

JinkoSolar to Supply 1.1MWh/500kW PV-plus-Energy Storage for Kenya Refugee Camp

JinkoSolar will supply a 1.1 MWh energy storage system (ESS) integrated with a 500kW PV project to a refugee camp in Kenya that will secure a more stable supply of power.

JinkoSolar' s air cooling energy storage system is featured of 10% higher power density compared to its peers, a pre-assembled design, and an IP65 protection rating. The company also provides liquid cooling ESS called SunGiga with 20% higher power density compared to air cooling, 20% higher lifecycles (up to 15 years), 30% less power consumption, and high-efficiency thermal management. SunGiga is a brand-new solution for applications spanning generation, grid ancillary services, regulation, and peak shaving. The device comes in a 250kWh to 2.5 MWh capacity and supports voltages ranging from 1,000 V to 1,500 V. The company's patented thermal solution can run at high

power efficiency throughout a 24-hour cycle. The system' s energy management software will give camp administrators the ability to prioritize and schedule the delivery of power based on residents' most critical needs.

While refugee camps are traditionally powered by diesel generators, diesel is more expensive than renewable energy and is dangerous to transport in a volatile region. Once the system delivers sufficient energy to the camp's households, it can then begin to tackle the clinic and school, for example, which currently rely on diesel generation.

JinkoSolar has developed and delivered a number of off-grid microgrid projects pairing solar, energy storage, and other resources in Asia, Africa.



Figure 1: Project Photos

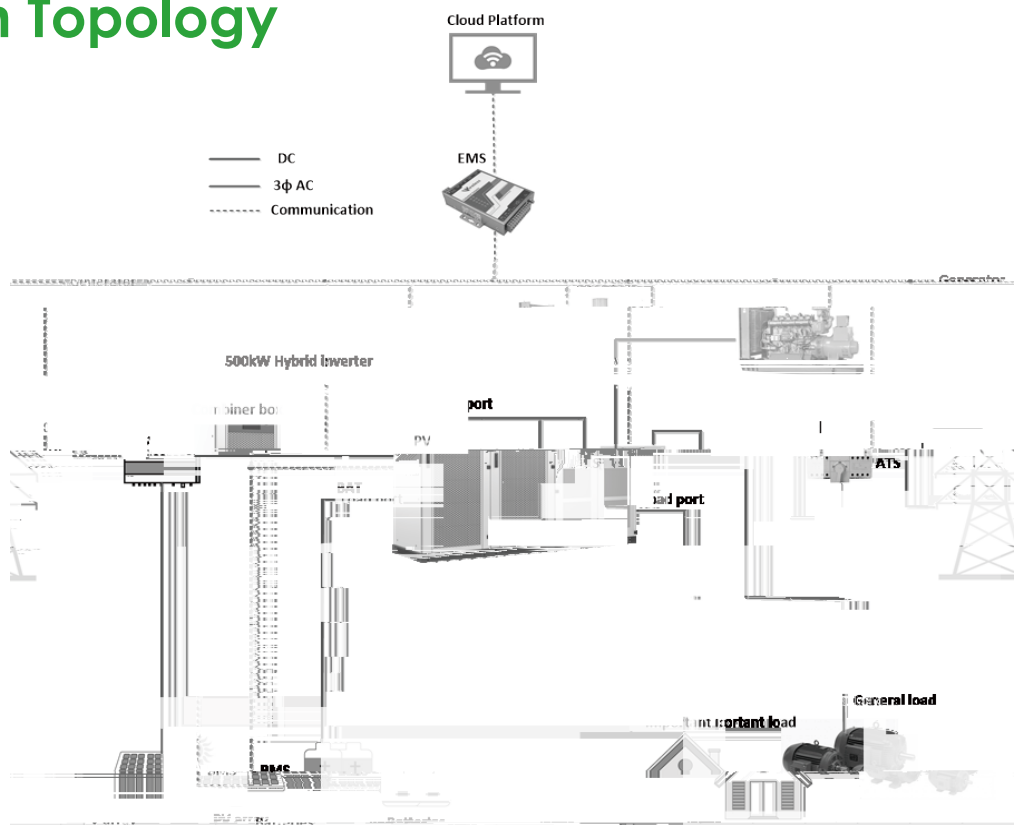
JKS540~1620K-500H



Key

- Highly integrated system with various working modes
- Pre-installed product enables express shipping and faster installation
- Cloud platform for remote monitoring and management
- Supports various power generation and storage modes

System Topology



SYSTEM TECHNICAL SPECIFICATIONS

DC Data		JKS540K-500H		JKS1080K-500H		JKS1620K-500H	
Battery Chemistry				Lithium Iron Phosphate (LFP)			
Cell Life Cycle		5,000 Cycles 1C@25 90%DOD°C		5,000 Cycles 0.5C@25 90%DOD°C			
Cell Specification				3.2V/96Ah			
Battery System Configuration		4P11S		8P11S		12P11S	
DC Rated Energy Capacity		540kWh		1080kWh		1620kWh	
Rated Voltage				704V			
Voltage Range				616V~792V			
BMS Communication Interface				RS485, Ethernet, GPRS			
BMS Communication Protocol				Modbus RTU Modbus TCP			
Max.PV Input Voltage				1000V			
Standard/Max PV Power				600/720kW			
MPPT voltage range				250-850V			
MPPT voltage range@full load				450-850V			
AC Data							
Rated AC Power				500kW			
Maximum AC Power				550kW			
Rated Voltage				400V			
AC Rate of Current				722A			
THDi				≤3%			
Power Factor				1(leading) ~1(lagging)			
Rated Frequency (Hz)				50/60Hz			
AC Connection				3W+N+PE			
STS Power				500kW			
STS Switching Time				≤20ms			
General Data							
Dimension (W*D*H)		6,058*2,438*2,591mm		12,192*2,438*2,591mm			
Weight		<20T		<30T		< 40T	
Degree of Protection				IP54			
Operating Temperature Range				-20~40°C			
Relative Humidity				0~95% (non-condensing)			
Max. Working Altitude				3,000m			
Cooling Concept of DC hatch				HVAC			
Communication Interfaces				RS485, Ethernet, GPRS			
Certifications				UL9540A, IEC62619, CE, UN38.3			

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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