Create better life with green energy

Sichuan SafeQuene Energy Storage Technology Co., Ltd

Tel: +260 773 535 038 / WhatsApp: +86 136 5624 6645

E-mail: sales@sfq-power.com

Web: www.sfq-power.com

Address: Jinshan Industrial Park, Luojiang District, Deyang City, Sichuan Province, China

SFQ Energy Storage

集团概况
OVERVIEW OF THE GROUP

Shenzhen Chengtun Group Founded in 1993, Shenzhen Chengtun Group has its headquarters rooted in Shenzhen, with its Western China Headquarters and Global Operation Center located in Chengdu. The Group has over 15,000 employees, and its business footprint spans both domestic and international markets, taking root in numerous regions. In 2024, the Group's operating revenue and total asset scale both exceeded the 70 billion yuan mark; it has officially stepped onto a new development stage, laying a more solid foundation for the realization of its long-term strategic goals.

Since 2016, Chengtun Group has accurately seized the opportunities brought by the vigorous development of the new energy industry, strongly deploying in the field of energy metals such as lithium, copper, and nickel. At the same time, it has forward-lookingly focused on the energy storage industry track, committing itself to building an integrated ecosystem of "energy metal guarantee + energy storage technology innovation + scenario application expansion". Through years of in-depth cultivation, the Group has successfully built a full-chain layout from resource exploration and mining, material smelting and manufacturing to energy storage system integration, with all links advancing in coordination. Among them, the energy storage segment serves as the core strategic direction of the Group. In 2022, it successively established Sichuan SafeQuene Energy Storage Technology Co., Ltd. and Guangdong Gerui Green Energy Technology Co., Ltd., focusing on making breakthroughs in fields such as the R&D of core materials for energy storage batteries, the provision of energy storage system solutions, and the commercialization of new energy storage technologies. It has quickly formed technological advantages and industrial scale, becoming an important driving force for the development of the green energy industry.

The Group actively responds to the national strategic call and continuously strengthens the linkage layout of energy metals and the energy storage industry: on the one hand, it takes core resources such as lithium, copper, and nickel as the foundation to supply key raw materials for the energy storage industry; on the other hand, through technological breakthroughs and market expansion in the energy storage segment, it deeply integrates into cutting-edge fields such as electric vehicles, grid-side energy storage, and user-side energy storage. The energy storage business has become the core growth driver of the Group's new energy segment. It has carried out in-depth cooperation with many upstream and downstream enterprises to achieve mutual benefit and win-win results. Its two listed subsidiaries, **Chengtun Mining (Stock Code: 600711) and Chengxin Lithium (Stock Code: 002240)**, have also completed strategic layouts around core metal resources such as lithium, copper, and nickel required for energy storage, further consolidating the resource foundation of the energy storage industry and helping the Group seize opportunities in the capital market and the industry track.

Looking ahead to the next three years, Chengtun Group will unswervingly implement the strategic guideline of "controlling resources upstream and expanding materials downstream". While steadily increasing the production capacity of lithium salts, copper, nickel, etc., it will take the energy storage industry as the key breakthrough direction: continuously increasing investment in energy storage technology R&D, promoting the large-scale expansion of energy storage system integration production capacity, carrying out carbon reduction innovation practices around new energy metals, and actively exploring the commercial application of energy storage in multiple scenarios.

The Group is determined to become a benchmark enterprise with strong competitiveness and growth potential in the industry, contributing tremendous strength to helping achieve the "dual carbon" goals and promoting the sustainable development of global energy. Upholding the concept of "Making the Best Use of Resources, Creating a Better Life", Chengtun Group is striding forward towards a broader future.

产业布局
INDUSTRIAL LAYOUT

Chengtun Group

New Energy Industry

Energy Metals

- Lithium Ore
- Lithium Carbonate
- Lithium Hydroxide
- Metallic Lithium
- Nickel Ore
- Ferronickel
- High-Grade Nickel Matte
- Nickel Sulfate
- Cobalt Ore
- Cobalt Hydroxide
- Cobalt Sulfate
- Cobalt Tetroxide
- Copper Ore
- Electrolytic Copper
- Rare Earth Ore

Cathode Materials

- Ferric Phosphate
- Lithium Iron Phosphate
- High-Nickel Ternary Precursor
- High-Nickel Ternary Material

Energy Storage Products

Manufacturing of Energy Storage Systems

Operation of Photovoltaic Energy Storage Systems

Industrial Fund

- New Energy Fund

Base Metals

- Lead-Zinc Ore
- Zinc, Germanium
- Gold, Silver Ore
- Indium Ingot
- Cadmium Cake
- Zinc-Copper Slag, Iron-Silver Slag

Others

- Forestry
- Medium-Density Fiberboard (MDF)
- Particleboard
- Motor Components

全球分布

GLOBAL DISTRIBUTION

Chengtun Group has business operations in 11 countries worldwide, with 32 production bases established, and is further expanding its global business layout.

Chengdu, Sichuan: Group's Global Operation Center / Headquarters of Chengxin Lithium / Headquarters of Energy Storage Systems
Suining, Sichuan: Lithium Hydroxide / Metallic Lithium / Lithium Iron Phosphate / Ferric Phosphate
Deyang, Sichuan: Lithium Carbonate / Lithium Hydroxide / Manufacturing of Energy Storage Systems
Aba, Sichuan: Lithium Concentrate
Ganzi, Sichuan: Lithium Concentrate
Ya'an, Sichuan: Zinc and Germanium
Liangshan, Sichuan: Rare Earths

Zambia
Lusaka: Nickel Concentrate

Beijing: North China Operation Center
Handan, Hebei: Wood-Based Panels
Inner Mongolia: Copper, Tungsten, Tin, Lead, Zinc Ores

Xiamen, Fujian: Headquarters of Chengtun Mining
Shenzhen, Guangdong: Headquarters of Chengtun Group / Industrial Base
Zhuhai and Yangjiang, Guangdong: Cobalt Tetroxide
Qingyuan, Guangdong: Wood-Based Panels
Jiangmen, Guangdong: Wood-Based Panels
Zhaoqing, Guangdong: Wood-Based Panels
Hong Kong: Overseas Investment and Operation Center

Democratic Republic of the Congo (DRC)
Kolwezi: Cathode Copper / Cobalt Hydroxide
Kalongwe: Copper-Cobalt Ore / Cathode Copper / Cobalt Hydroxide

Yunnan: Copper, Cobalt, Zinc Ores
Fuquan, Guizhou: High-Grade Nickel Matte, Nickel Sulfate, Cobalt Sulfate, Ferric Phosphate
Xiangyang, Hubei: Wood-Based Panels

Argentina
Salta: SDLA Project / Pocitos and Arizaro Salt Lakes

Zimbabwe
Manicaland: Sabi Star Lithium-Tantalum Mine

Singapore
Southeast Asia Operation Center

Indonesia
Wedabay Industrial Park / High-Grade Nickel Matte (Ni)
Morowali Regency, Central Sulawesi Province / Lithium Salts (Li)

关于我们
ABOUT US

Chengtun Group
Wholly owns Sichuan SafeQuene Energy Storage Technology Co., Ltd.

SFQ Energy Storage
Founded in March 2022, it is a wholly-owned subsidiary of Chengtun Group.

GeRui Green Energy
Investment and Operation Division

SFQ (Deyang)
Manufacturing Division

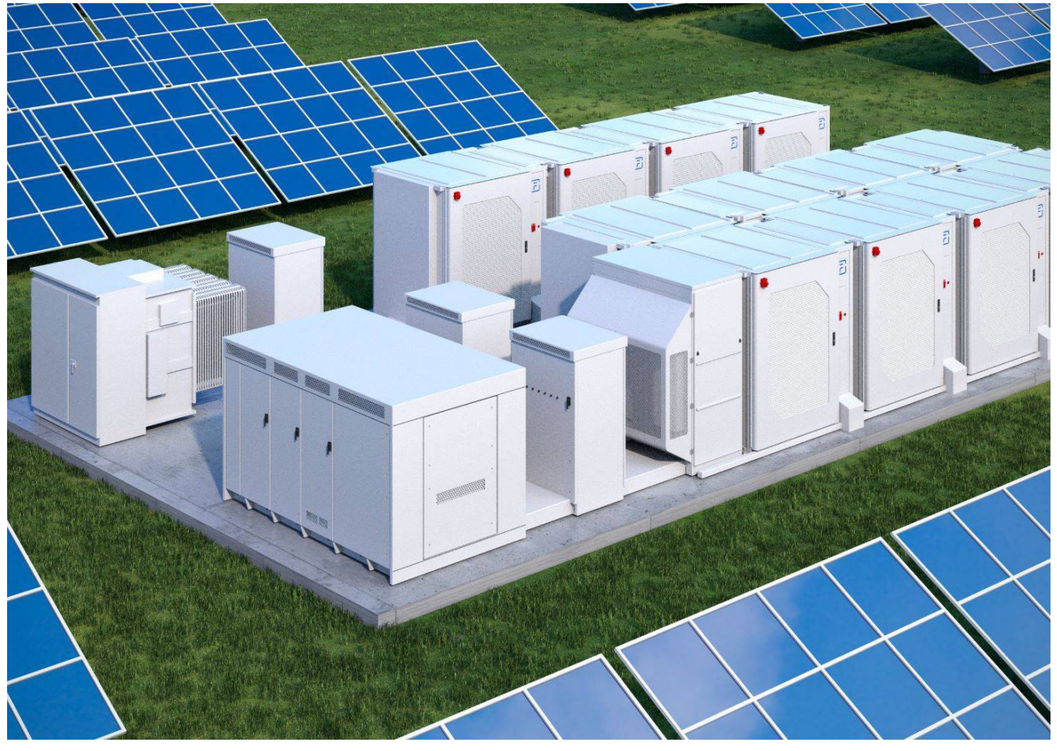
SFQ(Xi'an)
EMS Software and Operation & Maintenance Platform

Sichuan SafeQuene Energy Storage Technology Co., Ltd, Founded in March 2022, Sichuan SafeQuene Energy Storage Technology Co., Ltd. is a wholly-owned subsidiary of Chengtun Group Co., Ltd. It is an integrated energy solution provider and service provider that focuses on offering comprehensive energy storage system solutions for global users, integrating technology, R&D, production, sales, and operation.

The company is committed to fully integrating energy storage technology with multi-scenario applications on the user side, continuously carrying out solution innovation, and providing users with safe and cost-effective energy storage system solutions as well as business value innovation.

Its industry-specific solutions include: residential off-grid solar energy storage solutions, industrial and commercial energy storage solutions, wind-solar-diesel-energy storage microgrid solutions, smart new energy solutions for solar-energy storage-charging, new energy supply solutions for petroleum and drilling, integrated green energy supply solutions for smart mines, and energy solutions for agriculture and infrastructure.

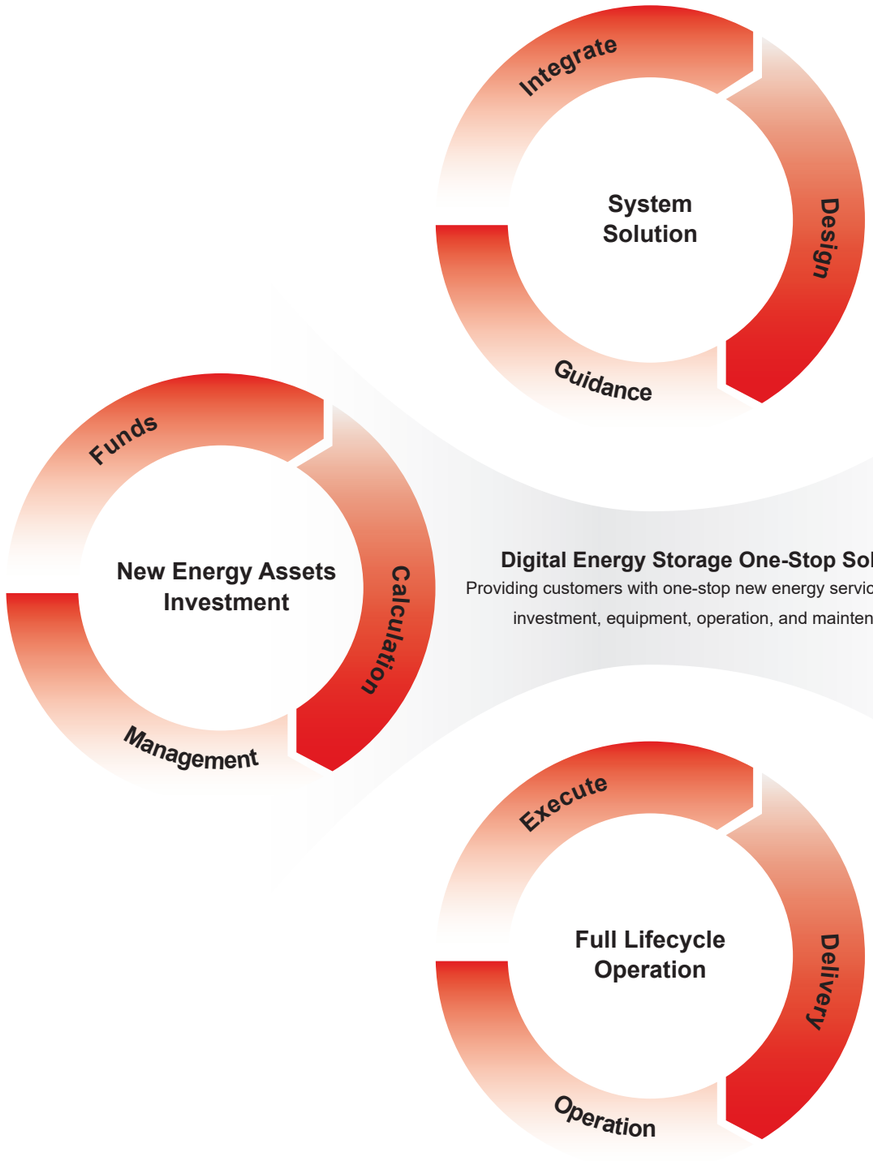
To further advance the implementation of its energy storage business, the company has established SafeQuene Energy Storage Technology (Deyang) Co., Ltd., located in the Luojiang Jinshan Industrial Park, with a total investment of 150 million yuan. The project is constructed in two phases (focusing on the large-scale production of lithium battery energy storage). After the commissioning of both Phase I and Phase II, the total production capacity will reach 6 GWh, making it the core base for the Group's large-scale delivery of energy storage products.



公司优势

COMPANY ADVANTAGES

Professional technical survey — scheme — product — installation — strategy — delivery — operation and maintenance; ensuring that each project has professional and specialized advantages in product operation.



Digital Energy Storage One-Stop Solution

Providing customers with one-stop new energy services covering investment, equipment, operation, and maintenance.

Smart Energy Cloud Platform

Based on the SaaS architecture, it integrates Huawei Cloud technology, big data analysis, artificial intelligence algorithms, and Internet of Things (IoT) technology to achieve safety, intelligence, openness, and collaboration in energy storage management.

Professional Electricity Consumption Data Analysis

Data Analysis + AI Model Technology: Ensuring reliable charging and discharging, maximizing returns, enabling early warning, implementing predictive charging and discharging management, and achieving intelligent learning parameter tuning.

Smart Operation and Maintenance Platform

Combining the SaaS-based intelligent operation and maintenance platform with mobile terminals, it helps service providers quickly establish a honeycomb-style operation and maintenance system, realize a point-to-face operation and maintenance system, and reduce the operation and maintenance costs throughout the entire life cycle of energy storage.

Panoramic Dynamics + Multi-Dimensional Collaboration

Coverage of multiple electricity tariff types and dynamic joint optimization;

Maximizing revenue through "price difference revenue + reduction of demand charges + demand response + aggregated regulation"

"Source-load-storage + consumption-sales-storage" multi-dimensional collaborative management!

EnergyLattice EMS

EnergyLattice EMS is the core of the on-site energy storage system. Relying on its high-speed and stable EMU, it achieves more stable and reliable cloud-edge collaboration. Through massive data collection, AI intelligent algorithm analysis, and intelligent strategy execution, it ensures the safe, economical, and reliable operation of the system while maximizing the comprehensive benefits of the energy storage system.

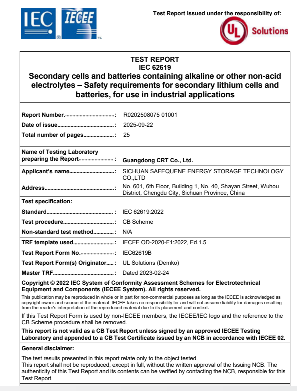
Professional Operation and Maintenance

By comprehensively utilizing core technical means such as the intelligent battery diagnosis system, commercial energy storage cloud-edge collaborative EMS, and energy storage big data cloud platform, it conducts condition monitoring and intelligent operation and maintenance on the core equipment of user-side energy storage power stations.

公司资质

COMPANY QUALIFICATIONS

The company has obtained ISO9001 system certification and has been awarded multiple design patents, utility model patents, invention patents, as well as software copyrights.

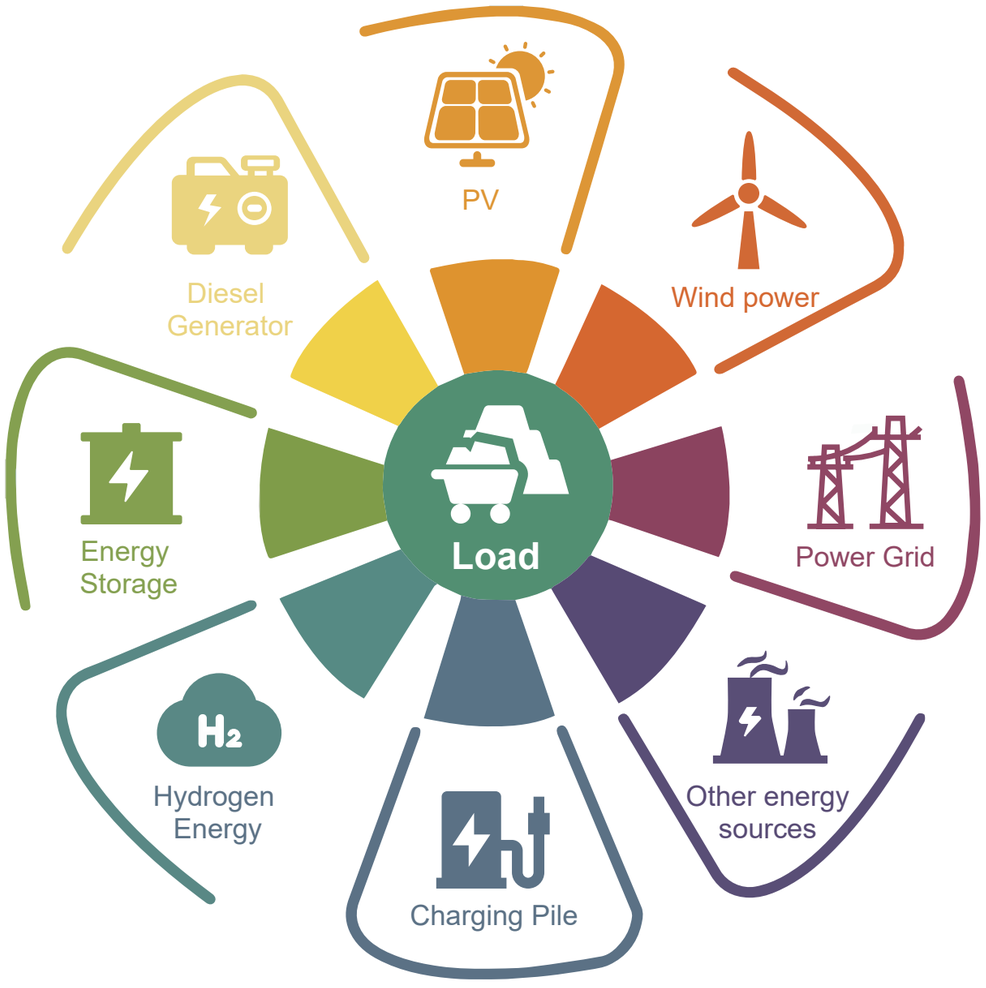


风、光、柴、储、充等微电网解决方案

SOLUTIONS

A small-scale microgrid system that integrates grid, wind, solar, diesel, energy storage, and other energy sources to achieve multi-energy complementarity can be widely adapted to the needs of grid-connected operation, off-grid operation, and power supply in non-electrified areas.

At the same time, by building a composite application model for combined power supply, multi-functional power supply, and multi-scenario power supply of large electrical equipment, it can reduce equipment idleness and waste caused by load intermittency and short-term power supply. It also addresses issues such as low economic calculation and poor profitability in such scenario applications. This thus creates a new type of power supply system that expands application directions and scenarios.



Multi-energy access

• Through standard energy storage and power supply systems, solutions and approaches for different loads and application scenarios are realized.

Multi-functional integration

• It can realize the integration function of multiple energy sources such as photovoltaic, wind power, diesel power generation, and gas-fired power generation.

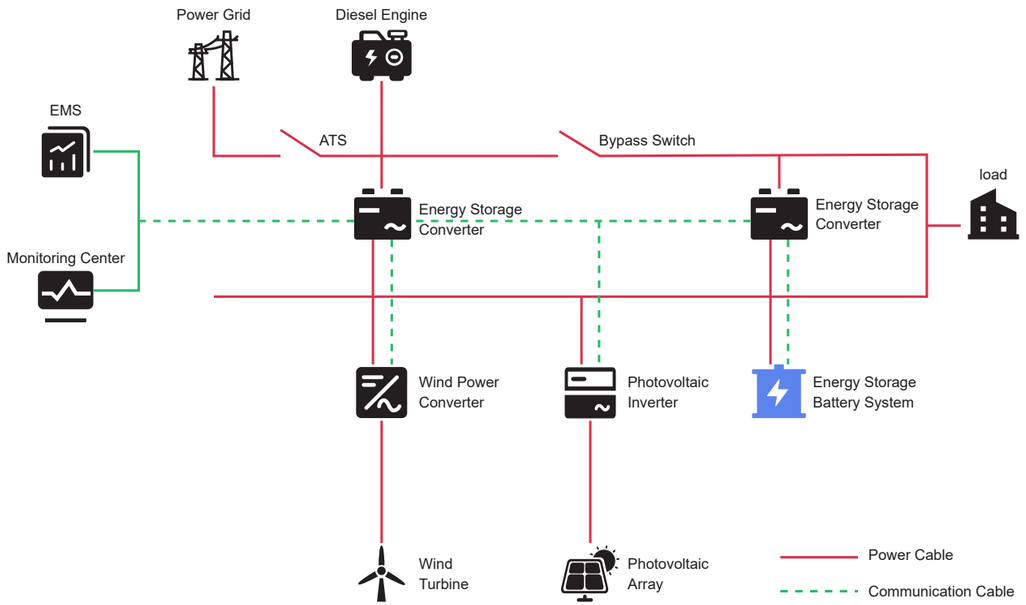
Multi-mode configuration

• Standardized products, standardized strategies, applications in special (customized) scenarios, and moving toward certification and the international market.

智能微电网解决方案
SOLUTIONS

A smart microgrid is a highly autonomous and flexibly controllable localized power system. By deeply integrating distributed energy resources (such as photovoltaics and wind power), energy storage systems, traditional power generation (such as diesel backup power), and intelligent control technologies, it builds a self-balancing and self-managing micro power network. Its goal is to provide users with a power supply solution featuring high reliability, high quality, and high resilience.

The core technology application of SFQ's smart microgrid solution is reflected in its innovative system architecture design, advanced Energy Management System (EMS), and powerful smart cloud platform. These components work together to ensure the system's reliability, stability, economy, and intelligence level.



Intelligence

EMS Optimized Dispatching + Intelligent Equipment Collaboration

Reliability

Designed based on the "Stable Triangular Structure," it ensures that the failure of any single unit will not affect the overall stable operation of the system.

Uninterrupted power supply

The bypass switch enables zero-perception mode switching

Key Control Technologies and Mechanisms

• Risk Control Mechanism (Fault Defense "Firewall")

Real-Time Panoramic Monitoring

• It conducts millisecond-level high-speed collection and monitoring of the status of all key equipment (including diesel generators, power grids, PCS, batteries, photovoltaic (PV) systems, and loads) as well as power supply quality.

Rapid Fault Localization and Isolation

• Intelligent algorithms are used to quickly locate system fault points and implement precise isolation strategies (such as disconnecting faulty equipment/circuits), ensuring that faults do not affect the overall operation of the microgrid.

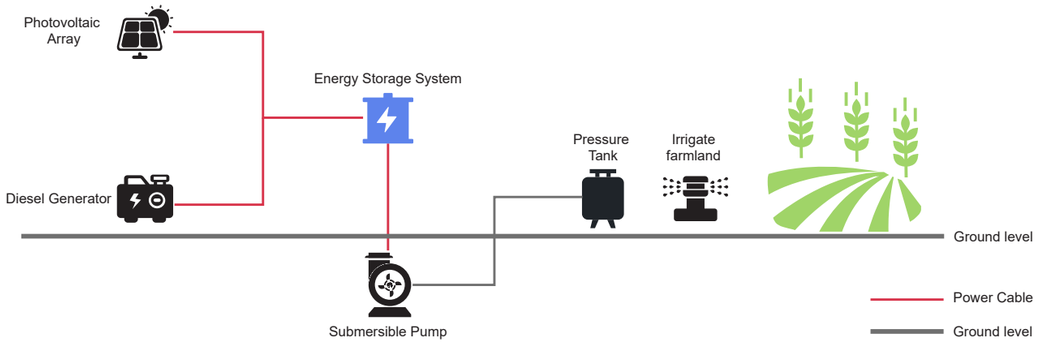
Intelligent Alarm and Linkage

• It pushes alarm information in real time and links relevant equipment to activate protection actions (e.g., BMS-linked protection for batteries).

农业、基建能源解决方案
SOLUTIONS

Agricultural and infrastructure energy solutions are small-scale power generation and distribution systems composed of distributed photovoltaic power generation equipment, energy storage devices, energy conversion devices, load monitoring devices, and protection devices.

This new type of green power supply system provides stable electricity for agricultural irrigation, agricultural equipment, farm machinery, and remote infrastructure areas. The entire system generates electricity locally and consumes it locally, offering new ideas and solutions to address power quality issues in remote mountain villages. While improving power supply quality, it also significantly enhances safety and convenience. By tapping into the potential of renewable energy, it better serves regional economic development and people's production and daily lives.



Miniaturization

Low voltage level, small system scale, and on-site utilization of electrical energy.

Self-balancing

The internal electricity of the microgrid is self-balancing, with minimal power exchange with the external power grid.

Cleanliness

Mainly relying on clean energy sources such as photovoltaic power and wind power generation, it is clean and low-carbon.

Efficiency

Integrate all links of electrical energy, improve energy utilization efficiency, and achieve energy conservation and emission reduction.

Ensure stable agricultural production

- Alleviate the pressure on the power grid caused by energy-intensive agriculture.
- Ensure continuous power supply for critical loads.
- In the event of a power grid failure, the emergency backup power support system operates off-grid.

Improve the quality of rural electricity supply

- Solve the problems of intermittent, seasonal, and temporary overloads.
- Solve the problem of low voltage at the end of distribution lines caused by their long power supply radius.

Address the rigid demand for electricity

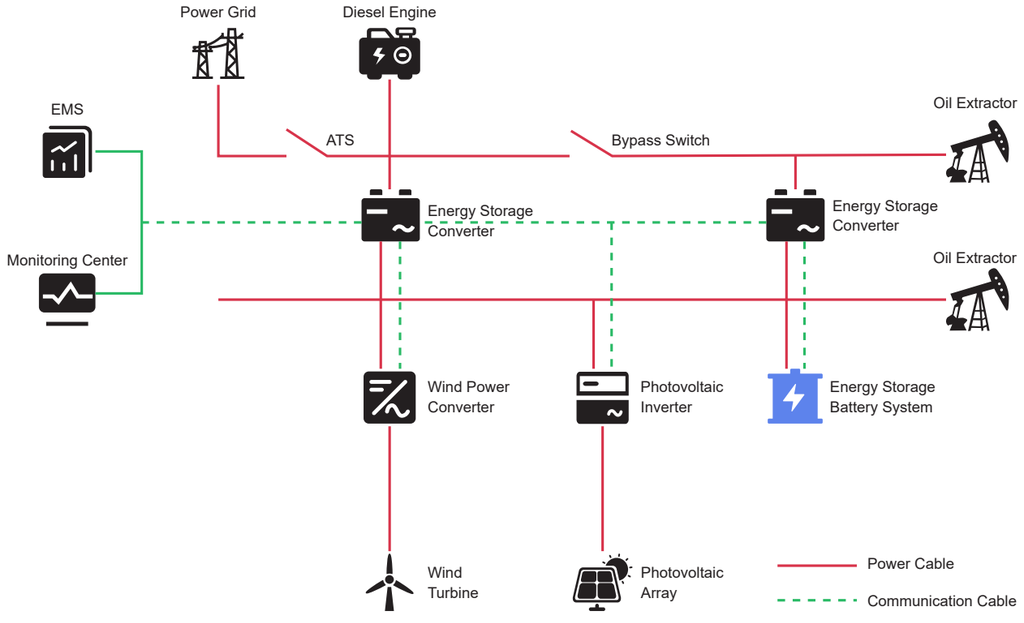
- Address the electricity needs for daily life and production in remote rural areas without access to electricity.
- Farmland achieves off-grid irrigation.

石油钻探、采油、输油新型能源供给解决方案

SOLUTIONS

The new energy supply solution for drilling, fracturing, oil production, oil transportation, and camps in the petroleum industry is a microgrid power supply system composed of photovoltaic power generation, wind power generation, diesel generator power generation, gas-fired power generation, and energy storage.

With the support of peripheral equipment systems, it can realize grid-connected operation, off-grid operation, and arbitrary switching between grid-connected and off-grid operation with multiple voltage levels. The solution provides a pure DC power supply method, which can improve system energy efficiency, reduce losses during energy conversion, recover the stroke energy of oil production machines, and offer an AC power supplement solution.



Flexible access

• Flexible access to new energy sources allows for the integration of photovoltaic power, energy storage, wind power, and diesel generators to build a microgrid system.

Simple configuration

• Dynamic coordination of wind power, photovoltaic power, energy storage, and diesel generators: the product types of each unit are diverse, the technology is mature, and engineering application is simple.

Flexible expansion

• The access power of the system can be flexibly expanded in the later stage, with low transformation costs and short implementation time.

Plug-and-play

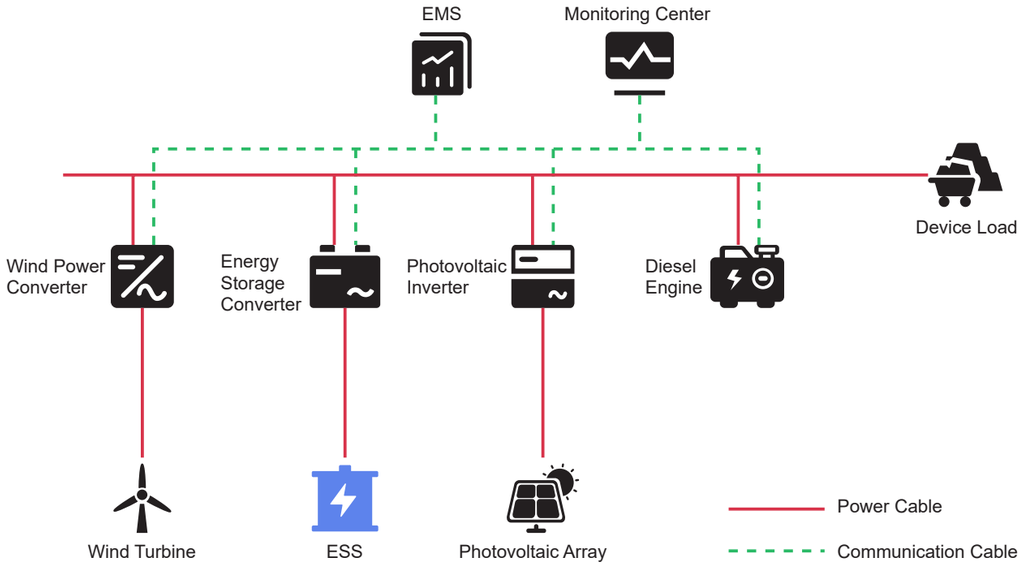
• The equipment supports "plug-and-charge" and "plug-and-use" with "unloading-type" discharge, ensuring stability and reliability.

智慧矿山、绿色冶炼综合能源供给解决方案

SOLUTIONS

A large amount of energy is required to sustain energy supply in the production processes of ore mining and smelting. Energy conservation and emission reduction have become the top priority for enterprise development. Effectively utilizing natural resources in combination with factory conditions to promote energy reform will drive the development of "smart mines and green smelting".

By integrating photovoltaic power, energy storage, thermoelectricity, generators, and power grid coordination to achieve comprehensive energy supply, significant contributions can be made to enterprises in terms of capacity expansion, reducing electricity costs, and promoting energy conservation and emission reduction!



Sustainable Energy Microgrid

- Design, invest in, and operate wind-solar-storage microgrids.
- Sign a long-term power purchase agreement with the mine.

Lay bricks for smart mines and add tiles to green smelting.

- Engage in the construction of zero-carbon green mines, and promote the harmonious coexistence of the mining industry and nature.
- Gather the power of energy, empower zero-carbon mines and smelting, and start a new chapter in the sustainable development of the mining industry.

户用 / 工商业光储系统

CORE PRODUCTS

- Rack-mounted design for effortless installation and scalable expansion.
- Full-spectrum remote intelligent monitoring & control.
- Rapid charging capability paired with extended cycle life.
- Smart temperature regulation plus multi-layered safety protection mechanisms.
- Streamlined exterior design enabling intuitive device status visualization.
- Multi-mode compatibility with flexible capacity customization.

Residential / C&I Energy Storage System

ICESS-T 0-30/40/A

ICESS-T 0-40/80/A

ICESS-T 0-50/102/A

ICESS-T 0-60/122/A

Residential / C&I Energy Storage System

ICESS-T 0-60/112/A

ICESS-T 0-60/225/A

ICESS-T 0-80/321/A

ICESS-T 0-80/482/A

工商业储能系统

CORE PRODUCTS

- Full-range battery cell temperature acquisition + AI monitoring and early warning.
- Intelligent temperature control system, integrated with temperature/smoke detection + PACK-level and cluster-level composite fire protection.
- Intelligent AI technology and smart energy management system (EMS) for enhanced equipment operational efficiency.
- QR code-based fault inquiry + data monitoring, enabling clear visualization of equipment status data.
- Flexible customization of operation strategies, better matching load characteristics and power consumption habits.
- High-efficiency and flexible PCS configuration + 314Ah large-capacity battery cell system.

C&I Energy Storage System (Air-Cooled)

ICESS-T 0-30/160/A

ICESS-T 0-100/225/A

ICESS-T 0-120/241/A

ICESS-T 0-125/257/A

C&I Energy Storage System (Liquid-Cooled)

ICESS-T 0-105/208/L

ICESS-T 0-130/261/L

分布式微电网系统

CORE PRODUCTS

- Adopts a high-protection split structure of one cabinet per unit / one cabinet per enclosure.
- Independent temperature control & independent operation and maintenance; capacity coverage: 241–723 kWh.
- Equipped with an intelligent BMS + AI energy management system to improve equipment operational efficiency.
- Supports LAN/RS485/CAN remote monitoring.
- Configured with full-range battery cell status acquisition + AI predictive early warning.
- Smoke/temperature detection + perfluorohexane/aerosol fire protection (optional).

Distributed Microgrid System (Air-Cooled)

TCESS-S 60-120/241/A

TCESS-S 120-120/482/A

TCESS-S 180-120/723/A

- Adopts a split modular structure, enabling on-demand combined deployment.
- Features cluster-specific temperature control, cluster-specific fire protection, full-range battery cell temperature acquisition, and AI monitoring & early warning.
- IP54 high protection rating, supporting a wide operating temperature range of -30°C ~ +55°C.
- Equipped with multiple protection functions against overvoltage, undervoltage, overcurrent, overtemperature, etc.
- Supports AC/DC startup, with grid-connected/off-grid switching time ≤ 10ms.
- THDi as low as 0.99%, delivering high-quality and stable output power.

Distributed Microgrid System (Liquid-Cooled)

TCESS-S 60-130/261/L

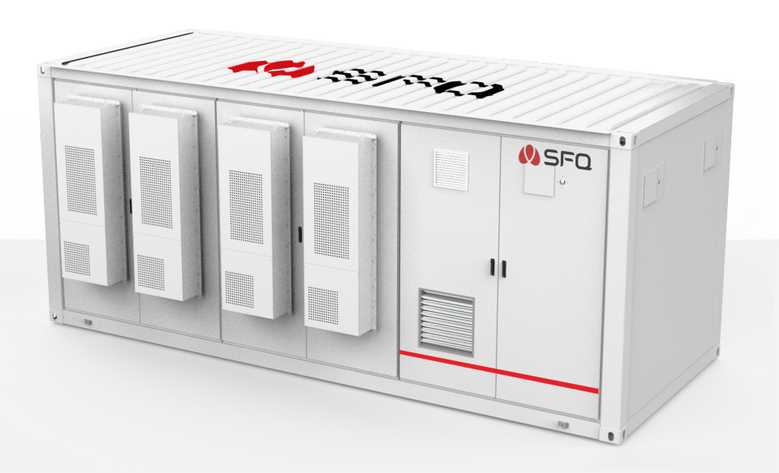
TCESS-S 120-130/261/L

TCESS-S 180-130/783/L

集装箱微电网系统

CORE PRODUCTS

- Adopts a forced air cooling solution, supporting wide-temperature operation ranging from -25°C to +55°C.
- With an IP54 protection rating, it is suitable for complex outdoor scenarios.
- Equipped with an AI Energy Management System (EMS) to improve equipment operating efficiency.
- Compatible with multiple communication interfaces including LAN, CAN and RS485, enabling remote monitoring of operating status.
- Features a standard container plus independent compartment structure, and is equipped with a full range of battery cells.
- Temperature collection combined with AI predictive early warning function.



Containerized Microgrid System (Air-Cooled)

SCESS-T 250-250/1028/A

SCESS-T 400-400/1446/A

SCESS-T 720-720/1446/A

- Adopts a liquid cooling solution for superior temperature control precision.
- Can stably support the operation of ultra-high power loads ranging from 250kW to 780kW.
- Equipped with an AI Energy Management System (EMS) to enhance equipment operating efficiency.
- Compatible with multiple communication interfaces including LAN, CAN and RS485, enabling remote real-time monitoring of operating status.
- The photovoltaic input voltage covers 200V to 1100V (supporting 1–20 channels of MPPT).
- Supports customized multi-energy integration of “wind/solar/diesel (gas)-storage-grid”.

Containerized Microgrid System (Liquid-Cooled)

SCESS-T 250-250/1044/L

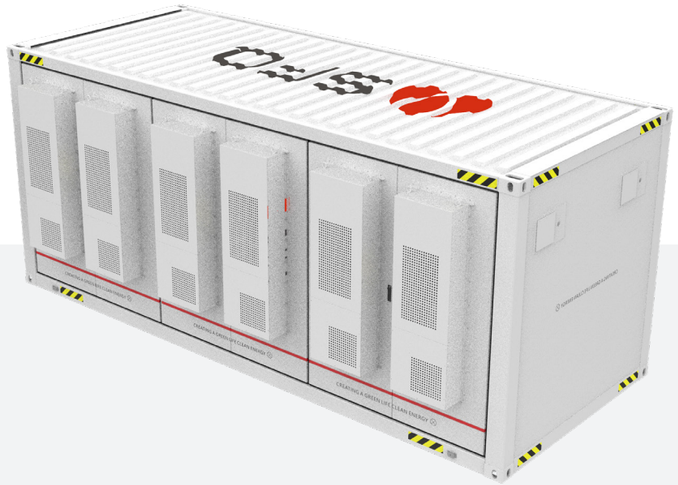
SCESS-T 400-400/1567/L

SCESS-T 780-780/1567/L

集装箱储能系统

CORE PRODUCTS

- Adopts an independent dual cooling solution of liquid cooling / air cooling (selectable on demand).
- Equipped with physical isolation of compartments, suitable for stable heat dissipation of large-capacity energy storage systems.
- Full-range battery cell temperature collection combined with AI predictive monitoring enables early warning of abnormalities.
- Compatible with multiple communication interfaces including LAN, CAN and RS485, allowing remote monitoring of operating status.
- Covers an ultra-wide capacity range from 2170kWh to 5015kWh.
- Supports customized busbar output, which can match a variety of PCS access and grouping schemes.



Containerized Energy Storage System (Air-Cooled)

ICS-DC 2170/A/10

- Adopts an independent dual cooling system of liquid cooling/air cooling (selectable on demand).
- Equipped with compartment physical isolation, suitable for stable heat dissipation of large-capacity energy storage systems.
- Full-range battery cell temperature collection combined with AI predictive monitoring to enable early warning of abnormalities.
- Compatible with multiple communication interfaces including LAN, CAN and RS485, allowing remote monitoring of operating status.
- Covers an ultra-wide capacity range from 2170kWh to 5015kWh.
- Supports customized busbar output, which can match a variety of PCS access and grouping schemes.

Containerized Energy Storage System (Liquid-Cooled)

ICS-DC 2351/L/10

ICS-DC 2507/L/15

ICS-DC 5015/L/15

多能融合智能微电网系统

CORE PRODUCTS

- Standard containerized design with a high protection rating, adaptable to various harsh environments.
- Multi-level energy protection and fault monitoring functions for early warning of potential issues.
- Integrated intelligent AI technology and an Intelligent Energy Management System (EMS) to enhance equipment operating efficiency.
- Smart microgrid management technology with a random fault exit strategy to ensure stable system operation.
- An intelligent integrated system of wind, solar, diesel (gas), energy storage and power grid, supporting optional configurations and on-demand expansion.
- Maximizes the access to diverse energy sources based on local resources and improves energy collection capacity.

Multi-Energy Hybrid Intelligent Microgrid System

ICS-AC XX-400/54

ICS-AC XX-1000/54

升压一体机

CORE PRODUCTS

- Full four-quadrant operation with a bidirectional power conversion system.
- Adopts advanced three-level technology for high conversion efficiency.
- Full-power operation at 1500V, supporting wide-range DC voltage operation.
- Convenient modular design for easy access to all components during maintenance.
- Pre-assembled solutions, configured and tested to reduce on-site labor and project cycles.
- Compliant with international standards including CE, VDE, ISO and EN.

2.5MW Step-up Integrated Machine

升压一体机

CORE PRODUCTS

- Full four-quadrant operation with a bidirectional power conversion system.
- Adopts advanced three-level technology for high conversion efficiency.
- Full-power operation at 1500V, supporting wide-range DC voltage operation.
- Convenient modular design for easy access to all components during maintenance.
- Pre-assembled solutions, configured and tested to reduce on-site labor and project cycles.
- Compliant with international standards including CE, VDE, ISO and EN.

5MW Step-up Integrated Machine

- Full four-quadrant operation with a bidirectional power conversion system.
- Adopts advanced three-level technology for high conversion efficiency.
- Full-power operation at 1500V, supporting wide-range DC voltage operation.
- Convenient modular design for easy access to all components during maintenance.
- Pre-assembled solutions, configured and tested to reduce on-site labor and project cycles.
- Compliant with international standards including CE, VDE, ISO and EN.

6.3MW Step-up Integrated Machine

升压一体机

CORE PRODUCTS

- Full four-quadrant operation with a bidirectional power conversion system.
- Adopts advanced three-level technology for high conversion efficiency.
- Full-power operation at 1500V, supporting wide-range DC voltage operation.
- Convenient modular design for easy access to all components during maintenance.
- Pre-assembled solutions, configured and tested to reduce on-site labor and project cycles.
- Compliant with international standards including CE, VDE, ISO and EN.

10MW Step-up Integrated Machine

EnergyLattice EMS 能源管理系统

CORE PRODUCTS

Product Introduction

As the core of the EnergyLattice EMS on-site energy storage system, it relies on a high-speed and stable EMU to achieve more stable and reliable cloud-edge collaboration. Through massive data collection, AI intelligent algorithm analysis, and intelligent strategy execution, it ensures the safe, economical, and reliable operation of the system while maximizing the comprehensive benefits of the energy storage system.

Product Features

Safety Protection / Fault Handling

- Intelligent linkage with BMS (Battery Management System) for real-time monitoring and evaluation of battery health status, high-speed detection of grid abnormalities, and triggering of protection actions to reduce safety risks
- Supports main-standby switching to ensure stable system operation in case of partial faults

Energy Prediction / Intelligent Decision-Making

- Intelligent load forecasting to optimize charging and discharging depth and improve charging and discharging efficiency
- Adoption of algorithms such as Model Predictive Control (MPC) and Dynamic Programming (DP) for real-time adjustment of energy storage operation strategies

Reliable Edge-End Acquisition

- High-speed acquisition chip, focusing on millisecond-level centralized control services
- Local integrated strategy library + OTA remote upgrade
- Standardized device protocols for more flexible configuration

Intelligent Strategy Networking

- EMS dynamic host allocation and operation mechanism to ensure uninterrupted network connectivity
- High-speed microgrid coordinator, collaborating with EMS to implement intelligent microgrid strategies

Intelligent Hardware

Intelligent Collector / SFQ-212 Intelligent Acquisition

The embedded integrated monitoring host SFQ-212 is a new-generation multi-purpose ARM monitoring host developed for important scenarios such as modern intelligent systems and energy storage systems. This host also supports data processing and linkage control, which can replace manual inspection, realize unattended operation, significantly improve maintenance efficiency, and reduce management costs.

Intelligent Collector / SFQ-215 Intelligent Acquisition

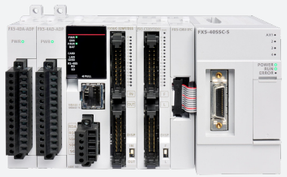
This collector is suitable for scenarios where few devices need to be connected and local display is not required. It offers the highest cost performance. With a compact size, it is also ideal for use when the space inside the cabinet is limited.

Intelligent Collector / SFQ-412 Intelligent Acquisition

The most prominent feature of this collector is its support for a local touchscreen. It can be used in standard cabinets, allowing local users to view internal cabinet parameters and real-time data information directly on the cabinet. The touchscreen itself has an elegant and sleek appearance, providing a pleasant visual experience.

Microgrid Coordinator

With ultra-high-speed interaction, the entire cycle of collection, calculation, and control takes less than 200ms. It is suitable for extreme scenarios such as peak shaving, frequency modulation, and grid-connected/off-grid switching, enabling fast and accurate responses to microgrid scenarios.



Microgrid Integrated Control Cabinet

An integrated energy storage controller applied to the rapid integration and deployment of energy storage power stations on-site; it internally integrates an EMS system, system server, microgrid coordinator, UPS, environmental detection equipment, smoke sensors, network transmission devices, and AC/DC power distribution components.

EnergyLattice 智慧能源云平台

CORE PRODUCTS

Product Introduction

Built on a SaaS architecture, it integrates Huawei Cloud technology, big data analysis, artificial intelligence algorithms, and Internet of Things (IoT) technology to achieve safe, intelligent, open, and collaborative energy storage management. It is a comprehensive management system that integrates energy monitoring, intelligent scheduling, and analysis and prediction.

Product Features

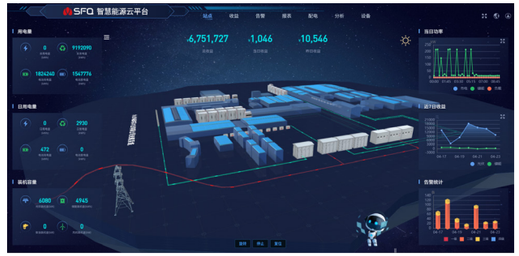
Intelligent Safety Early Warning and Proactive Operation & Maintenance Capabilities
- Establishment of fault prediction models and expert databases
- Operation and maintenance linkage to proactively promote problem closure
- Full-lifecycle safety management data

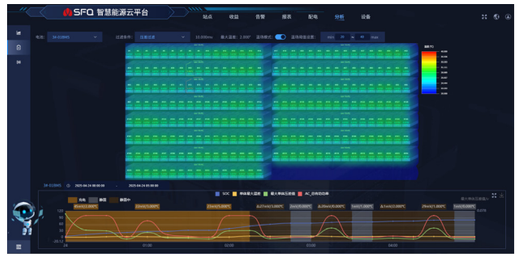
Intelligent AI Model
- Access to large AI models, enabling voice and text interaction as well as intelligent retrieval
- Battery charging and discharging analysis, SOH and SOC calculation, and photovoltaic power generation prediction analysis
- Ensuring that every question receives a response, with all answers being adaptive and relevant

Multi-Dimensional Data Analysis for Energy Efficiency Optimization
- Intelligent analysis of charging-discharging efficiency and health status
- Comprehensive and effective suggestions focusing on carbon emissions
- In-depth analysis of energy consumption to improve energy efficiency

Multi-Terminal Collaborative and Efficient Management
- PC terminal: digital twin, visualized reports, and full-function access
- APP: data display for on-the-go viewing, including simplified reports and revenue statistics
- WeChat: device data presentation via QR code scanning

System Display





Applicable Scenarios

- Energy Storage Power Station
- Microgrid
- Distributed Photovoltaic-Storage-Charging
- Low-Carbon Park
- Transformer District Energy Storage

System Modules

DashBroad	Revenue Management	AI Interactive Query
Digital Twin Simulation	Data Analysis	Report Statistics
AI Intelligent Assistant	Alarm Management	Intelligent Operation and Maintenance
Real-time Monitoring	Strategy Management	Health Assessment
Data Prediction	Notification Service	System Settings

项目案例
PROJECT CASES

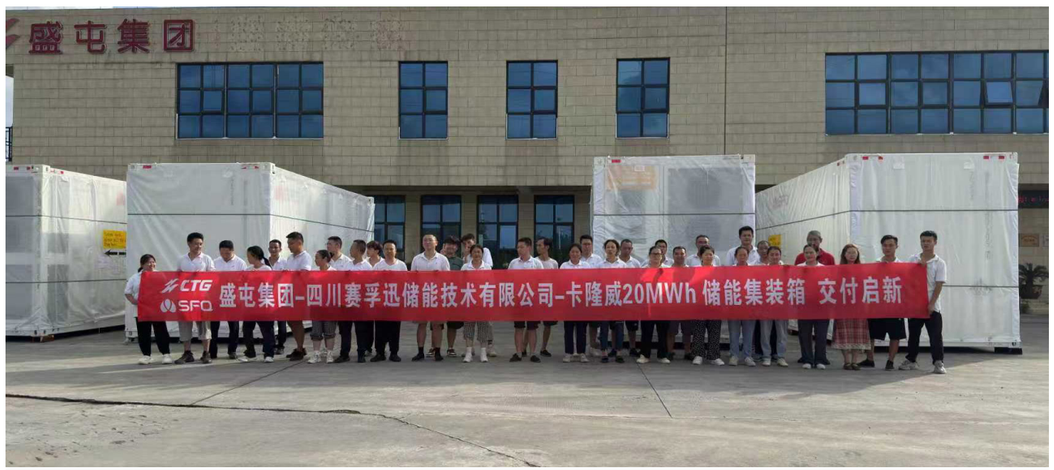
微电网储能
MICROGRID BESS

Project: CCR Company PV-Storage-Diesel Microgrid Project
Capacity: 12.593MWp/10MW/11.712MWh
Location: Democratic Republic of the Congo
Completion Date: 2024
Installation Type: Outdoor
Application Scenario: Ground-mounted PV, Energy Storage, Diesel-Generated Microgrid System

工商业储能
C&I BESS

Project: Manono C&I Energy Storage Project
Capacity: 250kW/548kWh
Location: Democratic Republic of the Congo
Completion Date: 2024
Installation Type: Outdoor
Application Scenario: Ground-mounted Photovoltaic (PV), Energy Storage, Diesel Generator

项目案例
PROJECT CASES



微电网储能
MICROGRID BESS

Project: Kalongwei Mining Co., Ltd. Microgrid Project
Capacity: 20MWp / 20MW / 20MWh
Location: Democratic Republic of the Congo
Completion Date: 2025 (Under Construction)
Installation Type: Outdoor
Application Scenario: Ground-mounted Photovoltaic (PV), Energy Storage, Diesel-Generated Microgrid System

工商业储能
C&I BESS

Project: Zimbabwe Farm PV Energy Storage Project
Capacity: 100kWp / 100kW / 128.88kWh * 3
Location: Zimbabwe
Completion Date: 2025
Installation Type: Indoor
Application Scenario: Ground-mounted PV, Rooftop PV, Energy Storage

项目案例
PROJECT CASES

工商业储能
C&I BESS

Project: Sichuan Yajiang PV Energy Storage Project
Photovoltaics: 240kW/495kWp
Energy Storage: 240kW/860kWh
Location: Yajiang County, Ganzi, Sichuan
Completion Date: 2024
Installation Type: Ground-mounted PV, Energy Storage, Solar Street Lights

工商业储能
C&I BESS

Project: Guangdong Taishan C&I Energy Storage Project
Photovoltaics: 7MWp/7MW
Energy Storage: 2.3MW/5.4MWh
Location: Taishan Weilibang Wood Industry Co., Ltd.
Completion Date: May 2024
Installation Type: Factory Roof PV, Ground-mounted PV, Energy Storage

项目案例
PROJECT CASES

工商业储能
C&I BESS

Project: Lubumbashi C&I Energy Storage Project
Capacity: 105.6kWp/100kW/215kWh
Location: Democratic Republic of the Congo
Completion Date: 2024
Installation Type: Outdoor
Application Scenario: Ground-mounted Photovoltaic (PV), Energy Storage, Diesel Generator

工商业储能
C&I BESS

Project: Guangdong Fengkai C&I Energy Storage Project
Capacity: 9.5MWp
Location: Fengkai Weilibang Wood Industry, Guangdong
Completion Date: 2025
Installation Type: Outdoor
Application Scenario: Factory Roof PV, Ground-mounted PV, Energy Storage

项目案例
PROJECT CASES

工商业储能
C&I BESS

Project: PV & Energy Storage Project of Zhongse Huaxin Hydrometallurgy Co., Ltd.
Capacity: 13MWp PV + 8MWh Energy Storage
Location: Democratic Republic of the Congo (DRC)
Project Status: Under Construction
Installation Type: Outdoor
Application Scenario: Ground-mounted PV + PV-Storage-Diesel Intelligent Microgrid

工商业储能
C&I BESS

Project: PV & Energy Storage Project of Huipeng Mining 12745 Tin Mine Plant
PV Configuration: 3.4MWp PV + 10MWh Energy Storage
Location: Democratic Republic of the Congo (DRC)
Project Status: Under Construction
Installation Type: Outdoor
Application Scenario: Ground-mounted PV + Outdoor Energy Storage

项目案例

PROJECT CASES

工商业储能

C&I BESS

Project: "Green City" Project of Zambia Electricity Supply Corporation (ZESCO) Limited

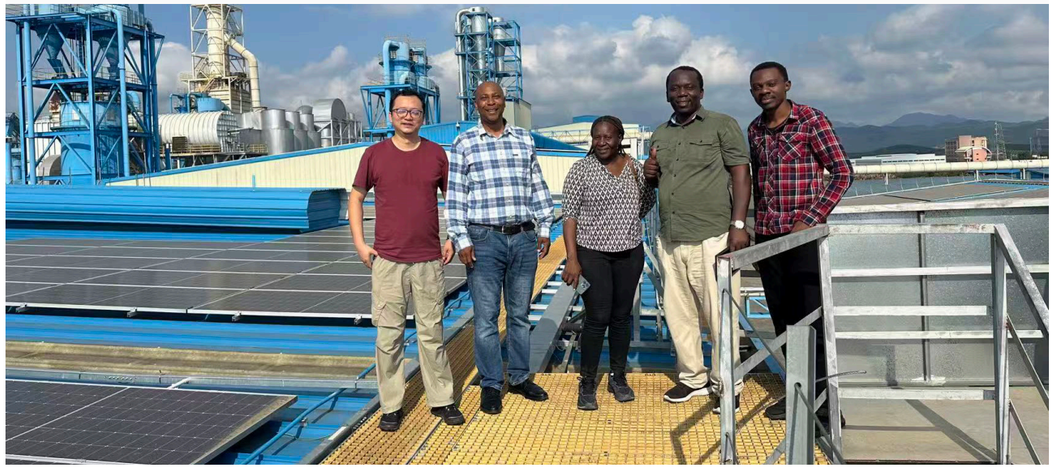
Capacity: 25MWp PV + 20MWh Energy Storage

Location: Lusaka, Zambia

Project Status: Under Construction

Installation Type: Outdoor

Application Scenario: Ground-mounted PV + Energy Storage Power Station



工商业储能

C&I BESS

Project: PV & Energy Storage Project of Tongaat Hulett Sugar Refinery, Zimbabwe

Capacity: 40MWp PV + 37MW/37MWh Energy Storage

Location: Zimbabwe

Project Status: Preparatory Stage (Under Construction)

Installation Type: Outdoor

Application Scenario: Ground-mounted PV + Energy Storage Power Station

项目案例

PROJECT CASES

工商业储能

C&I BESS

Project: New Energy Storage Project of SFQ (Deyang) Production Base

Capacity: 2.5GWh Energy Storage

Location: Luojiang, Deyang, Sichuan

Installation Type: Outdoor

Application Scenario: Outdoor Energy Storage

工商业储能

C&I BESS

Project: Guangdong Qingyuan Energy Storage Project

Configuration: 1MW/2MWh Energy Storage * 2

Location: Qingyuan, Guangdong

Project Status: Completed in December 2024

Installation Type: Outdoor

Application Scenario: Outdoor Energy Storage