

SMA Altenso Reaches 1 Gigawatt Milestone in Hydrogen Application Deliveries, Driving Global Renewable Energy Integration

March 13, 2025



SMA Altenso (Altenso), a subsidiary of SMA Solar Technology AG (SMA), has announced a significant achievement, surpassing 1 gigawatt (GW) in total power delivered for hydrogen applications. This milestone underscores Altenso’s leadership in advancing the flexible use of renewable energy through innovative global projects, including the successful implementation of SMA inverter technology for Cleanergy Solutions Namibia’s hydrogen project.

The current project in Namibia, integrating photovoltaics, battery storage, and hydrogen production, highlights Altenso’s strategic role in delivering comprehensive sustainable energy solutions. Dr. Jens Eiko Birkholz, Head of Sales & Business Development at Altenso, emphasized the company’s extensive track record, citing the successful execution of over 80 hydrogen projects utilizing PV and wind energy. These projects collectively enable the production of up to 130,000 tons of green hydrogen annually, contributing substantially to the decarbonization of industrial processes.

“Our achievement of the gigawatt milestone, coupled with our deep technological expertise and international project management experience, positions Altenso as a key player in the evolving hydrogen and renewable energy landscape,” stated Dr. Birkholz. He highlighted the company’s ability to manage increasingly complex projects, including offshore implementations.

SMA CEO Jürgen Reinert emphasized the critical role of stable grid integration and load control in the burgeoning hydrogen market. “SMA’s advanced technologies and Altenso’s project expertise are pivotal in driving renewable energy integration and shaping the future of energy,” Reinert noted.

Altenso is currently leading the system integration for a battery energy storage system (BESS) and providing power-to-gas (P2G) solutions for hydrogen production on Namibia's Atlantic coast. The photovoltaic (PV) farm and battery inverter technology were successfully installed by the end of 2024, with hydrogen production scheduled to commence by mid-2025. SMA's specialized rectifier solution, utilizing IGBT technology, ensures compatibility with diverse electrolyzers and strengthens grid stability through integrated services such as fault ride-through and reactive power support.

Furthermore, Altenso has developed an advanced energy management system (EMS) specifically tailored for these types of projects. This EMS optimizes sustainable hydrogen production by leveraging PV forecasts and dynamic demand profiles, demonstrating Altenso's commitment to driving efficiency and innovation in the renewable energy sector.