





Don't change your surroundings, adapt to them

How terrain-following trackers reduce costs and improve long-term performance

We all recognize this scene: two screens, one showing a table document with numbers stacking into dizzying heights, the other showing a satellite picture somewhere in Europe, hilly terrain that seems to capture the sun in a basin-like shape. What we see here is the inception of a brand-new solar park; if the numbers end up showing its worth it. Because it's not only what steel, trackers, panels and construction will cost. It's how this construction will perform after going on grid. So really, decisions made today, based on the calculations in this spreadsheet, need to consider the whole lifetime.

'Will I get my return as planned, or am I sinking money into unexpected corrective maintenance efforts for a fragile solar park system?'

Given the significant financial stakes involved, often amounting to hundreds of millions, it is natural for investors to exercise caution.

EPCs feel the pressure to provide some really good arguments for each project. The easiest, timesaving and cost-efficient solution? Don't adapt your surroundings, adapt to them.

Tailored performance, standardized platform

Instead of grading nature's curves to a more preferable site, the project needs to follow slopes and hillsides. A solar tracking solution that actually takes the real world into account from the get-go. The L:TEC® platform is the shared DNA of IDEEMATEC's trackers, built on unified mechanical and structural framework that delivers consistent performance across various tracker types and terrains.

Whether deployed in small agricultural applications or multi-gigawatt utility scale sites, all L:TEC® trackers share identical design principles, reducing engineering complexity and simplifying training. High structural stability under wind and snow loads as well as flexible terrain adaptability, make them the most fitting option for complex terrain as well as flat areas, and environmental factors and ensure long-term operability.

L:TEC® 1P: high-performance for utility-scale installations

The Horizon L:TEC® 1P is engineered for large-scale plants that need high yield, stability and efficient land use. Its design prioritizes structural resilience and durability, withstanding wind speeds up to 400 km/h and heavy snow loads, which are automatically dropped off after reaching a pre-determined height.

The patented decoupled drive reduces mechanical stress and balances loads across the structure. Row lengths up to 260 meters support large module counts, while fewer drive units and electrical components lower maintenance complexity over time. The result is a robust tracker that supports predictable performance and availability across asset life.

L:TEC® 2P: Efficient land utilization for distributed generation and constrained sites

For projects where land availability is restricted or soil conditions pose engineering challenges, the L:TEC® 2P offers a high-density two-in-portrait solution that combines structural stability with strong energy efficiency. Its modular architecture is well suited for medium-sized installations and distributed-generation projects.

With a low foundation pile count, the tracker performs effectively in geotechnically challenging or cost-sensitive environments. Multiple locking configurations help eliminate torsional effects, making the L:TEC® 2P a dependable option across diverse terrains and regions.

L:TEC® Agri-2P: Dual land use for agrivoltaics

The L:TEC® Agri-2P extends this engineering philosophy into the agrivoltaics sector, where the dual use of land for both crop cultivation and energy generation is increasingly essential.

Designed specifically for agricultural environments, the tracker allows farmers to maintain productive fields while



simultaneously generating solar power, optimizing land use without compromising agricultural output. Its shading profile can support crop growth in specific climates, while the rugged structural design ensures stable performance in rural areas with varying environmental demands.

An integrated control system, accessible via mobile and remote applications, enables operators to adjust tracker behavior in real time, providing operators with improved flexibility and long-term land efficiency.

Pre-assembly that changes the pace of solar construction

Steel columns, engines, heavy-duty machinery, workers walking in between office containers and cars, there is simply no space to spare for the construction crew to assemble a multitude of different parts into a tracker component. The shift toward pre-assembled components may look like a small technical adjustment on paper, but on a real job site, it changes the entire rhythm of work.

Anyone who has spent long days on solar installations knows how much time is lost before construction even begins. Crews start by sorting hardware, checking part lists, matching bolts to brackets and reviewing assembly steps. Only after this preparation does the structure begin to take shape. Every mistake discovered later triggers rework, and every missing or unclear component slows the momentum of the day.

A different start to the morning

Now imagine a different start. A truck arrives just after sunrise. Instead of crates filled with dozens of individual parts, it brings prepared assemblies that already combine the critical steps. A technician lifts one from the pallet and immediately understands how it integrates into the tracker. There is no searching for the right bag of bolts, no spread-out assembly line on site; work begins almost immediately and continues without hesitation.

This is the practical effect of pre-assembly. It shortens the distance between delivery and productive work by moving key assembly steps into controlled environments where repeatability is high and errors are far less common.

With fewer individual parts to manage, teams spend less time interpreting and more time building. Component variety falls significantly, which makes the entire installation process more predictable and easier to manage. These changes also show up in measurable performance gains, with installation times reduced by up to 18 to 23 percent.

Consistency that scales

There is more to it than efficiency. Preassembly gives developers and EPCs something the industry has struggled with for years: consistency. A site in Arizona now works in the same ways as a site in Spain or South Africa because the assemblies arrive in the same condition, follow the same sequence and fit together with the same accuracy.

Weather has less influence on progress, and crews with different skill levels can work toward the same quality outcomes. For owners and operators, this creates a cleaner handover from construction to long-term operation because fewer variables are introduced during installation.

Most importantly, pre-assembly supports the scale that modern solar development requires. Reducing the number of decisions that must be made in the field allows multiple sites to advance in parallel and removes the friction that typically slows large project portfolios. Instead of fighting through the familiar morning routine of sorting, checking and correcting, crews start their day building. And when thousands of components come together more simply and reliably, the entire industry moves faster.

Built for the long run

One last look at the satellite picture of the slope-style terrain, some edits in the spreadsheet later show the real savings of flexibility. A promising calculation for financing has been born and will hopefully journey from this desk of inception to a real-world project somewhere in Europe.

This long-lasting investment doesn't cause headaches with increasing maintenance costs over time, keeping the LCoE attractive. Soon, we will sleep even better at night, knowing the goods are already waiting for us in a warehouse close by.

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