

## Combining ultra-high performance modules with advanced trackers for maximum yield



**Vertex**  
**Vanguard 1P**  
**Valcasado**  
**Solar Park**

### Location

Huelva, Spain

### Type of Project

Ground Mounted

### Installed Capacity

22.02 MWp

### Number of Modules

33,600

### Number of Trackers

580

### Annual System Output

47,000 MWh

### CO<sub>2</sub> Savings

45,100 tCO<sub>2</sub> per year

### Completion Date

June 2024

### Type and Power Class of Modules

Vertex Dual-Glass Bifacial | 655Wp

### Type of Trackers

Vanguard 1P

**The Valcasado solar PV project exemplifies modern advancements in renewable energy. Situated in San Juan del Puerto, Huelva, this 22 MWp photovoltaic plant uses Trinasolar's Vertex modules and Vanguard 1P tracking systems. Expected to produce 47 GWh in its first year, the project will produce enough power for 14,000 homes and prevent 45,100 metric tons of CO<sub>2</sub> emissions annually.**

Owned and developed by The Green Tie Capital, the power plant was constructed by Elmya. Equipped with 33,600 Vertex bifacial modules and 580 Vanguard 1P trackers, the project benefits from Trinasolar's integrated module and tracking solutions. The Vertex dual-glass bifacial modules provide high efficiency due to their bifacial design, capturing solar energy on both sides to increase output. Meanwhile, the Vanguard 1P tracking systems enhance performance by aligning the panels with optimal solar angles throughout the day.

The combined use of modules and trackers from the same manufacturer maximizes compatibility, streamlining installation and reducing costs. Additionally, tight component integration accelerates project timelines, with Valcasado saving €100,000 on installation costs.



The site at Valcasado is flat and arid, with minor slopes and minimal annual precipitation. These conditions necessitated robust construction, verified by soil saturation and pull-out tests to secure long-term foundation stability. The plant's layout maximizes land use while adhering to legal boundaries, with a tailored mix of 32-module and 64-module trackers to optimize energy capture across three designated zones.

In line with Spain's renewable energy targets, the Valcasado project contributes significantly to the country's decarbonization efforts. The combined



deployment of ultra-high performance solar modules and advanced tracking systems enhances energy production while ensuring minimal environmental impact, setting a benchmark for future solar initiatives in the region. With rapid scalability and lower Levelized Cost of Energy (LCOE), the project underscores the value of integrated solar solutions in achieving sustainable energy goals.

The Valcasado project is a model of effective solar PV deployment, showcasing the advantages of integrated module and tracker solutions for optimizing performance and sustainability. This approach aligns with Trinasolar's commitment to innovative, low-cost solar solutions, paving the way for similar projects to support a clean energy transition in Spain and beyond.

***"The Valcasado project has been a great challenge for Elmya. We design and construct PV plants with the highest standards for quality and environmental sustainability, and this project meets those standards."***

**Miguel Pantoja**  
**Project Manager at Elmya**

