

## JinkoSolar Provides Its SunGiga C&I ESS to Zhaoguang New Energy in Shandong

JinkoSolar has delivered a set of SunGiga liquid-cooling C&I ESS (JKS-215KLAA-100PLAA) to Zhaoguang New Energy to better manage its overall electricity expenses by charging the batteries during low-cost valley hours and discharging them during high-cost peak hours.



Figure 1: Project Photos

JinkoSolar's C&I ESS SunGiga uniquely features its doubled safety compared to conventional ESS solutions. Its self-developed liquid cooling system sets the benchmark for temperature differences among cells below 2.5 Celsius degree. This temperature uniformity provides doubled safety and charging and discharging efficiency of the system, as well as longer battery life. An automatic State of Charge (SOC) calibration and an automated coolant refilling system help to decrease the expense on operation and maintenance (O&M).

In addition, SunGiga offers an all-around safety design across from the cell level to system level. With the benefits of artificial intelligence, the cells are monitored with great accuracy in real-time to detect changes and provide early-stage warnings for system. With five levels of protection in place to decrease the risk of thermal runaway.

There is a variety of battery capacity options, ranging from 250kWh to 2MWh, and are designed for applications that require energy storage for two to four hours. This solution simplifies the transportation, installation, operation and maintenance (O&M) processes associated with energy storage solutions through a combination of several components, including LFP battery power conversion system (PCS), BMS, EMS, and fire suppression system.

All-in-one ultra-safety and high-efficiency SunGiga has been widely preferred by C&I customers.

# 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  $\leq 2^{\circ}\text{C}$
- 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



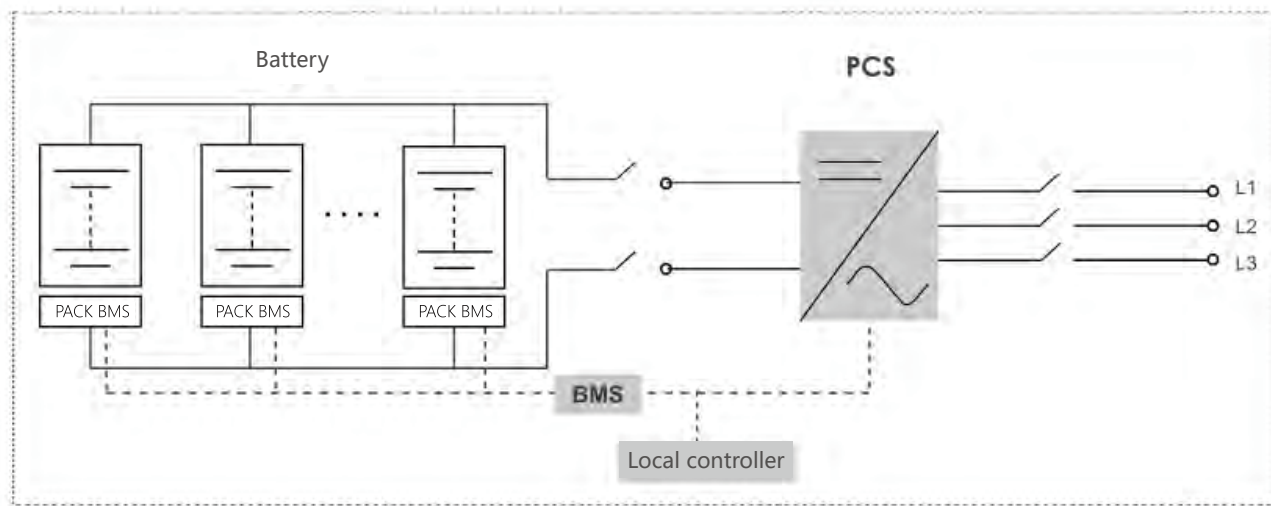
**Optimizing the use of renewable energy**  
Maximizing the use of PV to store spare power and discharge the power at night



**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
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°C~50°C, reduce frequency over 45°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	~2200 kg