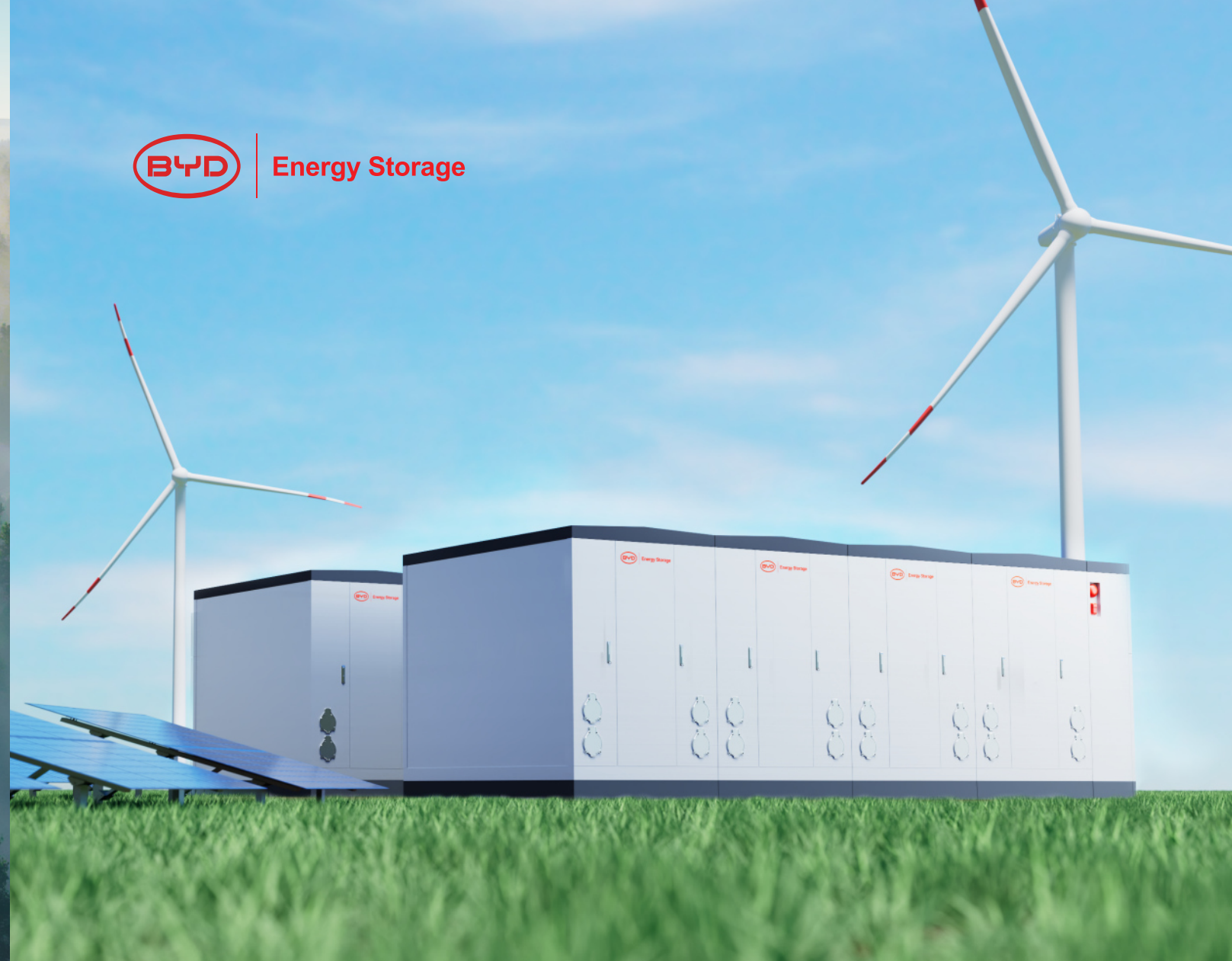




FINER STORAGE GREENER ENERGY



BYD Energy Storage



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BYD Energy Storage  
**Build Your Dreams**

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# ABOUT US

01



## About Us

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# ABOUT BYD



2024 Annual Revenue  
\$ **107** Billion



R&D Personnel  
**120,000+**



Research Institutes  
**11**



Patent Applications  
**65,000+**



Authorized Patents  
**39,000+**



## TECHNOLOGY INNOVATION FOR A BETTER LIFE

BYD was established on November 18, 1994, headquartered in Shenzhen, Guangdong Province. Its business spans four major industries, i.e., automobile, electronics, renewable energy, and rail transit. It is among the Fortune 500 companies, and listed both on Hong Kong and Shenzhen Stock Exchanges. As of now, BYD has applied for more than 59,000 patents, and obtained more than 35,000 authorized patents worldwide. In 2024, the Group posted revenue of \$107 billion (+29% YoY), while R&D investment hit \$7.46 billion(+36% YoY). BYD sold 4.27 million new energy vehicles globally (+41% YoY), retaining its title as the world's top seller and making industry history.

Shouldering its era responsibilities, BYD laid out three new energy strategies in 2008, establishing a layout spanning solar energy, energy storage and electric vehicles. It has connected the entire industry chain from energy acquisition and storage to application, built a zero-emission new energy ecosystem, and pioneered a path of green and innovative development.



# ABOUT BYD ENERGY STORAGE

BYD Energy Storage, established in 2008, stands as a global trailblazer, leader, and expert in battery energy storage systems; BYD Energy Storage has established a complete industrial chain integrating R&D, manufacturing, sales, service and recycling of energy storage products covering Utility-scale BESS, C&I BESS, Megawatt Flash Charging System, Residential BESS, Power Conversion System(PCS), Mobile Energy Storage Charging System, Digital Energy, New Application Business, Network Energy, etc.

Leveraging cutting-edge battery technology and strong innovation capabilities, the company has successfully delivered safe and reliable energy storage solutions for hundreds of utility-scale, C&I, and residential projects worldwide, spanning over 110 countries, including the U.S., U.K., Germany, Saudi Arabia, South Africa, Chile, Switzerland, Italy, Japan, etc.

BYD Energy Storage has always adhered to the mission of "Finer Storage, Greener Energy", looking forward to collaborating with you in pursuit of a cleaner and more sustainable future.



**7%**

Annual Revenue for R&D



**7,000+**

R&D personnel



**700+**

Global TOP PhD



**13,000+**

Patent Applications



**7,000+**

Authorized Patents



**1,000+**

Blade Battery Patents

# BYD ENERGY STORAGE MILESTONES

**17+** years  
Operating experience

**400+**  
Energy storage projects

**110+**  
Regions

**85+GWh**  
Business operating experience

Pioneer

Endeavors

**2008**

Pioneered in the field of energy storage, established the EPRI, and conducted in-depth research on BESS power plant technology



**2009**

The earliest use of LFP batteries as energy storage batteries

The world's first user-side BESS power plant (1MW/4MWh)



**2010**

The world's first 200kWh walk-in containerized energy storage system



**2011**

The world's largest grid-side, LFP BESS power plant, Baoqing energy storage power station (3MW/12MWh)



**2012**

The world's largest "demonstration power plant combined with wind, PV, BESS, and transmission" Hebei Zhangbei BESS power plant (6MW/36MWh)



**2020**

The world's first liquid-cooling non walk-in energy storage product, Cube Pro



**2015**

North America's first high-rate containerized energy storage system (31.5MW/12MWh)



**2022**

The world's first energy storage product equipped with the Blade Battery, MC Cube



**2022**

The largest PV + BESS power plant in the U.S. in 2022 (350MW/1,700MWh)



**2023**

The largest BESS power plant for a single project in China in 2023 (300MW/1,200MWh)



**2024**

The new MC Cube product with the highest energy density in the world, 6.432MWh, has been launched in China



**2024**

The world's largest BESS power plant for a single project (2,600MWh)



2009

2010

2011

2013

2015

2016

2020

2023

2024



# ADVANTAGES

02



## Advantages

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**A** R&D Innovation 11

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**E** Global Shipments 21

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# R&D INNOVATION



## Blade Battery for Energy Storage

23 Years Of R&D And Manufacturing Experience In LFP Batteries, Supported By Cell Test Data

### Safety And Reliability & Ingenious Design



#### Ultimate Safety

Intrinsically safe blade battery dedicated to energy storage, no fire passed nail penetration test, no thermal runaway after 4h heating, superior heat dissipation, Intelligent chip control, active and passive protection to deal with various emergencies



#### Ultra Long Lifecycle

LFP chemistry, up to 12000 cycles



#### Ultra-high consistency

Stacking technology, ceramic components, ultra-high length-width ratio, superior cycling consistency.



#### Ultra High Energy Density

Integrating cells to system directly, higher space utilization to achieve ultra-high energy density



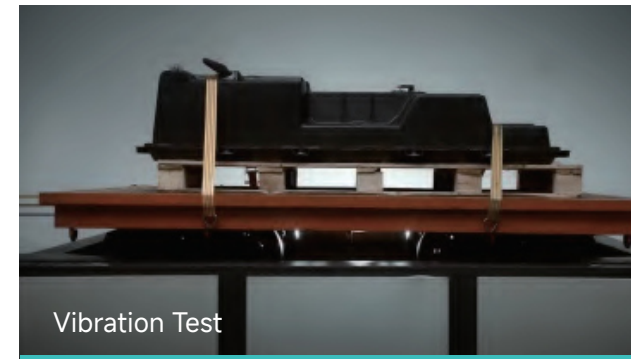
#### Ultra-wide temperature range

Operates efficiently in environments from -30°C to 55°C, maintaining optimal performance at all times

### Multiple Safety Tests



Fire Test



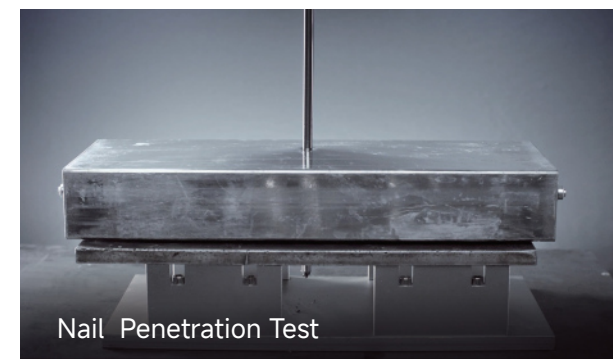
Vibration Test



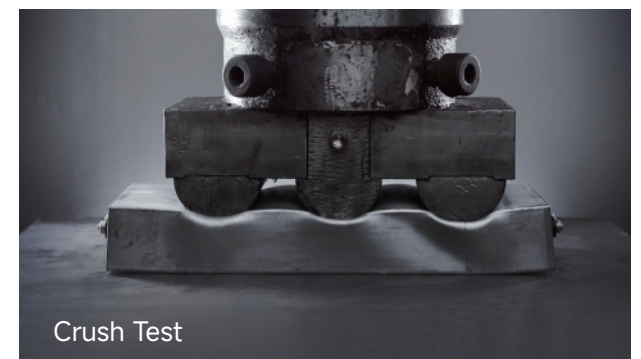
Impact Test



High Temperature Test



Nail Penetration Test

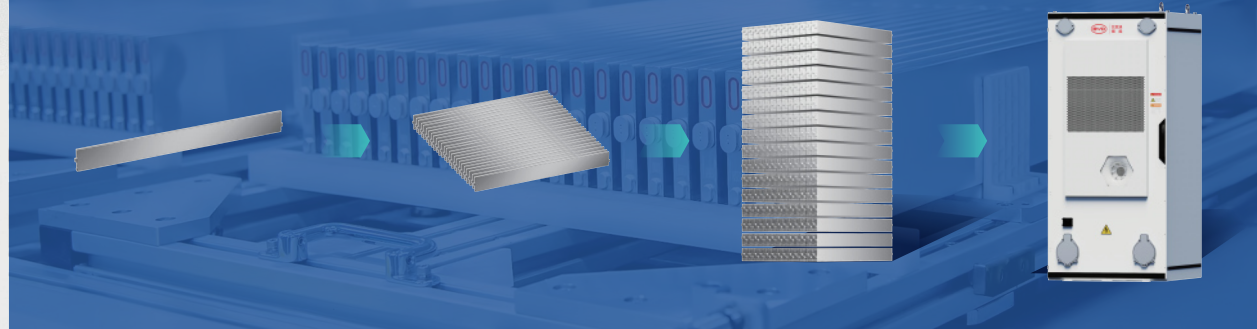


Crush Test

## SUPER-INTEGRATED CTS TECHNOLOGY



Global first CTS technology, cell directly integrated into the system



With the super advantages of the blade battery, the system integration is greatly improved  
Global first concept of Vcvs (cell to system volume ratio) Comprehensive Indicators

↓ **36%**  
Parts QTY

↑ **98%**  
Space utilization

↑ **30%**  
Structural strength

## INTELLIGENTIZATION FACILITATES HIGH-QUALITY DEVELOPMENT OF ENERGY STORAGE



### AI Empowerment

AI technology has been applied in the management and O&M widely. Through algorithm optimization and data analysis, it enhances the operational efficiency and safety of BESS



### Digital Management

BESS are gradually realizing digital management. By constructing digital platforms such as EMS and VPP, to achieve remote monitoring, intelligent dispatch, and optimization configuration of the BESS



### Intelligent O&M

The introduction of intelligent O&M technology has made the operation and maintenance of BESS more efficient and convenient. Through real-time monitoring, fault diagnosis, and predictive maintenance, potential issues can be identified and solved in advance, reducing failure rates and O&M costs



### System Integration

BESS are developing towards higher-level system integration, deeply integrating with smart grids, microgrids, and other systems to achieve efficient energy utilization and optimized configuration

**The application of intelligent technologies significantly improve the efficiency and safety of BESS, reduce lifecycle O&M costs, and drive high-quality development of the energy storage industry**

# MANUFACTURING



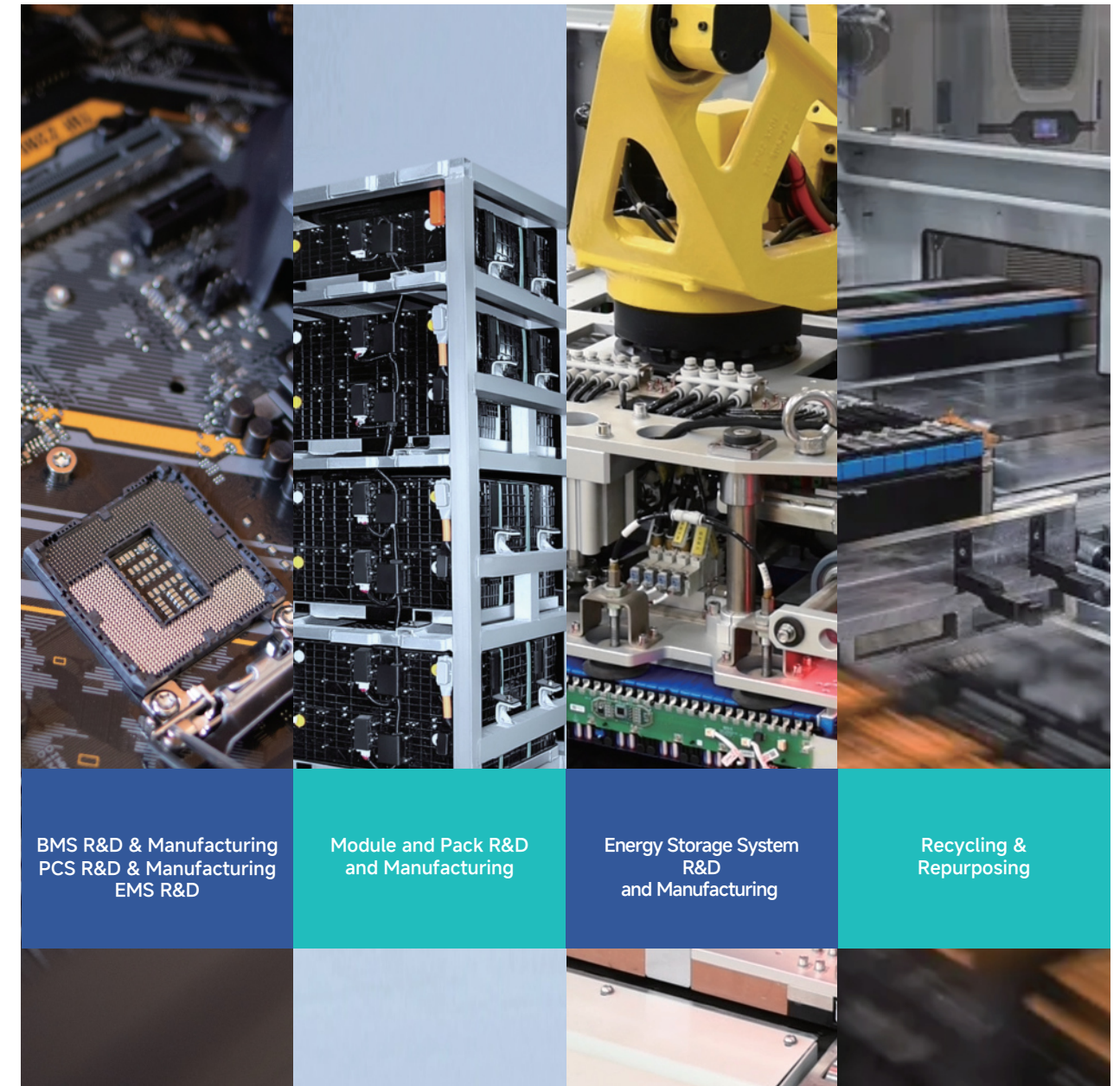
Mineral Resources Development

Material R&D & Manufacturing

Manufacturing Technical R&D

Cell R&D & Manufacturing

## Energy Storage System Whole Industrial Chain Layout



BMS R&D & Manufacturing  
PCS R&D & Manufacturing  
EMS R&D

Module and Pack R&D and Manufacturing

Energy Storage System R&D and Manufacturing

Recycling & Repurposing

Based on the R&D of basic materials | Centered on battery performance | Guided by innovative technologies  
Focus on all-round development of batteries



Automation



Intelligentization



Digitalization



One-stop



Full-process

# AWARDS AND HONORS

June 24, 2024  
National Science and Technology Conference  
National Science and Technology Awards Conference  
Academicians Conference of the Chinese Academy of Sciences and Chinese Academy of Engineering

Won two awards:  
2023 National Science and Technology Progress Award  
**Second Prize**



Key Technologies and Industrialization of Digital and Intelligent Testing and Control for Large-Capacity BESS  
**Second Prize**



Core Technologies and Equipment for Precision Manufacturing of Large-Capacity Lithium-Ion Batteries  
**Second Prize**



Key Technologies and Industrialization of Digital and Intelligent Testing and Control for Large-Capacity BESS  
**Third Prize**  
2011 National Energy Science and Technology Progress Award



Key Technologies in LiFePO<sub>4</sub> Power Battery Manufacturing and Application  
**Second Prize**  
2018 National Science and Technology Progress Award



Battery Energy Storage Power Station for Grid Load Balancing  
**Outstanding Patent Award**  
17th China Patent Awards (CNIPA), 2015

**SNEC Energy Storage Technology Excellence Award 2024**  
2024 SNEC

**CESC Pioneer Award for Key Technologies/Equipment in Power Storage Systems 2024**  
2024 CESC

**SMM Tier1 User-Side Energy Storage System Supplier 2024**  
2024 SMM

**International Energy Network: Energy Storage Industry Leading Enterprise 2023**  
2023 International Energy Network

**CIES China Energy Storage Industry Most Innovative Enterprise 2022**  
2022 CIES

**EESA Best System Integration Solution Provider Award 2021**  
2021 EESA

**BloombergNEF Energy Storage Tier 1 List 2024**  
2024 BloombergNEF

**Top2 in BloombergNEF Global Storage Providers & Integrators Bankability Survey 2024**  
2024 BloombergNEF

**Top2 in BloombergNEF Global Battery Bankability Survey 2024**  
2024 年 BloombergNEF

**EUPD Research Top Brand PV Storage Europe 2024**  
2024 EUPD

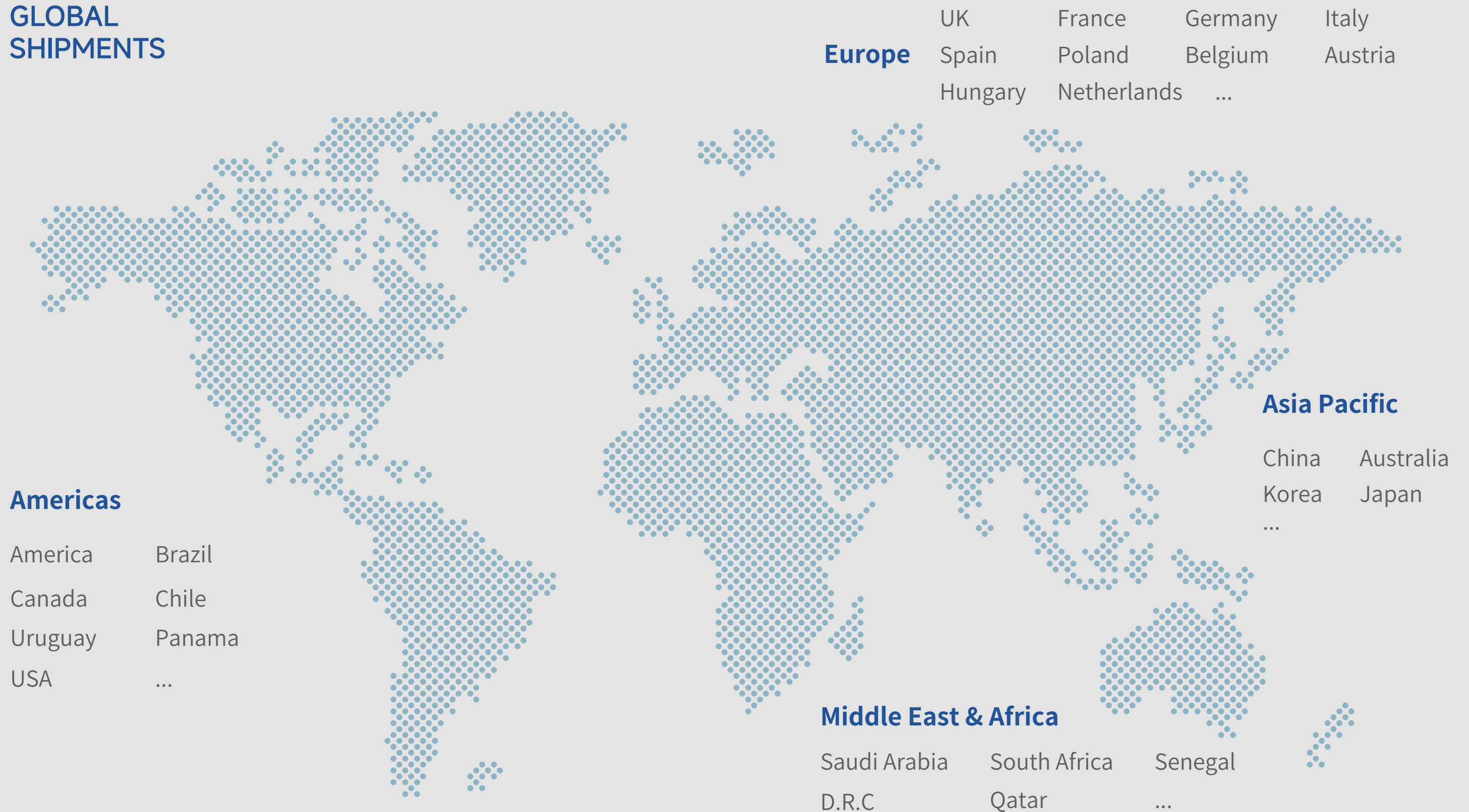
**Zayed Future Energy Award for Large Corporation 2016**  
2016 Zayed Future Energy Award for Large Enterprise

**UN Special Energy Award 2015**  
2015 UN Special Energy Award

# COOPERATION PARTNERS



# GLOBAL SHIPMENTS



Covering **110+** countries, over **85+ GWh** of project operation experience.  
The longest-running project has been in operation for **14** years



# PRODUCTS









## Products

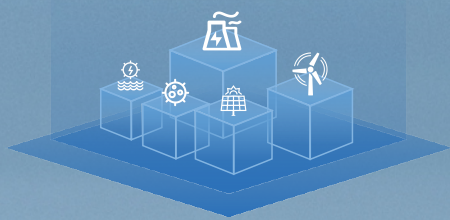
<b>A</b>	All-Scenario	25
<b>B</b>	All-Ecology	26
<b>C</b>	Utility-Scale Energy Storage Products	27
<b>D</b>	C&I Energy Storage Products	31
<b>E</b>	Energy Management System	33

# ALL-SCENARIO

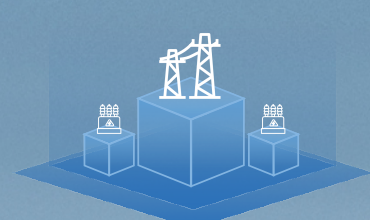
# ALL-ECOLOGY

 Wind and solar BESS	 Grid Following Grid Forming	 Frequency Regulation	 Standalone BESS	 C & I BESS	 Residential BESS
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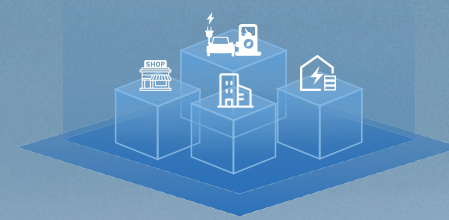
All Products	All Terrains	All Climates
<ul style="list-style-type: none"> <li>· Utility-scale BESS</li> <li>· C&amp;I BESS</li> <li>· Residential BESS</li> </ul>	<ul style="list-style-type: none"> <li>· Plateau</li> <li>· Desert</li> <li>· Plain</li> </ul>	<ul style="list-style-type: none"> <li>· Mountain</li> <li>· Gobi</li> <li>· Seafront</li> </ul>
<ul style="list-style-type: none"> <li>· PCS</li> <li>· BMS</li> <li>· EMS</li> </ul>	<ul style="list-style-type: none"> <li>· Extreme Cold</li> <li>· Severe Sand &amp; Wind</li> <li>· Heavy Snowfall</li> <li>· Extreme Heat</li> </ul>	<ul style="list-style-type: none"> <li>· High Humidity</li> <li>· Heavy Rainfall</li> <li>· Extreme Drought</li> <li>· Frequent Thunderstorm</li> </ul>



Generation Side



Grid Side



User Side



# MC Cube-T MC-B501-E/U-R2 & MC-B536-E/U-R4



Standard outdoor battery cabinet, MC Cube-T uses the new-generation LFP battery for energy storage, and adopts the world's first CTS (Cell To System) integration technology, small changes, large capacity.

## SYSTEM FEATURES



### Safe & Reliable

Passed 10+ destructive tests, six-dimension high-precision detection, four-level active and passive protection.



### Flexible Configuration and Management

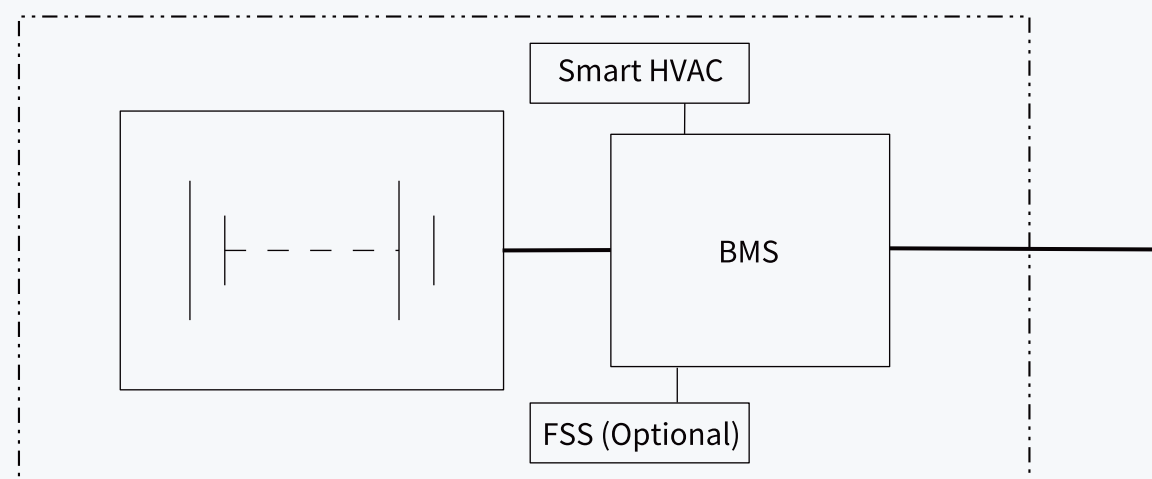
Intelligent liquid cooling comprehensively improves system efficiency; 1500V system voltage; Easy Transportation, Easy Layout, Easy Installation, Easy Maintenance, Easy Augmentation.



### Cost-efficient Ultra High Energy

It's equipped with new-gen safe and long-life LFP battery for energy storage, more energy, less footprint.

## CIRCUIT DIAGRAM



## SYSTEM PARAMETERS

System Type	MC-B501-E/U-R2	MC-B536-E/U-R4
<b>DC Data</b>		
Cell type	LFP	LFP
System configuration	1P416S	1P416S
DC usable energy @FAT	501kWh	536kWh
DC usable energy @1 month SAT	495kWh	530kWh
DC usable energy @3 months SAT	490kWh	525kWh
Nominal voltage	1,331.2V DC	1,331.2V DC
Battery voltage range	1,081.6~1,489.3V DC	1,081.6~1,497.6V DC
Nominal power	250.5kW	134kW
<b>General Data</b>		
Dimensions (WxDxH)	1,130×1,208×2,523mm	1,130×1,233×2,523mm
Weight	3,960kg	4,000kg
IP rating	IP55	IP55
Ambient operating temperature range	-30°C~+55°C [1]	-30°C~+55°C [1]
Relative humidity	5%-100%	5%-100%
Max. working altitude	<2,000m [2]	<2,000m [2]
Cooling concept	Liquid cooling	Liquid cooling
Noise@1m	≤75dBA	≤75dBA
Fire suppression system	With fire detection and alarm system	
Auxiliary power interface	AC 400V/50Hz, 3P4W; AC 480V/60Hz, 3P4W	
Auxiliary system peak power requirement@45°C, PF0.9	6.6kVA	4kVA
Communication protocols	CAN	CAN
Standard color	RAL 9003	RAL 9003
Compliance	IEC 62619, UL 9540, UL 9540A, UL 1973, UN 38.3, UN 3536, CE Marking	

Note:

[1] Power derating is performed when the ambient temperature is below -15°C or above +45°C.

[2] Power derating is performed when the altitude is between 2000-3000m.

# MC Cube-T BESS

MC10C-B5010-E/U-R2 & MC12C-B6012-E/U-R2  
MC10C-B5365-E/U-R4 & MC12C-B6437-E/U-R4

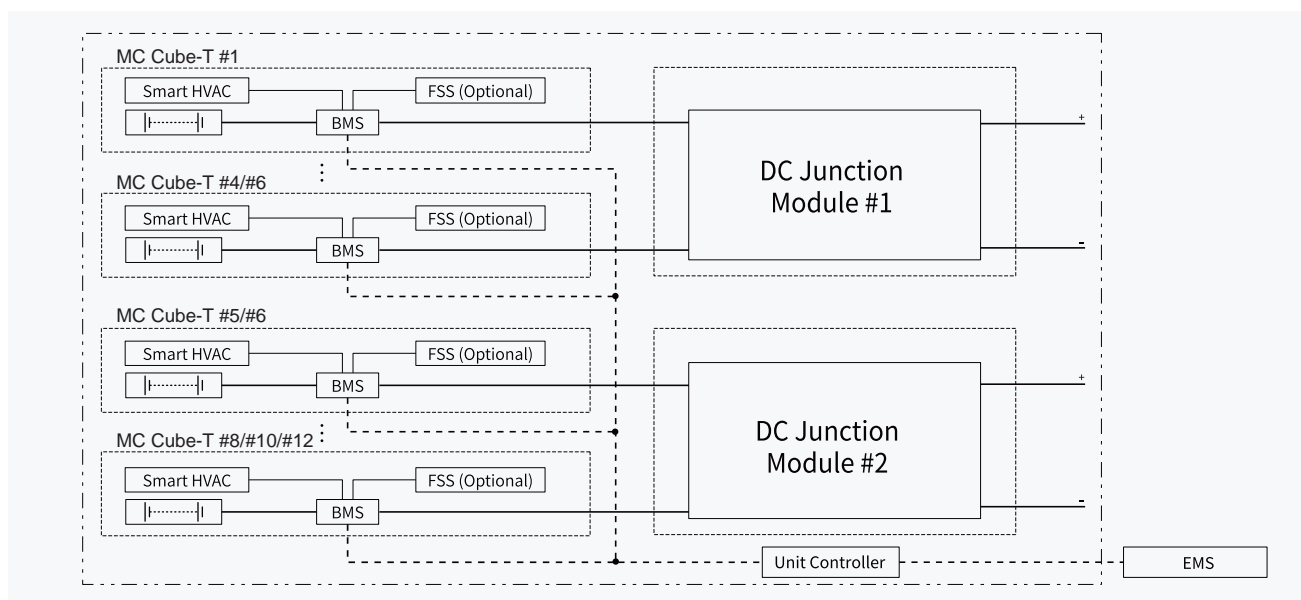
The new-generation MC Cube-T BESS practices the concept of MC Cube, inheriting from "Five Easy" strength, which enables flexible combination of any cube, to achieve any system capacity.



## SYSTEM FEATURE

- Ultra-high Density**  
 Compact design, larger capacity, smaller footprint.
- Independent Cluster Design**  
 1500V system voltage, reliable liquid-cooling at cluster level.
- Ultra-high Flexibility**  
 Flexible combination of any cube, to achieve any system capacity; can match mainstream string/central PCS.
- Highly Integrated**  
 Professional integration of local controller, HVAC and FSS.
- Safe & Long lifetime**  
 Ultimate protection, intelligent temperature control, temperature difference < 3°C, with new-gen safe and long-life LFP battery for energy storage.

## CIRCUIT DIAGRAM



## SYSTEM PARAMETERS

System Type	MC10C-B5010-E/U-R2	MC12C-B6012-E/U-R2	MC10C-B5365-E/U-R4	MC12C-B6437-E/U-R4
<b>DC Data</b>				
Cell type	LFP	LFP	LFP	LFP
System configuration	2×5×1P416S	2×6×1P416S	2×5×1P416S	2×6×1P416S
DC usable energy @FAT	5,010kWh	6,012kWh	5,360kWh	6,431kWh
DC usable energy @1 month SAT	4,950kWh	5,940kWh	5,306kWh	6,366kWh
DC usable energy @3 months SAT	4,900kWh	5,880kWh	5,252kWh	6,302kWh
Nominal voltage	1,331.2V DC	1,331.2V DC	1,331.2V DC	1,331.2V DC
Battery voltage range	1,081.6~1,489.3V DC	1,081.6~1,489.3V DC	1,081.6~1,497.6V DC	1,081.6~1,497.6V DC
Nominal power	2×1,253kW	2×1,503kW	2×670kW	2×804kW

## General Data

Dimensions (WxDxH)	6,058×2,438×2,896mm <sup>[1]</sup>	7,550×2,438×2,896mm <sup>[1]</sup>	6,058×2,438×2,896mm <sup>[1]</sup>	7,550×2,438×2,896mm <sup>[1]</sup>
Weight	43,550kg	52,720kg	43,750kg	53,010kg
IP rating	IP55	IP55	IP55	IP55
Ambient operating temperature range	-30°C~+55°C <sup>[2]</sup>	-30°C~+55°C <sup>[2]</sup>	-30°C~+55°C <sup>[2]</sup>	-30°C~+55°C <sup>[2]</sup>
Relative humidity	5%-100%	5%-100%	5%-100%	5%-100%
Max. working altitude	<2,000m <sup>[3]</sup>	<2,000m <sup>[3]</sup>	<2,000m <sup>[3]</sup>	<2,000m <sup>[3]</sup>
Cooling concept	Liquid cooling	Liquid cooling	Liquid cooling	Liquid cooling
Noise@1m	≤75dBA	≤75dBA	≤75dBA	≤75dBA
Fire suppression system	With fire detection and alarm system			
Auxiliary power interface	AC 400V/50Hz, 3P4W; AC 480V/60Hz, 3P4W			
Auxiliary system peak power requirement@45°C, PF0.9	70kVA	83kVA	50kVA	58kVA
Communication protocols	Modbus TCP/IP	Modbus TCP/IP	Modbus TCP/IP	Modbus TCP/IP
Standard color	RAL 9003	RAL 9003	RAL 9003	RAL 9003
Compliance	IEC 62619, UL 9540, UL 9540A, UL 1973, UN 38.3, UN 3536, CE Marking			

Note:  
 [1] The size does not include the size of the DMC HVAC. The HVAC of DMC needs to be installed on site, and the size after installing the HVAC is shown in the installation drawing.  
 [2] Power derating is performed when the ambient temperature is below -15°C or above +45°C.  
 [3] Power derating is performed when the altitude is between 2000-3000m.  
 [4] The energy storage system support flexible combination and capacity.

**MC-I** MC-P200B466-E/U-R2M01  
MC-P200B932-E/U-R4M01

Extremely safe, highly integrated, convenient, flexible, and cost-effective.



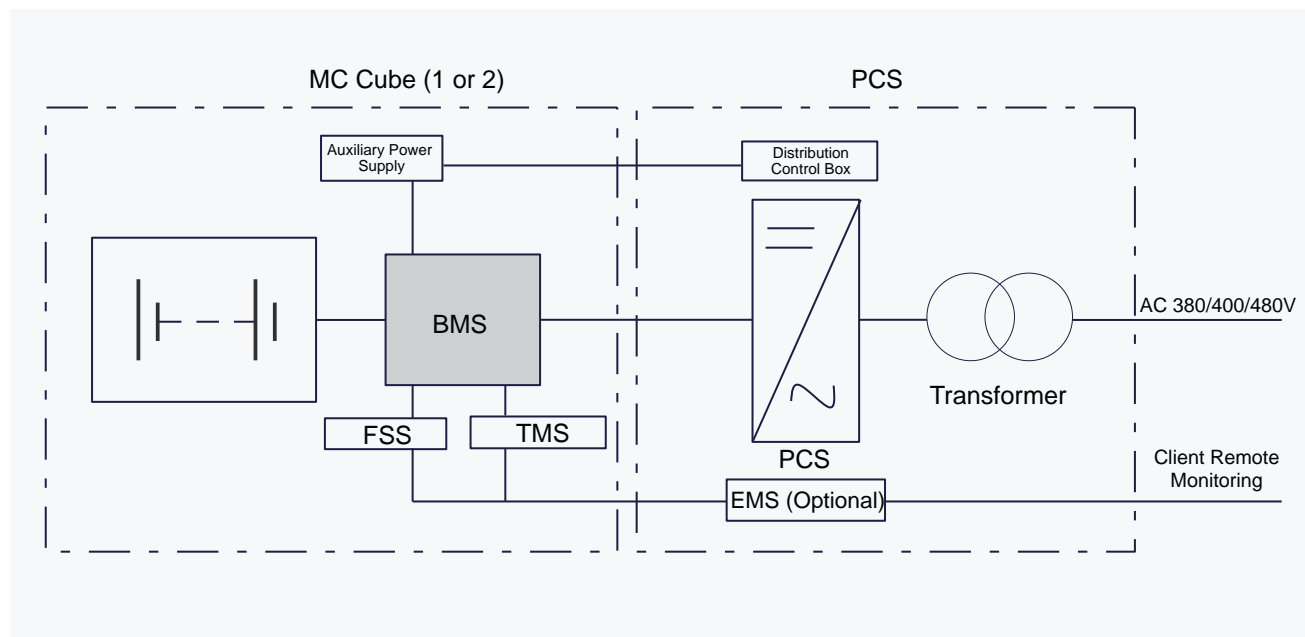
**SYSTEM FEATURES**

**High Energy Density**  
Compact mechanical design, minimized footprint.

**Highly Integrated**  
Highly integrated system to allow flexible transportation and on-site installation. All-in-one design, integrated with PCS, local controller, HVAC and FSS to ensure system safety.

**Safe & Long Lifecycle**  
Highly efficient system with safe and long lifecycle LFP battery.

**CIRCUIT DIAGRAM**



**SYSTEM PARAMETER**

System Type	IC01-B466AP200-E-R2	IC01-B932AP200-E-R4
<b>DC Data</b>		
Cell Type	LFP 350Ah	LFP 350Ah
System Configuration	1P416S	2x1P416S
Battery Capacity(BOL)	466kWh	932kWh
DC Usable Energy (BOL)@FAT	447kWh	894kWh
Nominal Voltage	1,331.2V	1,331.2V
Battery Voltage Range	1,081.6-1,497.6V	1,081.6-1,497.6V
Cooling Concept	Liquid cooling	Liquid cooling
<b>AC Data</b>		
Nominal Power	200kW	200kW
AC Usable Energy (BOL)@FAT	431kwh	862kwh
Max. THD of Current (@Nominal Power)	<3%	<3%
Power Factor	-0.95-0.95	-0.95-0.95
Nominal Grid Voltage	400V	400V
Nominal Grid Frequency	50Hz	50Hz
Isolation Method	Isolation Transformer	Isolation Transformer
<b>System Data</b>		
Dimensions (WxDxH)	2,250x1,170x2,675mm	3,380x1,170x2,675mm
Weight	~6T	~10T
Ambient Operating Temperature Range	-30°C~+55°C <sup>[1]</sup>	-30°C~+55°C <sup>[1]</sup>
Relative Humidity	5%-95%	5%-95%
Max. Working Altitude	<2,000m <sup>[2]</sup>	<2,000m <sup>[2]</sup>
Noise	≤75dB(A)	≤75dB(A)
Fire Suppression System	Aerosol	Aerosol
Auxiliary Power Interface	AC400V/50Hz,3-phase 4-wire	AC400V/50Hz,3-phase 4-wire
Auxiliary System Peak Power Requirement @45°C,PF0.8	~9kVA	~15kVA
IP Rating	IP55(Battery Parts);IP54(Electrical Parts)	IP55((Battery Parts);IP54((Electrical Parts)
Anti-Corrosion Grade	C4	C4
Communication Interfaces	Ethernet	Ethernet
Communication Protocols	Modbus TCP/IP	Modbus TCP/IP
Compliance	IEC 62477,IEC 62619,UL 1973,UL 9540 UL 9540A	EC 62477,IEC 62619,UL 1973,UL 9540 UL 9540A

Note:

[1] Power derating is performed when the ambient temperature is below -15°C or above +45°C

[2] Power derating is performed when the altitude is between 2000-3000m.

# EMS60

BYD has independently developed EMS60 as the “central intelligence” for the new power system. There are 4 innovations in EMS60: Modular architecture, Mega-scale data engine, AI strategy & Full lifecycle management. The innovation establishes an full-chain intelligent energy management system which is all-scenario adaptable, covering data processing, strategic optimization, and asset value enhancement.



## EMS60 Functions and Specifications

### Functional Summary:

- **Real-time Monitoring:** Batteries, Power Conversion Systems (PCS), Loads, Wind Power, Solar PV, and Auxiliary Systems.
- **Operations & Maintenance Management:** Collects energy storage operation data, integrates station-wide data information.
- **Advanced Control:** AGC/AVC, Primary Frequency Regulation, Scheduling Curves, Smoothing Fluctuations, System Peak Shaving, Automatic SOC Maintenance.
- **Zoned Control:** System safety zoning, control safety grading.
- **Real-time Control:** Internal energy control for energy storage and microgrids, maintaining grid power balance.
- **Advanced Applications:** Diagnostics and early warning, panoramic analysis (power plant efficiency, cost, and energy conversion analysis).
- **Intelligent Optimization Scheduling Strategies:** Anti-Reverse Current Protection, Demand Control, Load Tracking.

### 6 Advantages

**Cross-platform Compatibility**  
Supports cross-platform operation, compatible with domestic databases (MYSQL, DB GoldenSQL, etc.) and operating systems (Windows, Linux, Kylin, NISUS, etc.).

**Modular Configuration**  
Modular design philosophy, compatible with the protocols, agreements, and strategies required for photovoltaic storage and micro-grid operations.

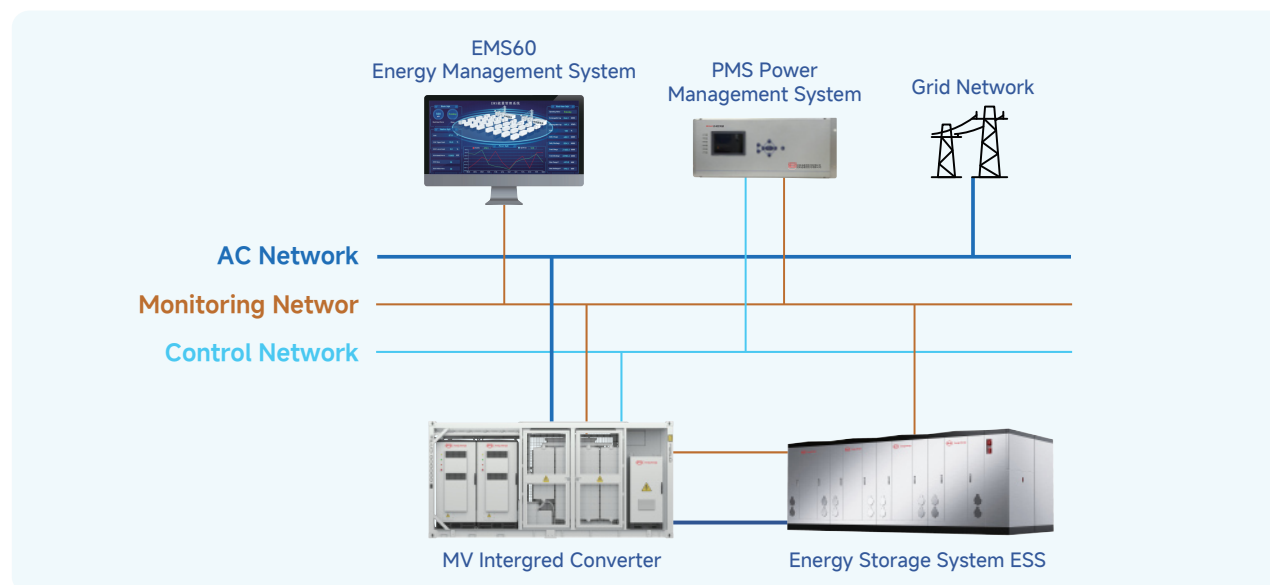
**Million-Level Data Simulation**  
Simulates complex scenarios using big data technology, including graphical real-world scenario models and related processes.

**Advanced Data Analytics**  
Features a high-capacity data collection system, efficient processing of massive data volumes, and a stable data preservation mechanism.

**Energy Optimization**  
Implements full life cycle management and advanced energy optimization algorithms.

**Customized Smart Strategies**  
Enables the development of customized functionalities and strategies, including smoothing fluctuations, inertia support, primary frequency regulation, scheduling curves, anti-reverse current protection, and demand control.

### Circuit Diagram



	Configuration	Performance Indicators
Software Capacity	Number of Stations Connected	≥1,024
	Volume of Real-time Data Access	≥4,000,000
	Volume of Control Access	≥200,000
Real-time Performance	Volume of Computational Access	≥80,000
	Real-time Image Response Time	<2S
	Automatic Image Refresh Time	1-10s(Adjustable)
	Teleindication Status Change Transmission Time	<1s
	Telemetry Value Change Transmission Time	<2s
CPU Load Rate	Remote Control/Adjustment Response Time	<1s
	Average CPU Load Rate of Each Computational Node (for any 30-minute period)	<3%
	Network Load Rate	Average CPU Load Rate of Each Computational Node (for any 30-minute period)
Reliability	Local Area Network Operation Load Rate (for any 30-minute period)	Hot standby: < 10 s
	Dual-Machine Switching Time	>99.99%
Information Processing Metrics	Annual System Availability	<20ms
	SOE (Sequence of Events) Resolution	>99.99%
	Accuracy of Analog Telemetry	100%
	Accuracy of Teleindication Actions	100%
	Accuracy of Remote Control Actions	>99.99%



# SERVICE

04



## Service

Professional Efficient Responsible

A	After-Sales Service	37
B	Battery Recycling	38

# AFTER-SALES SERVICE

## Service Concept



### Excelsior



Over **110** regions, more than **360** projects, over **17** years of O&M experience in BESS.



### Vigorous + Resolute



After-sale service response time **<1 h**



### Meticulous



Customer satisfaction **98%**

## 24-Hour Service

### Online support services

- 24/7 hotline reception
- 5 days/8 hours remote problem handling
- Fault email alerts

### Spare parts management services

- Sufficient spare parts to meet on-site needs
- Coverage by nearby warehouses

### Station support services

- Resolving common faults within 48 hours
- Regular on-site training by local teams

### Health check services

- On-site reports and prevention plans
- Annual inspection and maintenance services
- Regular component replacement

## Global Service Center

### BYD Global After-Sales Service Center:

- O&M Service Centers:** China, the United States, South America, the Middle East, Japan, the United Kingdom, Europe, Australia, South Africa
- O&M Service Outlets:** Hungary, Italy, the Netherlands, Spain, Saudi Arabia
- Online Cloud Services**

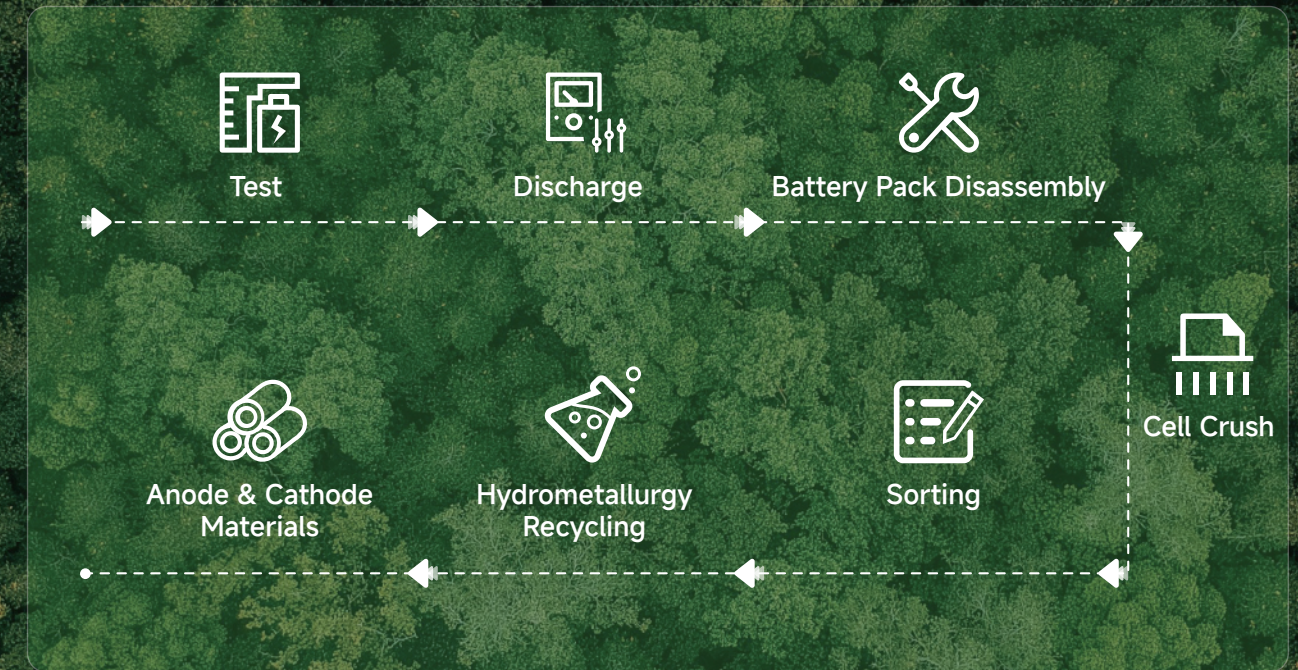
### Local Service and Support Systems:

- Outlets (or service providers)
- BYD Engineers
- Spare Parts Warehouses

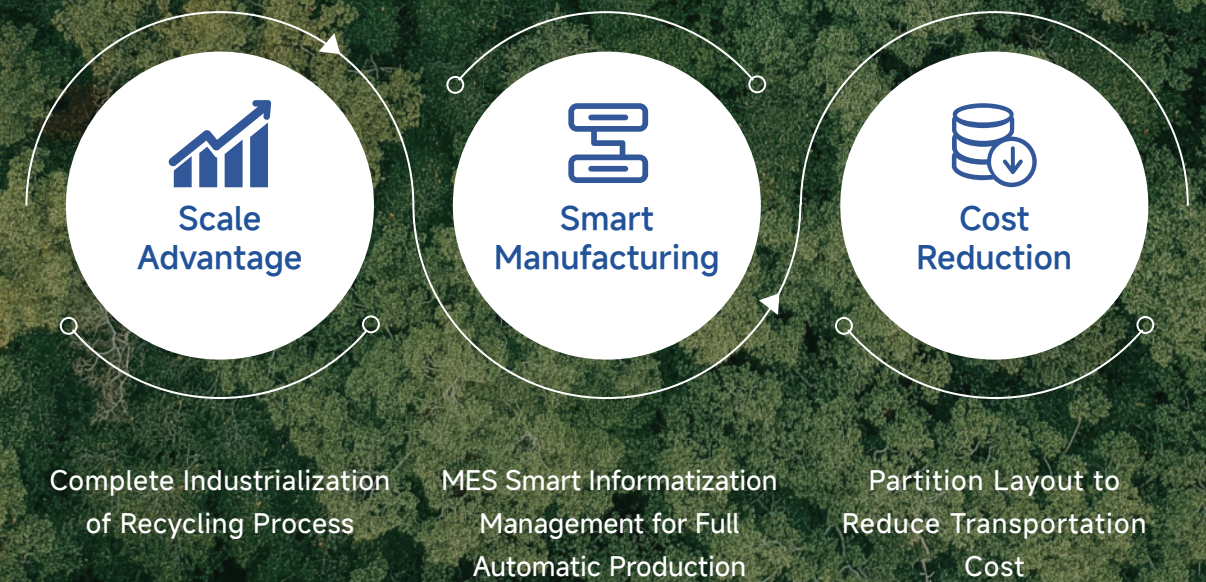


# BATTERY RECYCLING

## Recycling Process



## Industrialization





# CASES

05



## Cases

A	Overseas Cases	41
B	Domestic Cases	43

# OVERSEAS CASES



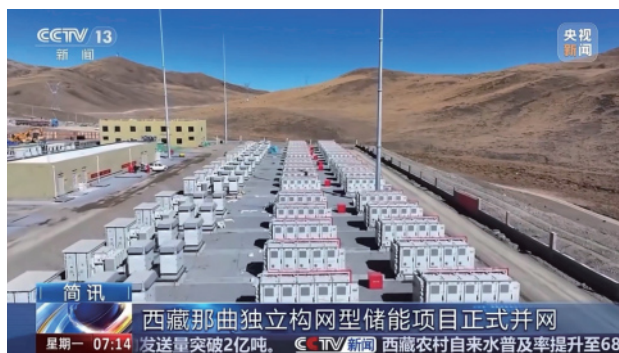
# DOMESTIC CASES



The Largest New Engery + BESS Project in 2023 Northwest, China 300MW/1,200MWh



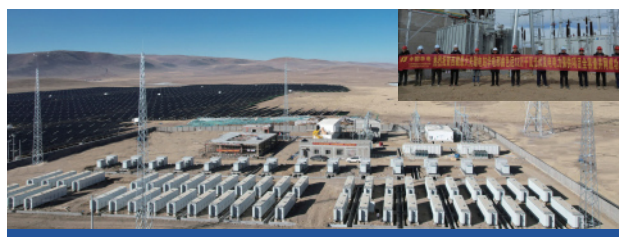
The Largest Wind-solar-thermal-storage-hydrogen Integrated Project in 2024 Northwest, China 300MW/1,200MWh



High-Altitude (4,600+m), Extreme Cold  
Largest Standalone Grid-Forming BESS Project  
Southwest, China 100MW/400MWh



World's Highest Altitude (5,100m), Extreme Cold  
Energy Storage Power Plant,  
Southwest, China 10MW/40MWh



High Altitude (4,500m) PV + Storage Power Plant  
Northwest, China 30MW/120MWh



First Extreme Cold BESS Project  
Inner Mongolia, China 60MW/120MWh



Strong Wind & Desert Standalone BESS Project Ningxia, China 200MW/400MWh



High Temp./Humidity/Salt Fog Wind + BESS Project Shandong 100MW/200MWh



High Temp./Humidity, First Commercially Operated  
Grid-side Standalone BESS  
Guangdong 100MW/200MWh



High Temp./Humidity/Salt Fog  
First Salt + PV Complementary Project  
Hainan 25MW/50MWh



Standalone BESS Project  
Ningxia 100MW/200MWh



2023 Largest User-side PV + Storage  
Project  
Chongqing 60MW/240MWh



World's First Nuclear-grade Backup  
Power Plant  
Shenzhen 2.5MW/3.5MWh