Yorkshire: Europe's Largest Unsubsidized Solar-Plus-Storage Project

Project Overview

The UK 34.7MW PV plant plus 27.5MW/30MWh large-scale energy storage project was successfully put into operation in winter 2019. It marks the largest unsubsidized solar-plus-storage project in Europe as well as the first unsubsidized utility-scale project in the UK. The project is expected to generate enough solar energy for 10,000 households per year.

The completion of the project not only opened a new era of unsubsidized and sustainable development of renewable energy in the UK and even Europe, but also provided an application demonstration of the era of global parity and grid connection.

Recently, in the UK and even Europe, the gradual cancellation of subsidies for renewable energy has become a new normal. The profits of PV power plants have been greatly reduced. The integration of PV and energy storage can improve the system efficiency and the power generating capability of PV plants. Solar-plus-storage solution is becoming the first choice for further unsubsidized projects.

"PV + ESS" for Higher Yields

Sungrow supplied the total system solution consisting of 1500Vdc PV turnkey station SG3125HV-MV and all-in-one "2.5 MW-1 Hour" ESS (energy storage system) solution for the project, which can keep a reasonable energy transmission amongst the grid, PV, energy storage and project users, maximizing ROI of the plant.

Location
Yorkshire, the UK

Developer
Gridserve

EPC and O&M
Gridserve

PV Inverter
Sungrow

Energy Storage System
Sungrow

Bifacial Module
Suntech Power

Solar Tracker
NextTracker

Commissioning Date
Q4, 2019

Capacity
34.7MW PV + 27.5MW/30MWh Energy Storage

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Given the changeable weather and poor sunshine conditions, the UK poses high requirements for the high DC/AC ratio. Sungrow provides 1500V turnkey medium-voltage inverter solution with an optimal DC/AC ratio of 1.4. Compatible with intelligent tracking systems and bi-facial modules, the solution significantly boosts yields by more than 20%.

Containerized in a 20-ft container together with the monitoring system and auxiliary power supply, Sungrow's new high performing PCS (power conversion system) SC2500HV-MV lies in its ability to deliver high efficiency and compatible with high voltage battery system to improve yields and reduces O&M costs. Furthermore, the reliable lithium-ion battery system from Sungrow Samsung SDI is housed in a 40-ft container.

It proves that standard container design is profitable to transportation and enables less footprints. It can shorten the commissioning duration and generate more as early as possible.

System Integration Contributes to More Safety

The safety of the battery is one of the most important factors to the stable operation of the energy storage system. Sungrow ESS adopts the four-level management system, including local controller management, battery system management, battery rack management and battery module management, in a bid to prevent situations like overcharge, over-discharge, over-current, over-voltage and under-voltage.

Equipped with intelligent HVAC (heating, ventilation and air conditioning) and automatic FFS (fire fighting system), along with the high-efficiency heat dissipation and thermal insulation design of the battery; the ESS solution can ensure that the battery won't experience extreme temperatures in harsh conditions, guaranteeing a safe and reliable system with maximum efficiency.

Integrated the monitoring system which secures the data from thousands of sampling points, the ESS solution can show the real-time operation status of the battery and prevent it from any potential hazards.

Notably, reserving 3 meters' fire prevention space between containers is not only convenient for installation and maintenance, but conducive to the safety of the system.

Endorsement from the Customer

The CEO of the project investor company highly praised this cooperation with Sungrow: "We attach great importance to this unsubsidized project and ensure that the power plant revenue is our most concern. During the cooperation, the Sungrow team gave us very professional technical support and services, the flexibility and professionalism of the entire program provide a strong guarantee for the smooth progress of the project. Based on this pleasant cooperation, we look forward to collaborating on more projects in the future."

About Sungrow

Sungrow Power Supply Co., Ltd ("Sungrow") is the world's most bankable inverter brand with over 100 GW installed worldwide as of December 2019. Founded in 1997 by University Professor Cao Renxian, Sungrow is a leader in the research and development of solar inverters, with the largest dedicated R&D team in the industry and a broad product portfolio offering PV inverter solutions and energy storage systems for utility-scale, commercial, and residential applications, as well as internationally recognized floating PV plant solutions. With a strong 23-year track record in the PV space, Sungrow products power installations in over 60 countries, maintaining a worldwide market share of over 15%. Learn more about Sungrow by visiting www.sungrowpower.com.

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