



Energy storage of renewable energy



Flexibility



Power density



Sustainability

Energy capacity in MWh

5.8



Charge power in MW

2.9



LEUTERSHAUSEN
GERMANY



STORING RENEWABLE ENERGY IN GERMANY

ABO Wind relies on **mtu** EnergyPacks to store renewable energy from a solar park in Bavaria

Executive summary

The German company ABO Wind designs and develops systems for generating electricity from renewable energies. In 2023, a solar park was built in Bavaria. To ensure optimal use of the electricity, the company opted for **mtu** EnergyPacks QG as a battery energy storage solution.

What

Delivery and commissioning of a large-scale Battery Energy Storage System (BESS)

Where

Leutershausen, Bavaria, Germany

Why

Storage of renewable energy

Main benefits

- Flexibly scalable battery storage
- Optimum power density
- Easy integration



A Rolls-Royce
solution



BATTERY SOLUTIONS: THE BEST WAY TO MEET SUSTAINABILITY TARGETS

ABO Wind is an experienced designer and developer of wind and solar farms. An **mtu** EnergyPack QG Battery Energy Storage Solution (BESS) was installed for their new plant in 2023. Because the company's Head of Project Development Wind and Solar, Thomas Treiling, knows: "The only way to achieve the climate targets is with sufficient storage capacities."

Initial Situation

Germany, at the heart of the European Union, has been pursuing ambitious goals for expanding renewable energies for years. Despite not being among the sunniest countries in the world, Germany has consistently ranked among the top 5 producers of renewable energy from solar parks in recent years. In 2022, the capacity of solar energy exceeded 65 GW throughout the year.

This is made possible by providers like ABO Wind. Founded in the state of Hesse in 1996, the company develops projects in the field of renewable energies, battery systems, and hydrogen solutions. In total, ABO Wind has now realized projects with a capacity of around five gigawatts. A new facility was established in 2023 in the southern state of Bavaria, whose infrastructure is comprised of solutions from Rolls-Royce.

Solution

As experienced developers of wind and solar parks, ABO Wind understands which critical components are essential for plants like this. Thomas Treiling, Head of Project Development Wind and Solar at ABO Wind, explains, "The only way we can increase the share of renewables in the generated electricity and achieve the climate targets is with sufficient storage capacities. We are proud to be among the pioneers in Germany with these hybrid projects and to have a reliable partner at our side in Rolls-Royce."

This storage capacity was installed in the form of an **mtu** EnergyPack QG. The flexibly scalable and grid-connected BESS can store up to 5.8 MWh and has an output of 2.9 MW. In total, the facility can produce up to 10,000 MWh per year, with its establishment supported by the German government: Due to the sustainability of the solar park, it benefits from subsidies provided by German programs to strengthen renewable energies.

SERVING THE ENERGY MARKET OF THE FUTURE

Germany is a country with an increasing amount of renewable energy. BESS are a key technology for this, as the plant in Bavaria shows.

Result

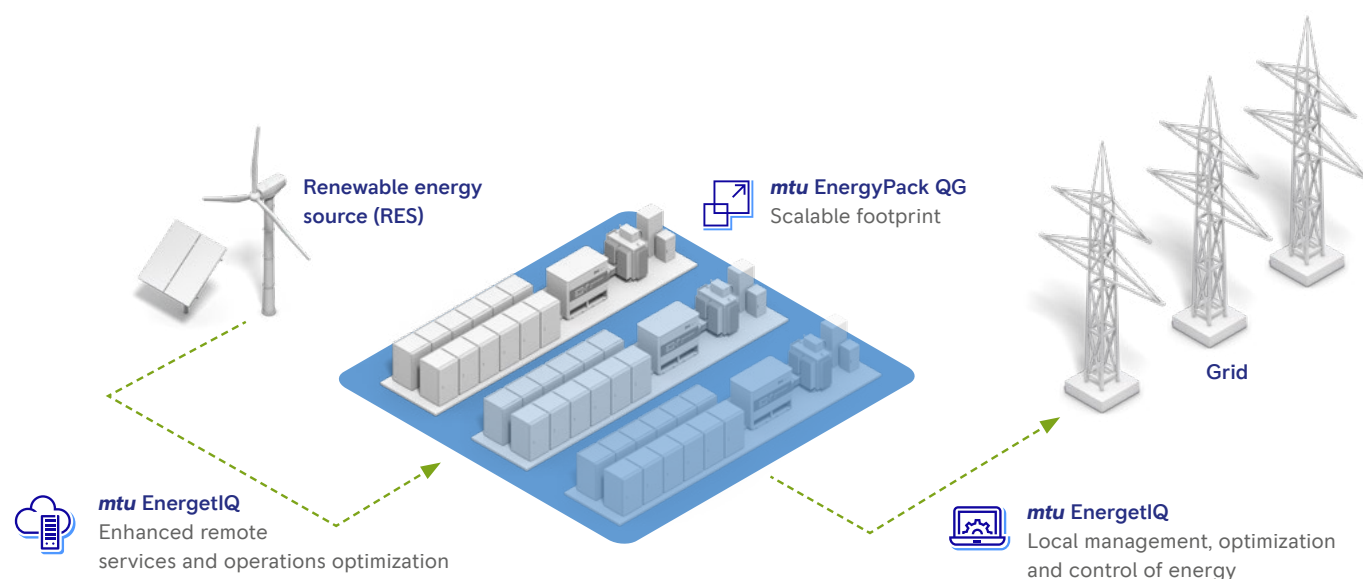
Through the combination of expertise and suitable solutions, solar parks like the one in Bavaria become a cornerstone of sustainable energy transformation. Andreas Görtz, President Sustainable Power Solutions at Rolls-Royce Power Systems, confirms: “We are delighted to have found a partner in ABO Wind with whom we can serve the energy market of the future in a trustworthy and competent manner.” In its current configuration, the project supplies enough sustainable electricity for 3,000 three-person households, saving 6,300 tons of CO₂ per year.

Projects like the facility in Bavaria demonstrate the readiness to venture into greater sustainability. In 2023, the German Bundesnetzagentur (Federal Network Agency), responsible for ensuring high and reliable power quality in the country, estimated the share of renewable energies in the national electricity mix at 56%. Only BESS enable this share to have a long-term contribution to the sustainable energy transition.



UNLIMITED SCALING MEETS PROJECT-SPECIFIC NEEDS

The **mtu** EnergyPack QG is the battery energy storage system designed for grid-scale applications.



A complete plant design may consist of multiple building blocks. Each block is designed for a nominal charge and discharge rating of up to 4.4 MVA. The power conversion system can be combined with either rack or container-based battery systems sized according to the desired C-Rate.

The thoroughly tested and certified batteries feature integrated control, fire suppression, cooling, and heating systems. As standalone operational units and due to their modular design, they can easily be replaced in case of failure, ensuring reliable operation with the highest availability of your batteries.

Our team of experts will help you design a system that meets your project goals and maximizes your site's potential.

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