



# Powering tomorrow

PES spent time talking to Carlos Lopez, CRO of PV Hardware, exploring the company's journey as a leading manufacturer of solar tracking solutions. With over 29 GW delivered worldwide and a strategic focus on international growth, it looks poised to help shape the future of solar energy.

**PES:** I'm looking forward to learning more about PV Hardware today, Carlos. For those readers who may be new to the name, can you provide some brief company background?

**Carlos Lopez:** At PV Hardware (PVH) we manufacture and supply innovative solar tracking solutions at a global scale for the solar energy market, including solar trackers, fixed structures and SCADA systems. We currently own three factories in Spain, Saudi Arabia and USA, and we plan to achieve a

global capacity of over 30 GW per year by the end of 2024.

So far, we have supplied over 29 GW to more than 500 large-scale projects across five continents, which has positioned us as the world's third largest supplier of solar trackers and structures. Now we are working on an international growth strategy that will consolidate PVH as one of the leading solar tracker companies in the world.

**PES:** How would you describe your experience in 2023?

**CL:** 2023 was the best year in PVH's history. We supplied over 11 GW to 163 large-scale projects and we achieved unprecedented business figures and economic growth. All this would not have been impossible without the trust of our clients and without a truly extraordinary team of people.

The PVH workforce is our greatest asset. We have doubled our staff internationally and they have made a very big effort to grow at all levels. We have had amazing top-qualified professionals moving to



Houston, Saudi Arabia, Dubai, South Africa and Australia, among other places, and giving their best for the company. Their effort and commitment are definitely appreciated, and the success of PVH is their success too.

**PES: Following a year of unprecedented business performance and economic expansion, are you planning to increase staffing and investment across all levels in response?**

**CL:** Yes. We are confident of our strategy and our trajectory. We are ready to make important investments across all organizational levels, and we are planning to expand our manufacturing capacity in Europe and the Middle East. This strategic move is designed to bolster our global leadership in the solar industry and enhance our clients' confidence in PVH.

**PES: Would you say this growth is being felt internationally?**

**CL:** That is our main goal. PVH was created in 2011 with a vocation to lead internationally, and we have achieved big goals on our way. In 2023 we have led the solar tracker market in Europe, the Middle East and Australia. We are ready, not only to consolidate this position, but to lead the sector on a global scale. We

own the largest factories in the world dedicated exclusively to the manufacture of solar trackers, so we provide an unparalleled added value of adaptability to our clients' needs.

**PES: You have recently opened a new factory in Houston, and will soon inaugurate your third manufacturing facility. Tell us more about that factory.**

**CL:** The new US factory in Houston was the logical next step in our international trajectory. The American solar industry is expected to grow exponentially in the near future and, being the international leader it is, PVH will play a key role in this expansion. We are under a huge growth mode right now in the US. We've made an enormous investment in a 12 GW state-of-the-art factory, complying with all American regulations and requests. We're completely vertically integrated, we manufacture everything in house, and we are able to provide a full adaptation to the US tracker market.

**PES: How is your business performing in Saudi Arabia? What has been your experience operating there, and can you share insights into some of the recent projects in this region?**

**CL:** The Middle East is undoubtedly one of the most crucial hubs for PVH's global business performance and our international growth strategy. GCC countries, particularly UAE and Saudi Arabia, are implementing highly ambitious energy transition policies towards renewable energies. We strategically decided to establish PVH Middle East as a 100% Saudi company, as the best way to comply with local regulations and access the world's largest solar projects that are being developed.

We have opened our second manufacturing facility in the Saudi city of Jeddah, and within a few months, we have already solidified our position as one of the leading companies in the local solar industry, with the highest local content score that can be achieved in the region. Our track record in the Middle East, between ongoing and already delivered projects has exceeded 14 GW, making us the largest tracker supplier in the region.

We have also partnered with the leading players in the industry, such as ACWA Power and NEOM in Saudi Arabia and Masdar and DEWA in UAE, to deliver the most innovative, the largest and the most important projects in the world.

**PES: Are there new products and solutions in your portfolio to support the growth?**

**CL:** We are constantly working on the best ways to improve our products and fulfil the needs of our clients. For example, in 2023 we introduced a CONNECT, a full tracking app that allows the user to actively track each item shipped and its exact location, as well as a forecast of when it will arrive at the final

destination. In addition, these data can be downloaded to any device for more convenient management and analysis.

We have also updated our monitoring tracker SCADA systems with the DBox5 and have recently launched AxoneDuo Infinity, the latest evolution in our solar tracking systems.

**PES: How does your latest control device, the DBox5, differ from earlier models and what are its advantages?**

**CL:** The DBox5 is the new generation of solar controllers, specifically designed to make photovoltaic installations more efficient than ever. Equipped with state-of-the-art technology, a superior communication system and a cutting-edge design, the DBox5 joins the functionalities of the latest generation of grid control units and new terrain-adaptive trackers to create a complete and absolutely renewed plant control system.

We have made a stronger device that is better connected with long-distance wireless communications protected by end-to-end cybersecurity systems, that can be managed through a highly intuitive interface on a new control app, available for both Android and iOS. The standby power consumption of the DBox5 has been reduced by 75%, allowing for a significant increase of its autonomy, and we have even reduced the carbon footprint by 18%.

We have built a more robust controller, with longer battery life that will withstand even the harshest conditions.

**PES: What's your latest product launch?**

**CL:** We have recently launched AxoneDuo Infinity, an evolution of our existing trackers to a maximum level of versatility. By changing the connection between rows with a cardan joint, we can offer different options of connecting rows and strings to meet specific terrain requirements in different locations, even within a single project.



Carlos Lopez



This system is equipped with new defence mechanisms for strong winds and hail, and is reinforced with tolerances and a number of devices on the structure that will prevent damage in an emergency. As we can operate the sole plant with a reduced number of motors, AxoneDuo Infinity optimizes project performance and minimizes total costs.

**PES: Customers need assurance about the quality and reliability of products, while also looking for ways to reduce installation time. How are you able to help here?**

**CL:** At PVH we control the whole process of our product, from design to manufacturing and delivery. We are fully aware that return on investment is a basic priority for our clients, especially on large projects with different partners and big investments. We have developed several ways to address the need for streamlined installation processes and make installations more efficient and cost-effective.

One of the most recent adaptations was to start installing octagonal torque tubes that reduce the steel needed while maintaining strength and durability. We test new treatments on our steel to improve resistance on the harshest conditions, from sand erosion in desert areas to snow and hail in northern Europe and USA.

**PES: Through prioritizing the pre-assembly of components within the factory, PVH can significantly decrease field installation time by up to 40%. Is this accurate? Please elaborate on how this is achieved.**

**CL:** PVH's factory pre-assembly strategy represents a revolution in operational efficiency resulting in a drastic reduction in the final cost of each of its solar projects. We have implemented this innovative approach of an advanced in-house pre-assembly process in all of our factories and we have reduced significantly the number of components delivered to the site by more than 85%, thereby reducing the installation time of solar projects by more than 40%.

This proactive approach not only benefits the company, but also brings significant advantages for both the end customer and the project manager. By assembling the most sensitive components in a controlled environment within its facilities, PVH provides confidence and security to its customers. In fact, the warranty on the designs and products of its latest projects extends up to 37 years.

**PES: Have you set your sights on 2024 being another year of growth? Does this apply to Europe and the rest of the world and how do you think the various global markets will differ?**

**CL:** Absolutely, we are optimistic about the growth prospects in 2024, both in Europe and across the globe. Our strategic initiatives, innovative solutions, and commitment to sustainability put PVH in a unique position to keep our trajectory of expansion and success in diverse markets.

We will soon start delivering from our Houston factory, we are already planning the extension of the Jeddah facility, and we have big plans to build the world's largest solar tracker factory in Spain. AxoneDuo Infinity will be a real game changer in our projects, and our clients will learn soon about all the value our pre-assembly process provides in terms of logistics and cost effectiveness.

We will keep working hand in hand with our customers, supporting them and giving them the best customer experience ever.

2024 market looks promising in all geographies. We have set our sights on continued sustainable growth, while looking after our global team. So please stay tuned for what's coming.