, becomes the dominant driver of value.

This is particularly relevant in AgriPV, where system accessibility, durability, and adaptability are not optional. Farming equipment must operate under and around the structure. Crops must receive appropriate light conditions. Maintenance must be predictable and efficient. The tracker is no longer just a yield optimization tool. It is a platform for operational continuity. And yet, not all trackers are built for that reality.

IDEEMATEC: the gold standard

Operational excellence in utility-scale solar is often discussed but rarely defined in concrete terms. In the context of AgriPV and increasingly across all large-scale projects, it comes down to three outcomes: reliability, standardization and speed, all of which are directly shaped by the tracker.

Reliability starts with the mechanical design, where a decoupled drive system ensures that loads are absorbed by the tracker structure rather than transferred to the modules, reducing wear, lowering failure rates and enabling predictable maintenance cycles that translate into stable OPEX over a 25-year horizon.

Standardization addresses scalability, with a unified system logic such as the L:TEC platform providing consistency across projects while still allowing project-specific adaptation, thereby reducing engineering effort and complexity for multiproject IPPs and enabling more efficient portfolio expansion.

Speed, finally, is driven by execution: preassembled components and a reduced number of parts, up to 30% fewer than conventional systems, allow for faster installation without compromising quality, shortening construction timelines and accelerating time to revenue.

With more than 500 MWp AgriPV trackers installed, IDEEMATEC is the gold standard for projects of all dimensions. The success stems from centering reliability at scale, supported by a system architecture that is specifically designed for the realities of long-term operation.

AgriPV is scaling. Is your technology ready?

The energy market is at an inflection point. Evolving regulatory aspects like the EEG 2027, coupled with limited viable space, cannot be handled by the same project models we already know. The framework itself is moving toward more complex projects, integrated land use and decentralized energy systems. This results in AgriPV branching out of the niche segment and trackers becoming a critical enabler of large-scale deployment.

It's the cornerstone technology connecting engineering and operations to the project economics over the full lifecycle of a project.

Experience the difference

The evolution of utility-scale solar is happening now and the next generation of projects is already taking shape.

To explore how tracker technology is redefining performance in AgriPV and beyond, meet IDEEMATEC at Intersolar, Outdoor Area, Booth 704/34, or get in touch directly. Because in a converging market, the difference is no longer in the obvious components. It is in the one decision you only make once.

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