## Boosting the future of the energy transition



Solar photovoltaic energy is poised to play a leading role in the transition to clean energy. According to the latest World Energy Outlook (WEO) report from the International Energy Agency (IEA), solar energy will account for more than half of the growth in renewable energy by 2030. Axial, a Spanish company specialising in the design, manufacture, and operation of solar trackers for utility-scale photovoltaic projects, is at the forefront of this shift.

In this energy revolution, companies in the renewable energy sector are called upon to play a pivotal role. Axial has emerged as one of the main options to lead the energy transformation worldwide.

Founded in 2008 by its CEO José Luis Fayos, the corporation operates in 50 countries and has executed around 1,000 projects since its inception. It is currently one of the world's top ten tracker suppliers, according to Wood MacKenzie and IHS Markit reports, and in the first quarter of 2024 alone, it exceeded 120 million euros in sales and gigawatt supplied.

With a team of more than 300 professionals and subsidiaries in Latin America and Asia, its extensive experience in diverse and competitive markets and its customer orientation have led the company to specialise in highly difficult projects, carried out in regions with extreme climates and very complex orography.

What sets Axial apart is its steadfast commitment to integrating the latest technological advancements into its designs, with safety and innovation as the core values guiding the development of its solar trackers. This focus on quality is reflected in the company's national and international certifications.

## **Technology and safety pioneers**

Axial has solidified its status as a leading global player in solar tracker design due to its technological innovation and the high level of safety provided by all its products.

The company stands out for its significant investment in technological innovation, leading the way in the adoption of key technical advancements such as the reinforcement of its solar trackers and the use of homokinetic technology.

In its quest to establish the safest solar trackers on the market, Axial introduced the AxialTracker 2TT with Blocking System® in 2018. In 2022, this was enhanced with the Multiblocking System®, allowing the design of even more rigid trackers. This advancement improves safety and durability, reduces torsional deformations, and offers better strategies for counteracting wind-related dynamic effects.

In 2020, the company was the first to implement homokinetic technology, going one step further than its competitors in the design of its dual row tracker AxialTracker Twin. A tracker that is more adaptative and safer than those previously available on the market.

The homokinetic transmission in the Axial Tracker Twin enables both rows to operate in perfect coordination without needing to be aligned or parallel to each other.

The homokinetic joint accommodates a misalignment of up to 30 degrees, providing a tracker that can fully optimise site layout. It allows for north-south and east-west terrain slopes of up to 15%, enabling complete adaptation to the landscape and reducing the need for civil works in projects.

Axial has continued to advance and perfect this cutting-edge technology, leading to the launch of its fourth-generation tracker, the AxialTracker SlopeSync, in 2024.

This articulated dual-row tracker is designed for complete adaptability to slopes and uneven terrain, moving beyond the traditional concept of a continuous straight torque tube axis. By enhancing existing ground adaptation systems, this new design features a torque axis made of a series of independent, articulated bars that rotate together while allowing flexibility to deviate and take on different inclinations. This enables the structure to adapt to varying ground contours at each point while maintaining proper solar tracking.

This innovative system aims to enhance existing ground adaptation methods, which typically rely on highly ductile steels to allow the tracker axis to flex. These forced deformations within the structures can compromise long-term reliability, as the cyclic stress and resulting fatigue phenomena are not conducive to extended durability.



SlopeSync avoids these deformations, minimising structural stress in critical components of the tracker, which extends its lifespan. Another distinctive aspect of this new design is its improved installation efficiency and reduced civil engineering requirements, leading to more sustainable projects.

## Leading the energy transition around the world

With its fourth generation of solar trackers, the company underscores its commitment to sustainability. The adaptability of its products to various terrains allows the company to minimise the environmental impact of its projects. This approach, combined with its vast experience and innovative mindset, has established Axial as a leading company in the global photovoltaic industry.

Specialising in utility-scale photovoltaic projects, it has become the leading reference in the solar tracker market in Spain, Italy, and Brazil.

One of Axial's latest projects involves supplying one of the largest photovoltaic plants ever built in Italy. In this project, it will provide the 300 MW plant with its AxialTracker 2TT. The project is particularly challenging due to the diverse terrain configurations, requiring its engineering team to conduct an exhaustive analysis to meet the customer's requirements while simplifying the installation process as much as possible.

As part of its international growth, the company has built a significant presence in Latin America, particularly in Brazil, where it has become a leading player in the market. With a full infrastructure in place, Axial Brazil has positioned itself as a major tracker manufacturer. By operating its own factory in the region, Axial maintains a stable and integrated presence in the region, which is the world's third-largest solar market by annual gigawatts.

In terms of supplying fixed structures, the company is also a leading provider in Europe, dominating markets such as those in the Netherlands, France, Ireland, and the United Kingdom. In fact, it recently secured a contract to supply a 350 MW utility-scale photovoltaic plant in the United Kingdom, the largest project of its kind ever constructed in the country. Defined by its global vision, Axial is consistently expanding and continues to grow its presence worldwide by entering new markets. Last year, the company secured its first project in Saudi Arabia, as part of its strategy to strengthen its foothold in the EMEA (Europe, Middle East, and Africa) region, a critical area for the future of solar energy.

'We aim to continue on this path of growth, concentrating on the successful execution of major utility-scale projects across the globe. Our extensive experience, coupled with the quality of our products, which feature the latest technology and meet the highest safety standards, serves as our guarantee of excellence,' concludes Jose Luis Fayos.

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