

The integration of digital tools in the processes of solar PV plants is essential for a sustainable future in the USA

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The United States is witnessing a transformative change in its energy landscape, with solar power emerging as a dominant force. As of August 2023, installed solar capacity in the United States exceeded 125 gigawatts (GW), and forecasts indicate a remarkable growth trajectory. This boom in solar energy production is not only reshaping the energy mix, but also underscores the importance of innovative technologies such as those offered by WILOC to improve the efficiency and productivity of PV plants.

Recent data highlight the rapid increase of solar power in the United States. By 2024, the country is expected to generate 14% more electricity from solar than from hydroelectric facilities, reflecting the steady growth of large and small-scale solar projects. The exponential growth of solar capacity is also evidenced by the staggering 44% annual increase in installed solar capacity between 2009 and 2022. Based on this data, the Energy Information Administration (EIA) forecasts that renewable energy, including solar, will exceed 1 trillion kilowatt-hours (kWh) by 2024, accounting for approximately 24.4% of total US electricity generation.

As the United States accelerates its transition to renewable energy, the digitization of photovoltaic plants plays a key role in optimizing efficiency and ensuring a steady and increasing production of sustainable energy. WILOC, world leader in process digitization, thanks to its cutting-edge solutions incorporating the latest IoT technology, is able to offer a complete set of tools designed to streamline the PV plant commissioning process, making it up to 25% faster. Thanks to its SaaS Cloud Platform and On-Site Apps, WILOC is able to keep track of every single solar panel during the assembly phases, counting which parts are in the operating area and which are missing to complete the installation, ensuring that they are placed in the right place and kept in good condition.

Harnessing solar power within the US energy industry is vitally important as the country seeks to diversify its energy sources and reduce its carbon footprint. Indeed, this growth is set to continue, with Wood Mackenzie and the Solar Energy Industries Association forecasting an increase in installed capacity from 153 GW to 375 GW by the end of 2028. This exponential growth positions solar energy as a central player in the transition to a cleaner and more sustainable energy future.

In this sense, the integration of the solar sector with digital tools represents a transformative leap towards greater efficiency in energy production and management. WILOC's IoT solutions enable real-time asset monitoring, improving overall plant performance, while material tracking and preventive maintenance solutions help to identify and rectify problems early, extend equipment life and reduce downtime, which is key to undertaking key challenges in the solar energy sector.

As Adolfo García-Figueras, Business Development Director at WILOC, points out, "Digital technologies, such as those offered by innovative companies like WILOC, not only streamline the commissioning process of solar plants, making them operational faster, but also provide real-time monitoring and preventive maintenance solutions. This integration not only optimizes the performance of solar installations, but also contributes to the overall resilience and reliability of the energy grid, marking a substantial step towards a more efficient and sustainable energy transition in the United States".

About WILOC

WILOC is a world leader in the implementation of cutting-edge solutions for the digitization of processes in different industrial sectors, such as renewable energies, extraction and processing of oil and gas derivatives, construction or traceability of assets and people in smart ports 4.0, contributing to the optimization and reduction of costs. Its solutions, multifunctional, fully scalable and versatile, are aimed at ensuring the safety of workers in all types of industries thanks to its real-time positioning and management of access, entrances, exits and presence; increasing productivity in the renewable energy sector through the digitization of processes; the management and control of assets in warehouses; or the location and management of heavy machinery in large engineering sites. WILOC is currently collaborating with some of the main international engineering projects in markets such as the USA, Saudi Arabia or Singapore, or in different European countries, including Spain. For more information, please visit www.wiloc.com