SUNGROW
Clean power for all

100 MW / 331 MWh BESS

SPEED MEETS POWER

UK TEAM SETS COMMISIONING RECORD

PowerTitan 2.0 BESS

SC3150UD-MV MVS

GRID FORMING

ACHIEVING COMMERCIAL OPERATION IN LESS THAN TWO WEEKS AFTER GRID ENERGISATION, IT MARKS A 72% GAIN IN BESS DELIVERY EFFICIENCY AND SETS A UK RECORD.

In early 2025, the 100MW/331MWh Bramley Battery Energy Storage System (BESS) officially entered commercial operation, marking a major milestone in the UK's transition to a low-carbon energy future. Developed by BW ESS and powered by Sungrow's state-of-the-art PowerTitan 2.0 system, the project exemplifies innovation, safety, and long-term value in the energy storage sector.

Located in Bramley, Hampshire (UK), the Bramley BESS is one of the country's most advanced energy storage projects. Delivered in record time, the system reached commercial operation just two weeks after grid energization, an achievement that sets a new standard for battery storage deployment across the UK and Europe.

Location
Bramley,
England

Systems
66x ST5015UX
BESS PowerTitan 2.0
33x Medium Voltage
Stations MVS5000-MV

EPC
BW ESS

EQUIPMENT DETAILS

The project has a capacity of 100 MW and 331 MWh and is equipped with Sungrow's PowerTitan 2.0, each with 5 MWh energy storage capacity, and separated Medium Voltage Stations, each with a 3.3 MVA transformer.

The all-in-one design of PowerTitan 2.0 combines a 2.5 MW Power Conversion System (PCS) and a 5 MWh battery system within a single 20-foot container, leading to a significant smaller footprint of the project by 55%.

BW ESS and Sungrow members during onsite in front of the PowerTitan 2.0 containers inauguration day.

In addition, this modular AC-DC block design, featuring pre-assembled battery modules and PCS, allowed for rapid on-site deployment and minimized installation complexity.

A notable innovation is PowerTitan's advanced grid-forming capability, designed to address declining grid inertia and damping associated with the increasing share of renewable energy. This cutting-edge technology, utilized for the first time in Europe, positions the Bramley project at the forefront of flexible, reliable energy storage solutions in the UK.

The system connects to the UK's 132 kV electric circuit via a loop-in and loop-out Extra High Voltage (EHV) configuration, an optimized design that strengthens grid protection schemes.

PowerTitan 2.0 can be installed back-to-back with a distance of 15 cm and with no loss of performance.

OBJECTIVES & OUTCOMES

The primary objective of the BESS project was to deliver a high-performance, large-scale energy storage system capable of enhancing grid flexibility, enabling the integration of renewable energy and pioneering new business models for long-term storage deployment.

One of the most remarkable outcomes was the record-breaking two-week timeline from grid energization to commercial operation. In the UK, this process typically spans several months due to extended commissioning, compliance testing, and regulatory approval phases. In coooperation, the teams from Sungrow and BW ESS set a new industry record by achieving commercial operation just two weeks after grid energization, completing HOT commissioning compliance and services testing within 12 days. Read more

PowerTitan 2.0 containers have been shipped directly from the Sungrow headquarters in China to the UK's closest harbour.

This impressive achievement is attributed to two main factors:

» Innovative System Design: The AC-DC block architecture of PowerTitan 2.0 enabled factory-level pre-commissioning, seamless integration, and reduced complexity during installation. By avoiding the traditional separation of PCS and battery systems, and by conducting pre-validated grid tests, the timeline was significantly compressed.

» Expert Project Execution: Sungrow assembled a multidisciplinary team of R&D specialists, project managers, and on-site engineers to deliver with precision and speed, and to respond promptly to the testing needs of the project operator and the grid. The team, eventually, successfully completed and passed all grid ancillary services tests in just one and a half days, significantly reducing testing time and enabling earlier energy trading and grid service benefits for customers

"This success was the result of outstanding teamwork between BW ESS and Sungrow. It demonstrates that for a project to truly succeed, it requires the seamless collaboration of client, supplier, and product - a true trinity."

Dr. Nan Jia
Chief Technology Officer at BW ESS

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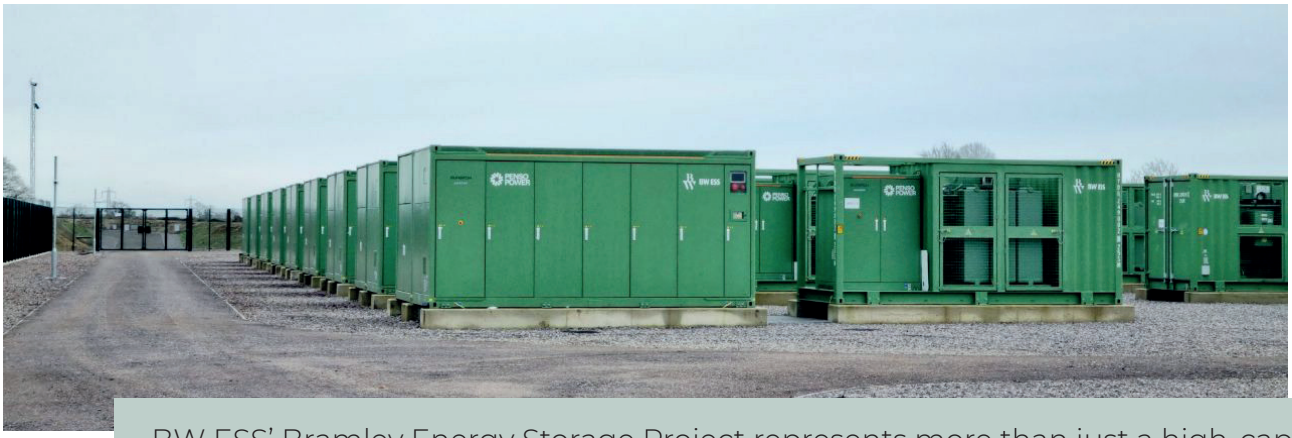
BUSINESS MODEL

The project is supported by a pioneering seven-year tolling agreement between BW ESS and Shell Energy Europe Limited (Shell). This is the first publicly announced long-term tolling deal for a single BESS asset in Great Britain, setting a precedent for a new revenue structure in the evolving power market.

Under this agreement, Shell manages the trading of Bramley's capacity across ancillary services and wholesale markets, while BW ESS benefits from predictable, fixed-price revenues. This structure provides financial security and de-risks long-term operations, making Bramley a model for future storage investments across Europe.

The agreement reflects a market shift, from short-term frequency response models to longer-duration load shifting, enabled by the performance and reliability of next-generation Bramley BESS technologies like the PowerTitan 2.0.



BW ESS' Bramley Energy Storage Project represents more than just a high-capacity BESS: it stands as a blueprint for future deployments that combine cutting-edge technology, innovative financing, and exceptional execution.

With its industry-first tolling model, record-setting deployment speed, and grid-forming capabilities, Bramley redefines what's possible in energy storage, offering a scalable and replicable solution to meet the evolving needs of a renewable-powered future.

ABOUT SUNGROW

Founded in 1997 by Professor Cao Renxian, Sungrow Power Supply Co., Ltd. is a global leader in renewable energy technology. With over 740 GW of power electronic converters installed worldwide, Sungrow is dedicated to clean energy solutions.
Entering the energy storage sector in 2006, Sungrow specializes in integrated ESS solutions, including PCS, lithium-ion batteries, and energy management systems. Its turnkey solutions serve residential, commercial, and utility applications.
With 19 years of growth and zero security incidents, Sungrow is a top ESS provider. In the first half of 2024, it shipped 8 GWh worldwide and was ranked the most bankable ESS and PCS company by BloombergNEF.

ABOUT BW ESS

BW ESS is a global energy storage owner-operator, moving with speed to deliver market-leading projects across multiple countries. Through greenfield origination and development partnerships, we have grown a pipeline of about 7.5 GW across the UK, Australia, Italy, Germany and Sweden, with over 500 MWh of energy storage projects in operation and over 2.5 GWh currently in construction.
BW ESS is a part of BW Group, a leading global energy and maritime infrastructure company, founded In 1955. BW Group's sustainable investments include solar, offshore wind, batteries, and water treatment.

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