

JinkoSolar to Deliver SunGiga C&I Storage System for ESS Project in Zhejiang

JinkoSolar, one of the largest and most innovative solar module manufacturers in the world, has announced it has delivered a 430kWh ESS project in Zhejiang, China with the company's liquid cooling C&I energy storage system, the JKS-215KLAA-100PLAA.



Figure 1: Project Photos

Increased safety, lower LCOE, easier integration, and operation & maintenance (O&M) costs, are always major concerns for stakeholders when choosing an ideal C&I ESS. JinkoSolar, based on its decades of experience in the energy industry, leading technology, and manufacturing excellence, launched its competitive C&I liquid cooling ESS, the SunGiga.

JinkoSolar's SunGiga C&I ESS provides a modularized design with a variety of battery capacity options, ranging from 200kWh to 2MWh, and is designed for applications that require energy storage for two to four hours. This solution simplifies the transportation, installation, and operation and maintenance (O&M) processes associated with energy storage solutions through a combination of several components, including lithium-ion batteries, a liquid cooling system, a power conversion system (PCS), an energy management system (EMS), and a fire suppression system (FSS), streamlining the transportation, installation, and O&M.

The SunGiga was pre-commissioned so that all parameters were set before leaving the factory, decreasing on-site commissioning time and guaranteeing early revenue for project owners.

Lower LCOE

Due to the liquid cooling technology, the SunGiga C&I ESS comes with a lower battery temperature difference, extending the lifetime of batteries and significantly improving the charging and discharging efficiency. Compared with the conventional air-cooling design, the liquid cooling system also significantly reduces thermal management energy consumption. The automatic state of charge (SOC) calibration and the automated coolant refilling considerably reduce operation and

Ultimate Safety

Safety is the top priority for battery system technology. JinkoSolar's SunGiga offers comprehensive safety design from the cell, electrical, and system levels. AI-assisted cell monitoring technology performs high-precision online computing of cell status and provides early-stage warnings to prevent thermal runaway.

SunGiga offers temperature, humidity, and combustible gas detection as well as a ventilation system as standard FSS configuration.

SUNGIGA

JKE-215K-2L-LAA

JKE-344K-2H-LAA

Liquid cooling outdoor battery cabinet

Jinko liquid cooling C&I product integrates packs, BMS, fire fighting equipments to provide customer with 1000V/1500V ESS solution. The system has a battery capacity of 215/344kWh and is characterized by flexible expansion, safety and reliability, intelligent liquid cooling and convenience. The modular design meets the needs of various application scenarios.



Flexible expansion

- Flexible battery mix :
5 Packs of 215 kWh and
8 Packs of 344 kWh
- Flexible multi-cabinet
expansion:
Modular design, support
multi-cabinet parallel
connection

Reliable and safe

- Intelligent monitoring
and linkage to ensure
system security
- Temperature, smoke,
and combustible gas
sensors to apply rapid
suppression of thermal
runaway

Intelligent liquid cooling

- Non-uniform flow channel
design to control cell
temperature difference $\leq 2^{\circ}\text{C}$
- Multiple liquid cooling
control modes to reduce
system power
consumption

Smart and convenience

- Multiple operating modes to
choose from and remote
upgrade support
- Cloud-based monitoring
and operating platform
supporting multiple device
access

Application Scenarios



Peak shaving

Peak & valley arbitrage



Energy backup

Supply power to facilities when the grid is down, or apply in areas without power.



Improve the stability of the electricity system

Enhance the stability, continuity and controllability of new energy generation



Optimizing the use of renewable energy

Maximizing the use of PV to store spare power and discharge the power at night



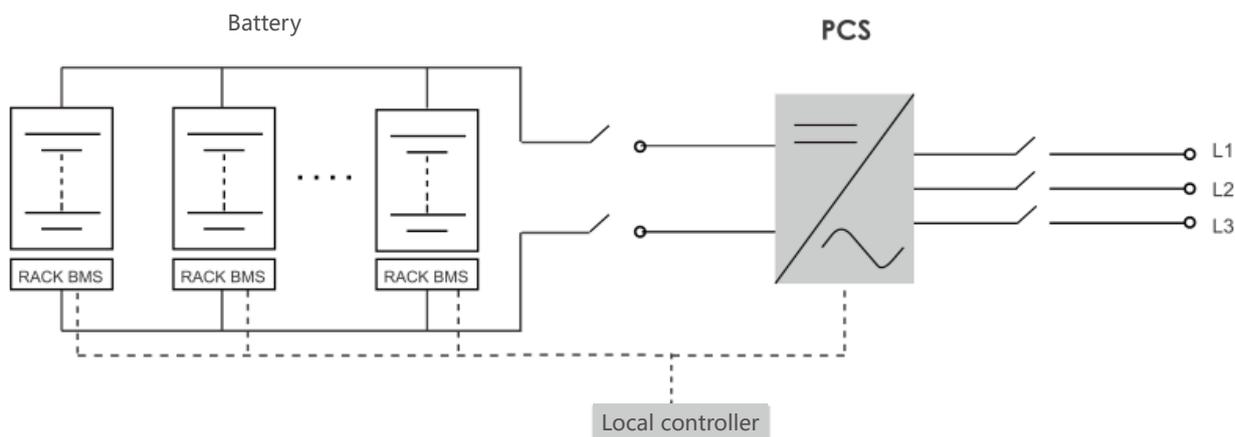
Arbitrage

Arbitrage by using peak and valley tariffs for different time periods.



Cost reduction

Discharge during peak electricity demand to reduce expensive electricity bills



Battery Parameter

Cell type	LFP 3.2V/280Ah	
Max. charging/discharging rate	0.5P	
Cell combination method	1P240S	1P384S
PACK number	5 pcs	8 pcs
Rated power	215 kWh	344 kWh
Rated voltage	768V	1228.8V
Voltage range	672V~864V	1075.2V~1382.4V
Cooling method	Liquid cooling	

System Parameter

Operating temperature	-20°C~50°C	
Humidity	≤95%RH, no condensation	
Altitude	≤2000m	
Protection level	IP54	
Firefighting method	Aerosol/Perfluorohexanone	
Anti-corrosion grade	C3	
Communication	RS485/CAN/Ethernet	
Dimension(WidthxDepthxHeight)	1300x1300x2300 mm	
Weight	~2000 kg	~3200 kg