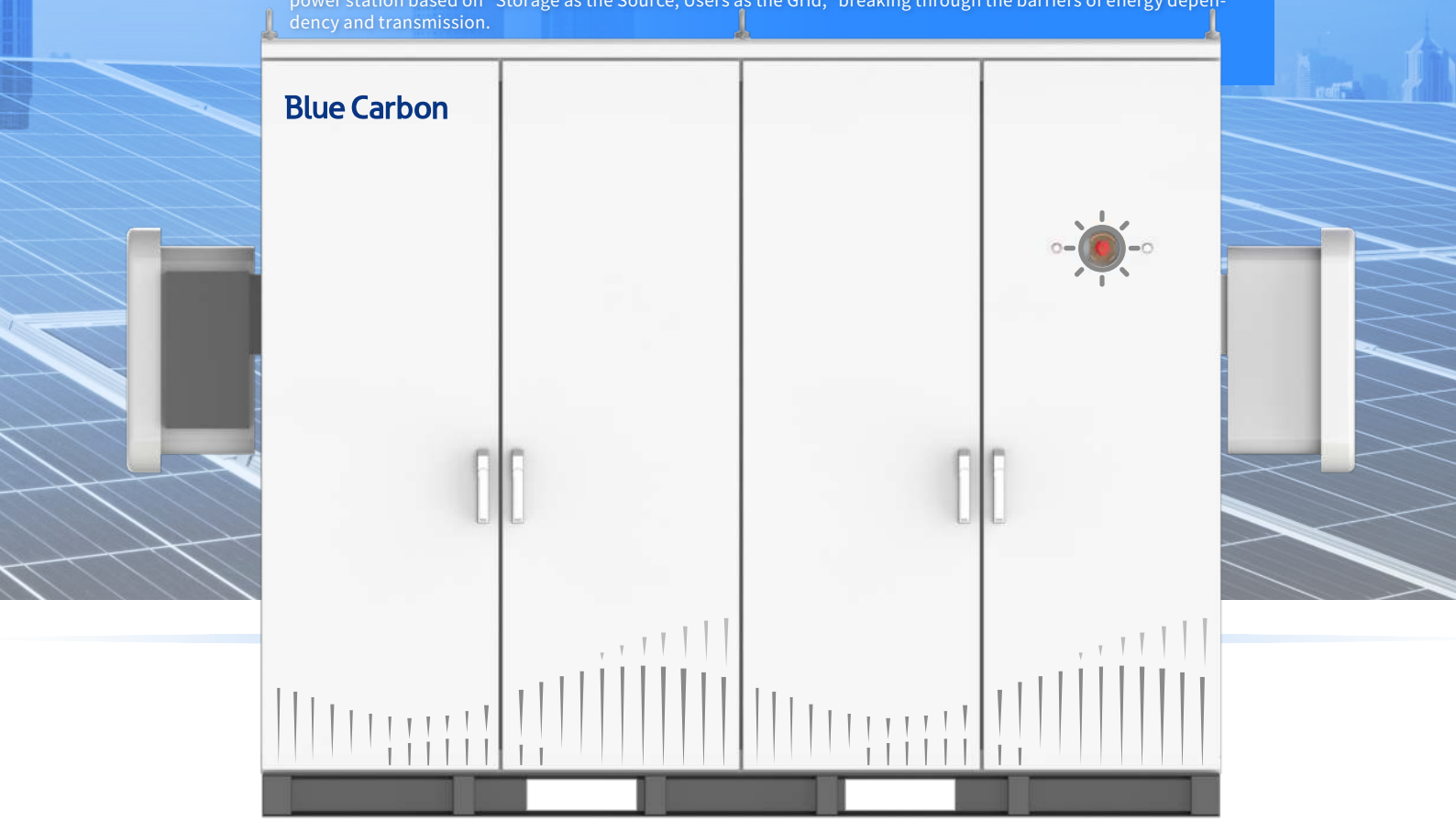
Blue Carbon

All-in-one Commercial & Industrial Energy Storage Cabinet

"Storage as the Source, Users as the Grid"

The traditional centralized power grid is facing capacity limits due to the proliferation of high-power appliances. Blue Carbon's mission is "to enable utility customers to participate in and benefit from the energy transition, making solar+storage a stable and affordable power source." We are building the concept of an independent power station based on "Storage as the Source, Users as the Grid," breaking through the barriers of energy dependency and transmission.



350kWh

- Automotive-grade Lithium Iron Phosphate (LFP) battery cells, Cycle life ≥6600 times
- Supporting off-grid/on-grid modes, with dynamic expansion based on demand
- Multiple charging sources: Solar PV, Grid Power, and Diesel Generator
- Highly integrated all-in-one design

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Peak Shaving and Demand Management:

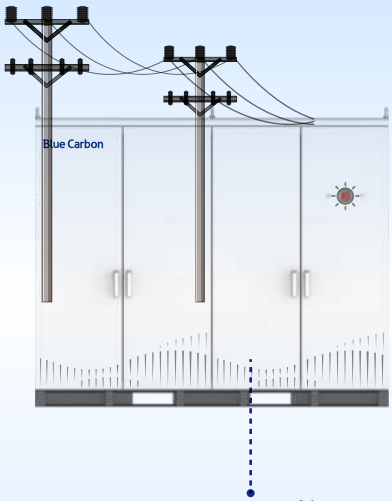
For users and regions with time-of-use (TOU) or tiered electricity pricing, the solar+storage system intelligently controls charging and discharging. It prioritizes using stored energy during peak-rate hours and stores low-cost energy during off-peak hours, thereby optimizing total electricity consumption under tiered pricing and reducing costs by arbitraging peak-valley price differences.

Critical Load Backup and Operational Continuity:

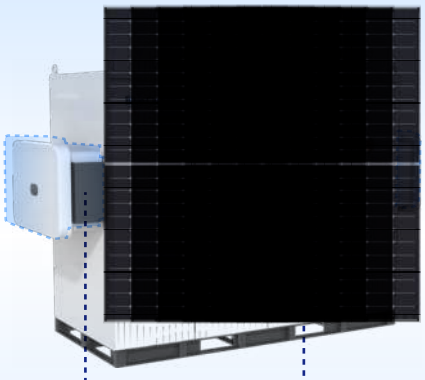
During power fluctuations or outages, it quickly switches to battery power to ensure the stable operation of critical facilities such as data base, hospitals, and telecom tower.

No Need Time Fast Switching of Multiple Power Inputs:

It performs an automatic and seamless transition to backup power, ensuring zero-interruption operation.



C&I Energy Storage Cabinet
(Built-in BMS, EMS, PCS)



External
110kW Three-Phase
On-Grid Inverter

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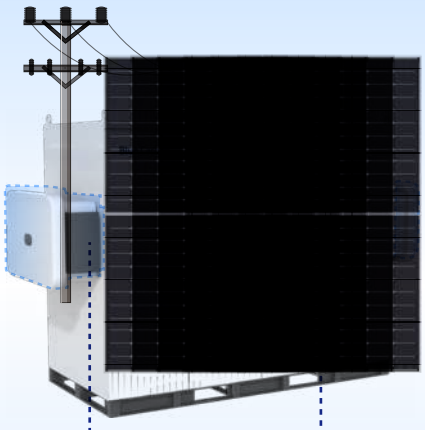
(Built-in BMS, EMS, PCS)



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C&I Energy Storage Cabinet Parameters

DC-Side Parameters

Cell Specification	C15 245Ah
Nominal Capacity	350kWh
Nominal Voltage	716.8V
Battery Current	167A
Depth of Discharge (DoD)	95%
DC Component	＜0.5%
Battery Temperature Control Method	Air Cooling

AC-Side Parameters

Connection Type	Three-phase Four-wire
Power Factor	0.99 /-1～1
Daytime AC Side Rated Power	430kW
Daytime AC Side Max. Power	473kW
Daytime AC Side Rated Voltage	400Vac
Daytime AC Side Max. Current	684A
Nighttime AC Side Rated Power	210kW
Nighttime AC Side Max. Power	231kW
Nighttime AC Side Rated Voltage	400Vac
Nighttime AC Side Max. Current	334A
Rated Grid Frequency	50/60Hz
Cooling Method	Forced Air Cooling
System Communication Interface (External)	RS485/CAN/DIDO/4G
System Communication Protocol (External)	Modbus-RTU/Modbus=TCP/ 1EC61850
Max. Efficiency	98.5%

System Parameters

C-rate (Charge/Discharge)	⩾0.5C
Cycle Life	6600
IP Rating	IP55
Operating Temperature Range	-30~50°C
Operating Humidity Range	0~95%RH(Non-condensing)
Operating Altitude	2000m
Dimensions (W×D×H)	2660(W)mm×1328(D)mm×2160(H)mm
Fire Suppression System	Smoke Detection / Heat Detection + Aerosol
Grid Input Voltage	AC 400V
Grid Input Frequency	50Hz/60Hz
Grid Charging Power	160kW

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110KW Three-Phase On-Grid Inverter Parameters

BCT-11OKW-PRO

DC Input Para meters	
Max. Input Voltage	1100V
Start-up Voltage	250V
Rated Input Voltage	620V
MPPT Voltage Range	180V~1000V
Number of MPPT Trackers / Number of Strings per MPPT	8/2
Max. Input Current per MPPT	40A
Max. Short-circuit Current per MPPT	50A
AC Output Parameters	
Max. Output Current	175A
Rated Output Power	110kW
Max. Active Power	121kW
Rated Output Frequency	50Hz/60Hz
Rated Grid Voltage	230Vac/400Vac, 3L/N/PE, 3L/PE
Protection	
DC Reverse Polarity Protection	Yes
Anti-islanding Protection	Yes
Output Short-circuit Protection	Yes
Leakage Current Detection	Yes
Insulation Resistance Detection	Yes
Ground Fault Detection	Yes
Grid Detection	Yes
String Current Detection	Optional
Surge Protection	Type II
DC Arc-fault Protection	Optional
Display and Communication	
Display	LCD/LED+APP
Communication	RS485/Bluetooth /4G
General Parameters	
Dimensions (W×H×D)	1040(W)mm×650(H)mm×350(D)mm
Weight	85kg
Operating Temperature Range	-30°C~+60°C
Cooling Method	Intelligent Air Cooling
IP Rating	IP66
Max. Operating Altitude	4000m
Relative Humidity	0~100%

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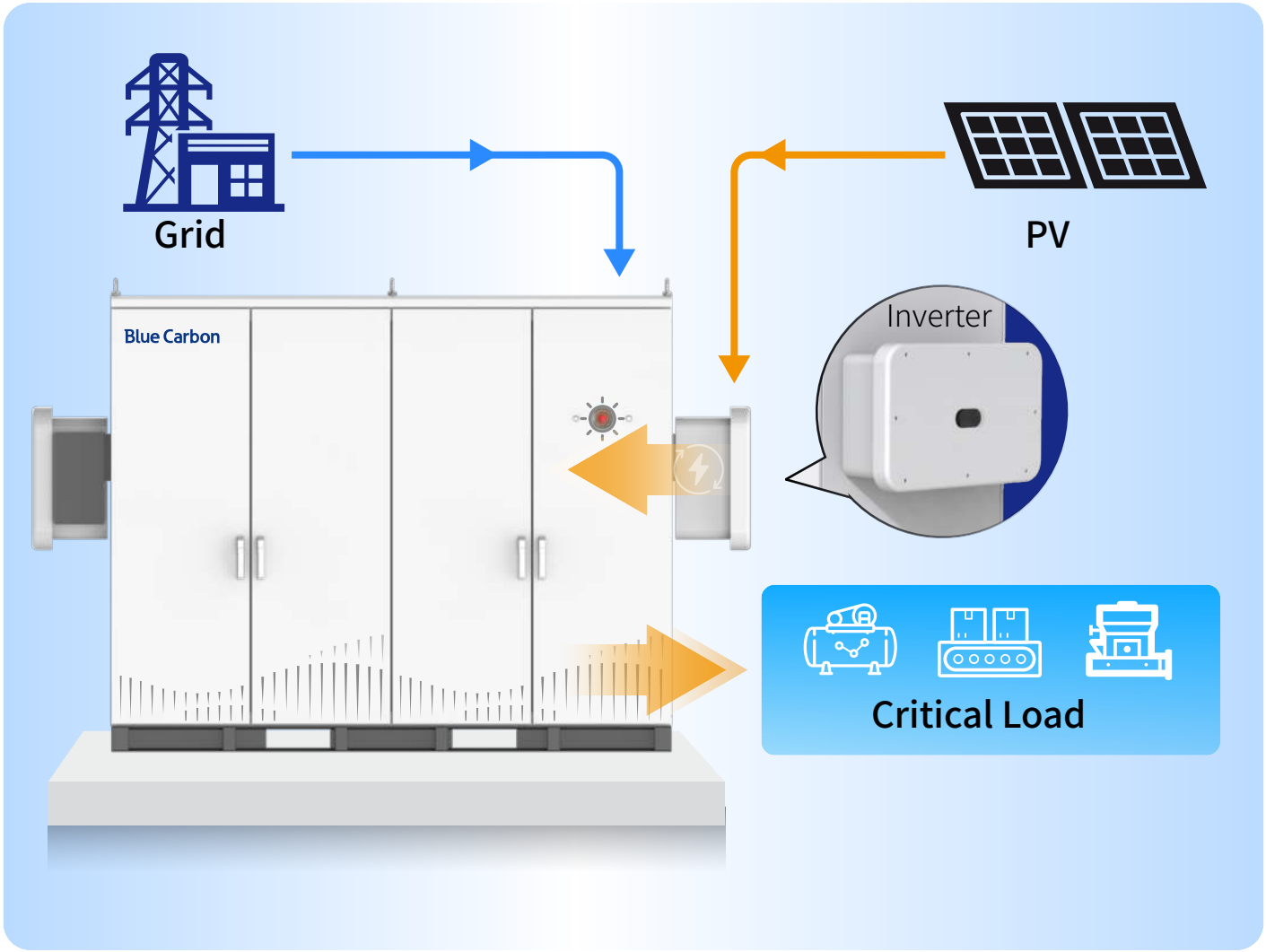
Hybrid Solution topology diagram



Forced Air Cooling

- No liquid leakage risk, safer
- No need for liquid refilling, more hassle-free
- Smoother & Faster Customs inspection

VS

Liquid Cooling Mode

Liquid leakage risk exists

Requires regular liquid refilling

More complex customs inspection

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Application Scenarios

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