

## JinkoSolar to Supply 100MWh Liquid Cooling ESS SunTera to Build Grid-side Energy Storage Power Station in Jiande, Zhejiang Province

Recently, JinkoSolar, a global leading PV and ESS supplier, successfully delivered SunTera, a 50MW/100MW grid-side energy storage power station located in Jiande, Zhejiang Province. After the completion of the first batch of 55MWh, it will effectively promote the consumption of new energy in the local area, provide auxiliary services for the grid, ensure the safe and stable operation of the electric power system, and effectively drive and promote the economic and social development of the local community.

This demonstration project of Zhejiang Provincial Energy Bureau and China State Power Grid Corporation will mark the successful application of the cutting-edge technology of liquid cooling in the field of energy storage engineering, which has promoted local energy security, stability and green and low-carbon development.

Safety is the most important part of every SunTera. Thanks to the liquid cooling system, the temperature differences between the batteries in the

cabinets can be controlled within 2.5 degrees Celsius, thus increasing the life of the system and the amount of available energy capacity, increasing the profitability of the power plant owner. So why does lowering the temperature difference between the batteries can increase its life and the energy capacity? This is because LFP batteries have different discharge efficiencies at different temperatures. the ideal operating temperature for lithium-ion batteries is about 25 Celsius, too high or too low temperature will reduce their discharge efficiency and life. If the battery temperature difference between cells is too large, it will cause a change in their internal chemical substance which will lead to different efficiencies and lifetimes.

JinkoSolar' s SunTera liquid cooling ESS has many other advantages, good safety performance, high energy density with up to 3.44 megawatt hours (MWhs), good thermal management effect, smart O&M, and strong environmental adaptability.



# JKE-3440K-2H-LAA

## Liquid cooling energy storage system



SunTera is JinkoSolar's new generation of liquid cooling energy storage product, which is equipped with 280Ah LFP cells and integrated with the industry's advanced design concept. SunTera is a safe, reliable, low-cost and high-performance product that provides customers with highly efficient integrated energy storage solutions. In the context of building a new type of power system, JinkoSolar will continue to uphold the mission of changing the energy structure and taking responsibility for the future to provide more reliable products and better experience to customers worldwide.



### Safe and reliable

- Separated battery and electrical compartment design to effectively avoid thermal runaway
- Multi-level fire warning to monitor early thermal runaway



### Excellent performance

- Highly efficient liquid cooling technology, the temperature difference of cell is controlled within 2.5 °C, which effectively improve the system life
- Intelligent cluster-level management to improve system discharge level



### Flexible configuration

- Modular design to support 1000V /1500V systems
- Compatible with many tier-1 PCS brands, providing flexible and customized solutions



### Cost reduction and efficiency

- Compact design with side-by-side layout and standard 20ft container design ensures 6.88MWh capacity in 40FT space
- Pre-installed design effectively reduces shipping, installation and O&M costs



### ESS in Power Generation

Enhance the stability, continuity and controllability of new energy generation to provide stability support to the grid.



### ESS in Grid Side

Participate in grid dispatching to meet the demand of grid peaking and frequency regulation, thus enhancing the flexibility and stability of the power system.



### ESS in User Side

Relieving the load on the power grid, meeting the demand for electricity from different customers, improving the security of electricity on the customer's side, and thus enhancing the customer's experience of using electricity



#### Battery parameter

Type of cell	Lithium Iron Phosphate(LFP)
Cell parameter	3.2V/280Ah
Max. charge/discharge power	0.5P
Configuration of system	1P384S×10
Rated capacity	3.44 MWh
Rated voltage	1228.8V
Voltage range	1075.2~1382.4V
Cooling method	Liquid Cooling
Operating temperature	-20~50°C
Humidity	≤95%RH, no condensation
Altitude	< 2000m / <4000m (optional, derating)
Noise level	< 80dB(A), @1m
IP grade	IP54
Storage temperature	-20~45°C
Corrosion-proof grade	C3 (EN ISO 12944) / C4 (optional) / C5(optional)
Fire protection	Temperature sensor+Smoke sensor+combustible gas detector+deflagration venting+fire extinguishing gas+water sprinkler
External communication interface	Ethernet/Fiber (optional)
Dimension(L×W×H)	6058×2438×2896mm
Weight	≈35000 kg