JinkoSolar C&I ESS, SunGiga, has successfully Connected to the Grid in Suzhou

JinkoSolar, today announced that it has delivered its liquid cooling storage system SunGiga for a C&I project in Suzhou. The highly integrated 430kWh energy storage system, which is mainly used for peak shaving, peak valley arbitrage, saving space, and streamlining the installation process, will offer high profitability, safety, and flexibility to the customer.

Figure 1: Project Photos

What makes liquid cooling SunGiga ESS unique?

This highly robust, smart, and doubled safety product SunGiga is designed for a set-it-and-forget-it installation and operation.

SunGiga' s module design allows for additional storage capacity to be added or removed to fine-tune the system to meet the storage demands of many more consumers than would be allowed with a fixed-capacity battery system. This is something that is customized once with the purchase of the system but could also be upgraded over time as needs change.

Energy density is the amount of power stored in a given volume, meaning that the SunGiga can store 50% more the amount of energy in the same physical footprint than the previous generation.

The safety issue of energy storage systems raised tremendous concern for customers. For conventional HVAC air cooling ESS, the poor uniformity of temperature between batteries, high auxiliary power consumption, inefficient heat dissipation, and so on result in safety risks and lower projected revenue. In addition to increased energy density, JinkoSolar' s new generation liquid cooling C&I energy storage system provides all-around safety-assured total ESS solutions from the battery, rack, pack, and cabinet to the while project, to meet different applications in a variety of C&I scenarios.

The new unit also comes with an active liquid cooling and AI-based managing system that cools the batteries while using 30% less power.

What factors are driving the adoption of C&I energy storage systems (ESS) in the China and globe?

Energy storage in the commercial and industrial (C&I) segment is poised for growth over the next decade. China will be one of the largest incremental markets. C&I energy storage gains localized political and economic support to assist in solving its problem of electricity shortage, particularly in eastern and southern China. Power outages caused by supply-demand imbalances bring substantial economic loss, and ESS also plays a role in the increased interest in backup power. On the other hand, the electricity cost for C&I demand is relatively high in some regions. Driven by incentives including time-of-use electricity price, and favorable updated policies, ancillary services, the C&I ESS increases revenue.

SUNGIGA

JKS-215KLAA-100PLAA

Liquid cooling outdoor all-in-one cabinet

Jinko 215 KWh liquid cooling all-in-one product integrates packs, BMS, PCS and fire fighting equipments to provide customer with 1000V ESS solution. The system has a battery capacity of 215kWh and the rated power is up to 100 KW. It 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

- ☐ All-in-one design with integrated PCS, reducing shipping and installation costs
- ☐ 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 ≤2℃
- ☐ 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

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Application Scenarios

Peak shaving
Peak & valley arbitrage

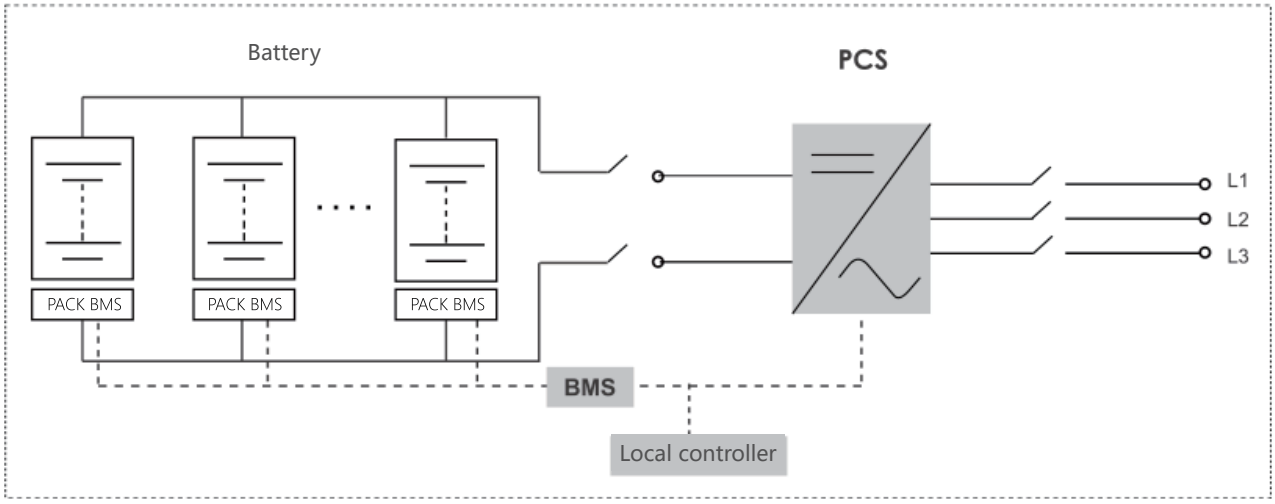
Energy backup
Supply power to facilities when the grid is down, or apply in areas without power.

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
PACK number	5 pcs
Rated power	215 kWh
Rated voltage	768V
Voltage range	672V~864V
Cooling method	Liquid cooling
AC parameter	
Rated AC power	100 kW
Rated voltage	400 Vac
AC side wiring method	Three-phase, three-wire
Rated frequency	50 Hz
Total current waveform distortion rate	< 3%
Cooling method	Intelligent forced air cooling
System parameter	
Ambient temperature	-20℃~50℃，reduce frequency over 45℃
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	~2200 kg