Time for climate action with scalable technology

The traditional energy supply landscape is changing, with solar energy becoming a necessity for modern companies. Many are taking control of their energy supply with their own industrial solar parks. PES learnt more about this shift from Joachim Goldbeck, CEO of Goldbeck Solar.

PES: I am pleased to welcome you to this edition of PES Joachim, and to introduce our readers to all things Goldbeck Solar. To give them an initial idea, you have been supplying photovoltaic systems to commercial and industrial customers for more than 20 years, right?

Joachim Goldbeck: Yes, you are right. Goldbeck Solar is an international company that specializes in the turnkey construction of photovoltaic systems for commercial and industrial customers. Since 2001 we have successfully completed projects in Germany, Europe and worldwide. We offer our

customers reliable, affordable, and profitable solutions that cover the entire value chain, from project development, engineering, construction, operation, and maintenance to financing and energy supply as a service. We are proud to be a gateway to solar energy.

PES: How have things changed in the industry in this relatively short space of time?

JG: The PV industry has undergone significant changes in the last two decades, both in Europe and globally. Cumulative global installed PV capacity reached 1.18TW in 2022, with China, Europe and the USA being the largest markets. According to the Snapshot of Global PV Markets 2023 report by the IEA, the cost of solar PV modules has fallen by more than 90% since 2010, which, coupled with technological innovation has improved the efficiency, reliability, and durability of solar PV systems, making it more competitive.

In addition, political support has changed dramatically, especially in Europe and the US after the outbreak of war in Ukraine, stimulating demand and investment in solar PV. As the penetration of solar PV in international electricity grids increases, integration challenges arise that require more flexibility, storage, and smart solutions to ensure grid stability and security.

PES: The traditional energy supply system has changed, and solar energy has become a necessity for modern companies, many of which are taking over their energy supply with their own industrial solar parks. How do you contribute to this?

JG: We contribute to this by offering our customers a modular construction system, in which customers can combine their resources and Goldbeck Solar fills in what is missing.

In the case of industrial solar parks, we can offer the construction of solar power plants on roofs on the side of the park, or energy supply contracts that allow our clients to reduce their energy costs and carbon footprint, while increasing their energy independence and security.

PES: Do you have any examples of this being put into practice?

JG: In Germany, many industrial parks and large companies have installed solar power plants to achieve their environmental goals. A notable example is Loreal, a cosmetics company that received an award for reaching CO_2 neutrality in 2021 for all its German sites. The company combined various measures, including a rooftop solar plant, to accomplish this feat. Solar energy is an investment driver case to obtain an inexpensive and clean energy supply, while remaining an attractive investment.

PES: In an industry that is based on the drive towards a more sustainable way of life, how important is it that the systems and services you offer are themselves sustainable?

JG: Creating a sustainable future is our industry's utmost priority. We strive to meet the evolving needs and aspirations of our customers and society while minimizing environmental impacts and promoting well-being and economic prosperity.

To achieve this, a fundamental shift in thinking and business practices is required. We are actively restructuring our processes, systems, and services to embrace innovation, resilience, adaptability, and efficiency.

This involves harnessing renewable energy sources, utilizing recyclable and bio-based materials, integrating smart technologies, and embracing principles of the circular economy. We are working very consistently to achieve this challenging transformation every day.

PES: Can you describe in detail the sustainable value proposition of Goldbeck Solar?

JG: Our sustainable value proposition is to provide solar energy solutions that are not only cost-effective, reliable, and profitable, but also ecologically and socially responsible. To do this, we plan our plants using the best planning tools, such as the 'SolarPlanner', to rationalise resources and make our plants technically and financially efficient.

We build our plants using the best available technologies and materials, ensuring high performance and efficiency throughout their lifetime. We improve our installation processes and collaborate with our business partners along the entire value chain. Thus, we not only work to meet the requirements of areas 1, 2 and 3, but also our business partners.

We offer maintenance and operation services that optimize the performance and profitability of solar plants, as well as reduce environmental and social impacts, such as land use, recycling, and community engagement.

We offer energy as a service through a variety of sales models, such as power purchase agreements, leasing, or self-consumption, which allow our customers to access clean, affordable energy with no upfront investment or risk. And of course we

innovate and develop new products and services that address current and future challenges and opportunities in the solar industry, such as the multiple uses of solar plants in combination with agriculture, biodiversity, and new technologies.

PES: In terms of the services you provide, do you cover all aspects, from project development onwards?

JG: Our offer is based on a building block system, and we can complement capacities of our partners to round up a 360 degree well balanced project. From the project development and financing to the construction and operation of the plants throughout their entire lifespan, which can last up to 25-30 years. We provide technical and financial support, as well as energy as a service through various sales models. We are a single source for customers who seek a strategic partnership for fast and hassle-free projects in different countries.

PES: Can you design projects from scratch yourselves or in collaboration with project developers?

JG: We can enter a cooperation at any stage. Design projects from scratch ourselves or in collaboration with project developers. We have a team of engineers and experts who can develop the best technical and economic solutions for each project, considering the specific site, customer and grid requirements and conditions. For this we use our unique SolarPlanner tool.

We can also work with project developers who have already secured land or rights for a solar farm and need a reliable partner to implement the project.

PES: What are the advantages of this?

JG: Developing projects from the beginning gives us more control and flexibility over project planning and outcomes. We can better plan solutions and execute next steps based on our available resources and adjust to changing circumstances by exploiting synergies. For our customers, this means an optimised and cost-effective solution. Early-stage developments increase the margin, while late-stage developments increase the speed of construction.

Both options increase the PV volume.

PES: What about regular maintenance services and operation once the solar system is installed, do you also have services for this aspect?

JG: The operation phase requires professional technical and commercial asset management. We have offered technical asset management since our foundation. We have plenty of experience and learned from the errors to improve constantly.

Goldbeck Solar is a leading provider of maintenance services for solar plants of any size and technology.

We have a large portfolio of our own and external projects that we monitor daily. We can detect and prevent problems before they affect the performance and reduce the maintenance costs to a minimum. We also suggest technical upgrades that can boost the profitability of a plant.

PES: Do you take care of third-party systems in addition to the ones you build yourself?

JG: We have a diverse and extensive project pipeline that covers all kinds of technologies. We are experts in maintaining not only the most modern large-scale solar plants, but also plants installed by other companies, plants with obsolete technologies or even floating solar systems. We are specialists in Solar PV energy.

Joachim Goldbeck

PES: What advantages and strengths does the company offer, compared to its competitors?

JG: With a 22-year international reputation, Goldbeck Solar is an innovative and sustainable solar energy company that provides lasting solutions. Our unique tools, such as SolarPlanner, enhance the planning of solar plants.

We constantly innovate in Agri PV, which improves our value proposition. As a reliable partner, we work as a team with our customers, solving problems, and celebrating successes for over 20 years. Our customers stay with us for life as we aim to be there at the end of their plant's lifetime.

PES: Looking into the future, what do you think the solar industry will look like in 20 years?

JG: The solar industry's future is promising, driven by advancements in efficiency, materials, resources, and automation. There will be more decentralisation and distribution of solar energy, with smart grids and microgrids enabling people and communities to generate and consume their own energy.

There will also be more integration and diversification of solar energy, with other renewable sources, such as wind, hydro and biomass, and energy storage systems. Plus, more efficient and affordable solar energy, with new technologies and materials reducing the cost and increasing the performance of solar components.

Finally, there will be more sustainability and accountability of solar energy, with more attention to the environmental and social impacts of solar projects, such as land use, water use, recycling, and community engagement, ensuring that solar energy contributes to global climate action and social justice goals.

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