Create better life with green energy

Sichuan SafeQuene Energy Storage Technology Co., Ltd

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SFQ Energy Storage

集团概况
GROUP OVERVIEW

Shenzhen Chengtun Group, founded in 1993, is headquartered in Shenzhen with its Western China Headquarters & Global Operations Center located in Chengdu. The Group employs over 15,000 people and operates across both domestic and international markets, with established presence in numerous regions. In 2024, the Group's revenue and total assets both exceeded RMB 70 billion, marking a significant milestone and laying a solid foundation for achieving long-term strategic objectives.

Since 2016, Chengtun Group has strategically capitalized on the booming new energy industry by making decisive investments in energy metals including lithium, copper, and nickel, while simultaneously focusing on the energy storage sector. The Group is committed to building an integrated ecosystem encompassing "energy metal supply + energy storage technology innovation + scenario-based application expansion." Through years of dedicated development, the Group has successfully established a full-chain layout spanning resource exploration and beneficiation, material smelting and manufacturing, to energy storage system integration, with synergistic operations across all segments. As the Group’s strategic core, the energy storage division established SICHUAN SAFEQUENE ENERGY STORAGE TECHNOLOGY CO.,LTD and Guangdong Gree Green Energy Technology Co., Ltd in 2022, focusing on core material R&D for storage batteries, energy storage system solutions, and commercialization of next-generation storage technologies. This has enabled us to rapidly develop technological advantages and achieve industrial scale, positioning us as a key driver in the green energy industry.

Actively responding to national strategic initiatives, the Group continues to strengthen the integrated development of energy metals and energy storage: on one front, leveraging core resources including lithium, copper, and nickel to supply critical raw materials for the storage industry; and on the other, deeply integrating into cutting-edge fields such as electric vehicles, grid-scale energy storage, and behind-the-meter energy storage through technological breakthroughs and market expansion in our storage division. Energy storage has become the core growth engine of the Group's new energy segment. Through close collaboration with upstream and downstream partners, the Group has achieved mutual benefits. Its two listed subsidiaries, **Chengtun Mining (600711)** and **Chengxin Lithium (002240)**, have also completed strategic layout in core metal resources required for energy storage—lithium, copper, and nickel—further strengthening the resource foundation of its storage business and positioning the Group to seize opportunities in both capital markets and industry sectors.

Looking ahead to the next three years, Chengtun Group will unwaveringly implement our strategic principle of "securing upstream resources while expanding downstream materials." While steadily increasing production capacity for lithium salts, copper, and nickel, the Group will prioritize breakthroughs in the energy storage sector: continuously increasing R&D investment in energy storage technologies, driving capacity expansion in energy storage system integration, implementing carbon-reduction innovative initiatives across new energy metals, and actively exploring commercial applications of energy storage in diverse scenarios.

The Group aspires to become a benchmark enterprise with strong competitiveness and growth potential in the industry, contributing significantly to achieving the "dual carbon" goals and promoting sustainable energy development worldwide. Guided by its philosophy of "We Transform Resources for a Better World," Chengtun Group is advancing confidently toward a broader future.

产业布局

BUSINESS SEGMENTS

Chengtun Group

New Energy Industry

Energy Metals

- Lithium Mine
- Lithium Carbonate
- Lithium Hydroxide
- Lithium Metal
- Nickel Mine
- Ferronickel
- Nickel Matte
- Nickel Sulfate
- Cobalt Mine
- Cobalt Hydroxide
- Cobalt Sulfate
- Tricobalt Tetraoxide
- Copper Mine
- Electrolytic Copper
- Rare Earth Mine

Cathode Materials

- Iron Phosphate
- Lithium Iron Phosphate
- NCM Precursor (equity investment)
- NCM Cathode Material (equity investment)

Energy Storage Products

Energy Storage System Manufacturing

PV + Energy Storage System Operation

Industrial Funds

- New Energy Fund

Base Metals

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

Others

- Forestry
- MDF
- Particleboard
- Motor Components

全球分布

GLOBAL PRESENCE

Chengtun Group operates across 11 countries worldwide, with 32 production bases established and ongoing global expansion.

Chengdu, Sichuan: Global Operations Center / Chengxin Lithium HQ / Energy Storage System HQ
Suining, Sichuan: Lithium Hydroxide / Lithium Metal / Lithium Iron Phosphate / Iron Phosphate
Deyang, Sichuan: Lithium Carbonate / Lithium Hydroxide / Energy Storage System Manufacturing
Aba, Sichuan: Lithium Concentrate
Ganzi, Sichuan: Lithium Concentrate
Ya'an, Sichuan: Zinc-Germanium
Liangshan, Sichuan: Rare Earth

Zambia
Lusaka: Nickel Concentrate

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

Xiamen, Fujian: Chengtun Mining HQ
Shenzhen, Guangdong: Chengtun Group HQ / Industrial Base
Zhuhai & Yangjiang, Guangdong: Tricobalt Tetraoxide
Qingyuan, Guangdong: Wood-Based Panels
Jiangmen, Guangdong: Wood-Based Panels
Zhaoqing, Guangdong: Wood-Based Panels
Hong Kong: Overseas Investment & Operations Center

DR Congo
Kolwezi: Cathode Copper / Cobalt Hydroxide
Kalongwe: Copper-Cobalt Mine / Cathode Copper / Cobalt Hydroxide

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

Argentina
Salta: DLA Project / Pocitos and Arizaro Salt Lakes

Zimbabwe
Manicaland: Sabi Star Lithium-Tantalum Mine

Singapore
Southeast Asia Operations Center

Indonesia
WedaBay Industrial Park / Nickel Matte (Ni)
Morowali, Sulawesi Tengah / Lithium Salt (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, a wholly-owned subsidiary of Chengtun Group

Gree Green Energy
Investment & Operations Division

SFQ (Deyang)
Manufacturing Division

SFQ(Xi'an)
EMS Software & O&M Platform

SICHUAN SAFEQUENE ENERGY STORAGE TECHNOLOGY CO.,LTD, established in March 2022 as a wholly-owned subsidiary of Chengtun Group, is an integrated energy solution provider and service provider specializing in comprehensive energy storage system solutions for global users. We integrate technology, R&D, production, sales, and operations.

We specialize in a comprehensive portfolio of energy solutions, including: Off-grid residential PV energy storage solutions, C&I energy storage solutions, wind-diesel-PV-storage microgrid solutions, PV-storage-charging smart new energy solutions, novel energy supply solutions for oil drilling, integrated energy supply solutions for smart mining and green smelting, and agriculture and infrastructure energy solutions.

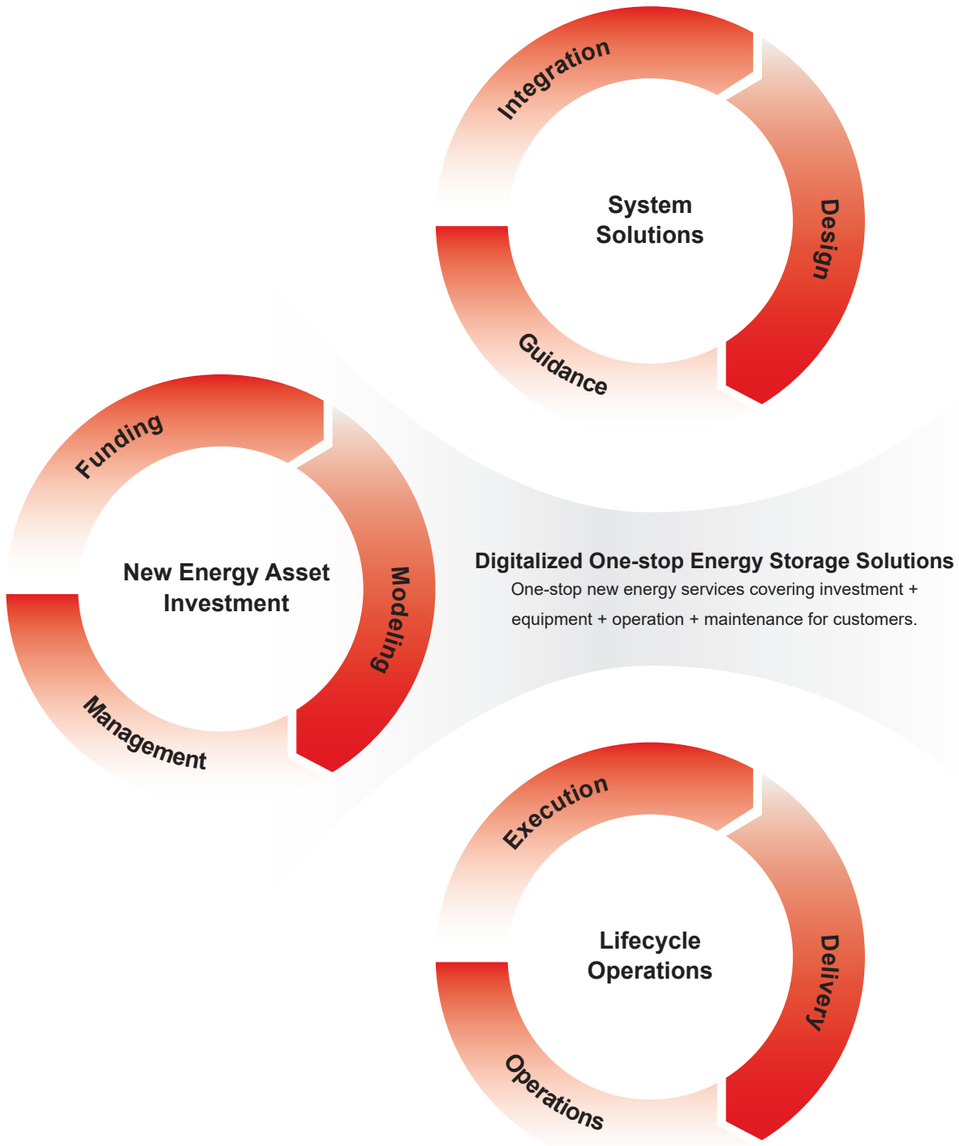
To underpin our global delivery, we are currently establishing a 6GWh Lithium-ion Battery Energy Storage System (BESS) manufacturing facility in Deyang (under construction), which will serve as the Group's core production and delivery hub.

Leveraging our full-chain capabilities in Energy Storage System (ESS) integration, Microgrid EPC for mining applications, and Investment & Operation, we have established a strong foothold in key international markets with acute demand, including the Democratic Republic of the Congo (DRC), Nigeria, Zambia, and Zimbabwe. Through our integrated model of "**Product Supply + Solution Enablement + Long-term Operation**", we are committed to becoming a global leader in green microgrid solutions for the mining industry.

公司优势

OUR STRENGTHS

Professional Technical Process: Survey → Solution → Product → Installation → Strategy → Delivery → O&M; ensuring each project benefits from specialized, customized product operation advantages.



Digitalized One-stop Energy Storage Solutions

One-stop new energy services covering investment + equipment + operation + maintenance for customers.

Smart Energy Cloud Platform

Built on SaaS architecture, this Cloud Platform has integrated Huawei Cloud technology, big data analysis, AI algorithms, and IoT for secure, intelligent, open, and collaborative energy storage management.

Professional Energy Consumption Analysis

Data analysis + AI modeling: Optimized charging/discharging, maximum revenue, early warning, predictive charge/discharge management, and intelligent parameter setting.

Smart O&M Platform

SaaS-based intelligent O&M platform with mobile integration, enabling service providers to rapidly establish a hub-and-spoke O&M system, reducing lifecycle O&M costs.

Panoramic Dynamic + Multi-Dimensional Coordination

Multiple tariff coverage, dynamic joint optimization;

Maximized revenue: "peak-valley spread + demand charge reduction + demand response + aggregation regulation";

Multi-dimensional coordinated management of "source-load-storage + consumption-sales-storage";

EnergyLattice EMS

As core of on-site energy storage systems, it features high speed, and stable EMU, contributing to more reliable cloud-edge collaboration. Through mass data acquisition, AI algorithm analysis, and intelligent strategy execution, it ensures safe, economical, and reliable system operation while maximizing comprehensive benefits of the energy storage system.

Professional O&M

Core technologies, including battery intelligent diagnostics, commercial energy storage cloud-edge collaborative EMS, and storage big data cloud platform, enable condition monitoring and intelligent O&M of customer-side storage station core equipment.

公司资质

CERTIFICATIONS

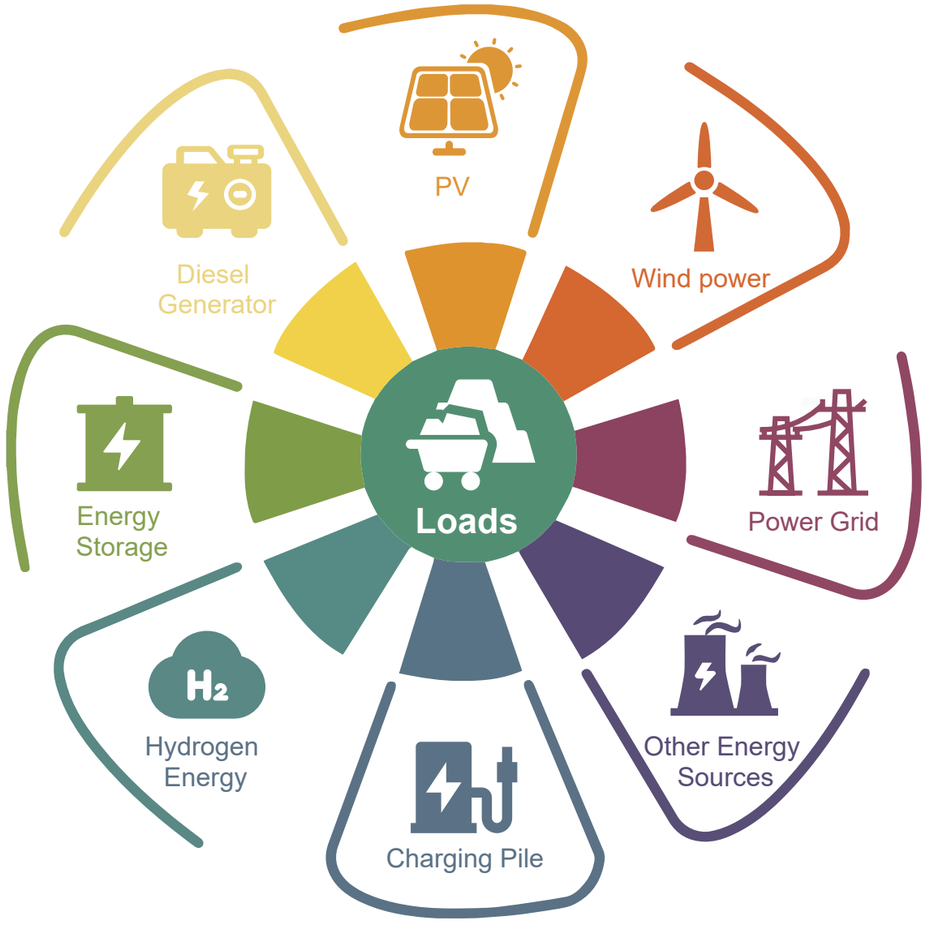
We have obtained ISO9001, ISO14001, and ISO45001 certifications for environmental and safety management systems. Our products have achieved certification to standards including IEC62619. We have been selected as a 2025 Sichuan Provincial High-Tech Enterprise, a Provincial Sci-Tech SME, and a Provincial Innovative SME. Moreover, we have been awarded multiple design patents, utility model patents, invention patents, and software copyrights.

风、光、柴、储、充等微电网解决方案

WIND-SOLAR-DIESEL-STORAGE-CHARGING MICROGRID SOLUTIONS

In those solutions, we combine grid power, wind, PV, diesel, storage, and other energy sources to build the integrated microgrid system featuring multi-energy complementarity. Meanwhile, such solutions are widely adaptable to grid-connected operation, off-grid operation, and power supply needs in areas without grid access.

Simultaneously, we develop composite application models for combined power supply to large equipment, multi-functional power supply, and multi-scenario power supply, reducing equipment idle time and waste caused by intermittent, short-duration loads while addressing low economic viability in such scenarios. This creates new application directions and expanded application scenarios for next-generation power systems.



Multi-Energy Integration

• Standardized power storage and power systems enable solution approaches for diverse loads and application scenarios.

Multi-Function Integration

Integration capabilities for PV, wind, diesel, gas power, and other energy sources.

Multi-Configuration Options

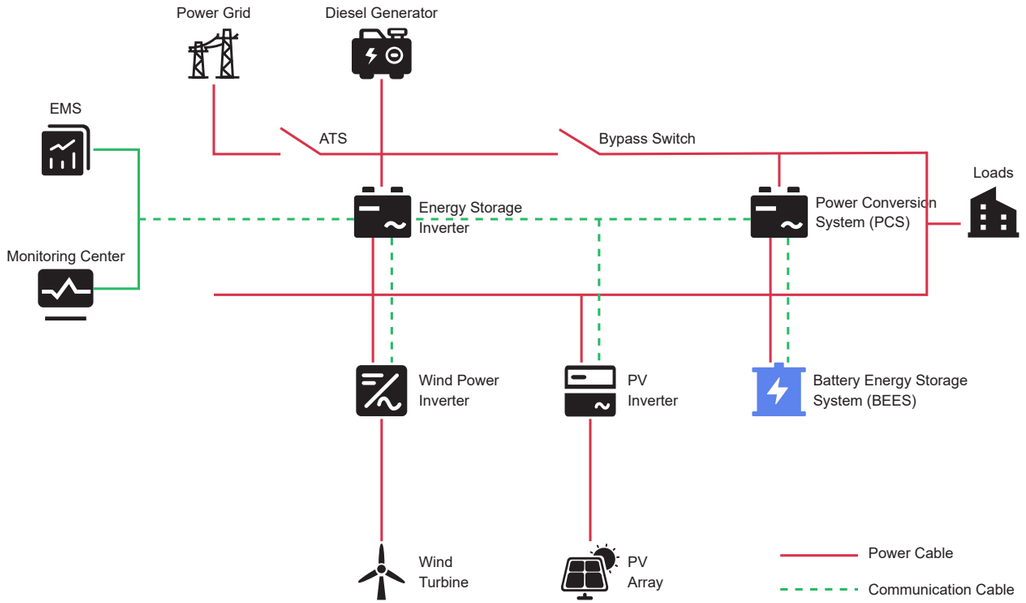
• Standardized products and strategies with special (customized) scenario applications, progressing toward certified international markets.

智能微电网解决方案

SMART MICROGRID SOLUTIONS

A smart microgrid constitutes a highly autonomous and flexibly controllable localized power system. Through the deep convergence of distributed energy resources (including PV and wind power), energy storage systems, conventional power generation (such as diesel generators for backup), and intelligent control technologies, it establishes a self-balancing and self-managing micro-scale power network. In this way, we are committed to provide end-users with power supply solutions characterized by high reliability, superior quality, and enhanced resilience.

The core technological embodiment of SFQ smart microgrid solution lies in its innovative system architecture design, advanced Energy Management System (EMS), and robust smart cloud platform. These elements collectively safeguard the system's reliability, stability, economic viability, and operational intelligence.



Intelligence

EMS optimized dispatching + equipment intelligence coordination

Reliability

"Stability Triangle" design (e.g., generator/ grid + energy storage system + PV primary source combination) ensures system stability unaffected by any single unit failure

Uninterrupted Power Supply

Zero-perception mode switching via bypass switch

Key Control Technologies & Mechanisms

• Risk control mechanisms (fault defense "firewall")

Real-Time Panoramic Monitoring

• Millisecond-level high-speed acquisition and monitoring of all critical equipment status (diesel generator, grid, PCS, battery, PV, loads) and power quality

Rapid Fault Location & Isolation

• Intelligent algorithms for rapid fault point identification and precise isolation strategies (for instance, disconnecting faulty equipment/ lines), ensuring unaffected microgrid operation

Intelligent Alerts & Coordination

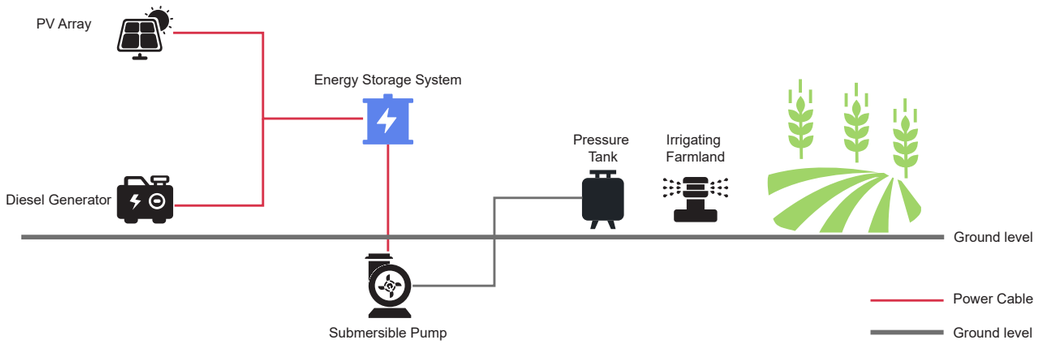
• Instant alert push with coordinated equipment protection actions (e.g., BMS-coordinated battery protection)

农业、基建能源解决方案

AGRICULTURE & INFRASTRUCTURE ENERGY SOLUTIONS

Agriculture and infrastructure energy solutions are small-scale power generation and distribution systems comprising distributed PV generation equipment, energy storage devices, power conversion devices, load monitoring devices, and protection devices.

This new green power system provides stable power for agricultural irrigation, agricultural equipment, farm machinery, and infrastructure in remote locations. The entire system generates and consumes power locally, offering new approaches and solutions for power quality issues in remote mountain areas, significantly improving both power supply quality, safety, and convenience. By unlocking renewable energy potential, we are dedicated to better serving regional economic development and people's livelihoods.



Micro-Scale

Low voltage level, small system scale, and local power consumption

Self-Balancing

Internal microgrid power balance, with minimal exchange with external grid

Clean Energy

Primarily PV, wind power and other clean sources for low-carbon operation

High Efficiency

Integration across all processes of power for improved energy efficiency and emission reduction

Ensuring Stable Agricultural Production

- Relieving grid pressure from high-energy agriculture
- Ensuring continuous power to critical loads
- Emergency backup during grid faults supporting off-grid operation

Improving Rural Power Quality

- Addressing intermittent, seasonal, and temporary overload issues
- Solving low voltage at distribution line endpoints due to long supply radius

Meeting Critical Power Needs

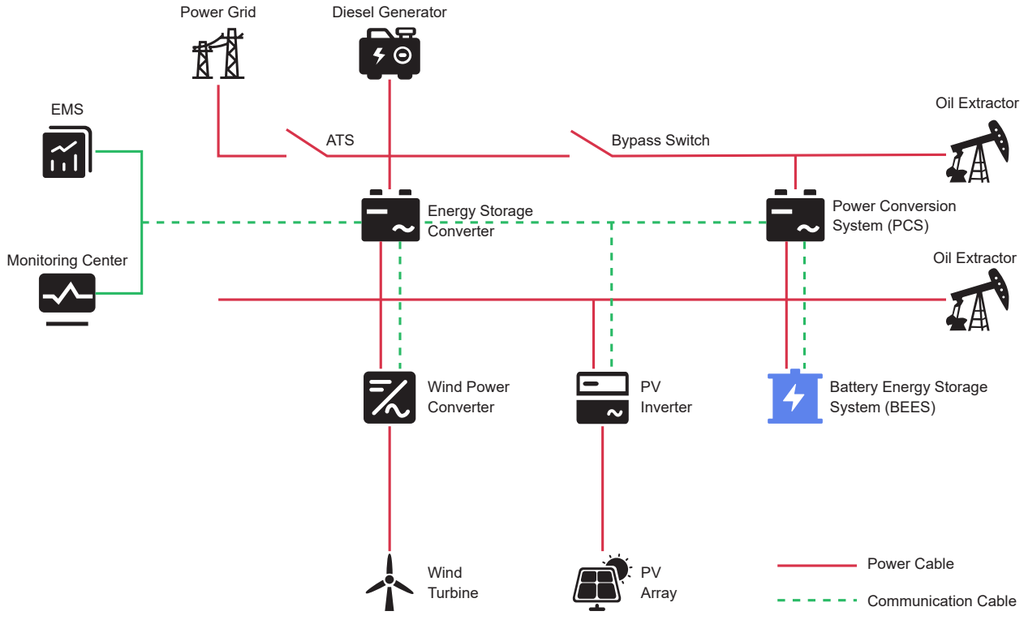
- Powering production and daily life in remote areas without grid access
- Enabling off-grid irrigation for farmland

石油钻探、采油、输油新型能源供给解决方案

NOVEL ENERGY SUPPLY SOLUTIONS FOR OIL DRILLING, EXTRACTION

Novel energy supply solutions for oil drilling, fracturing, extraction, transportation, and camps in the oil industry consist of microgrid power systems integrating PV power generation, wind power generation, diesel engine generation, gas generation, and energy storage.

With peripheral equipment systems, they enable grid-connected operation, off-grid operation, and seamless switching between modes at multiple voltage levels. Solutions include pure DC power supply options to improve system efficiency, reduce losses during energy conversion, recover energy from strokes of oil extractors, and AC charging options.



Flexible Integration

• Flexible integration of new energies including PV, energy storage, wind power, and diesel engines, to build microgrid systems

Simple Configuration

• Dynamic wind-solar-diesel-storage coordination with diverse products, and mature technologies for straightforward engineering applications

Flexible Expansion

• Later-stage flexible expansion of system power capacity with low modification costs and short implementation time

Plug & Play

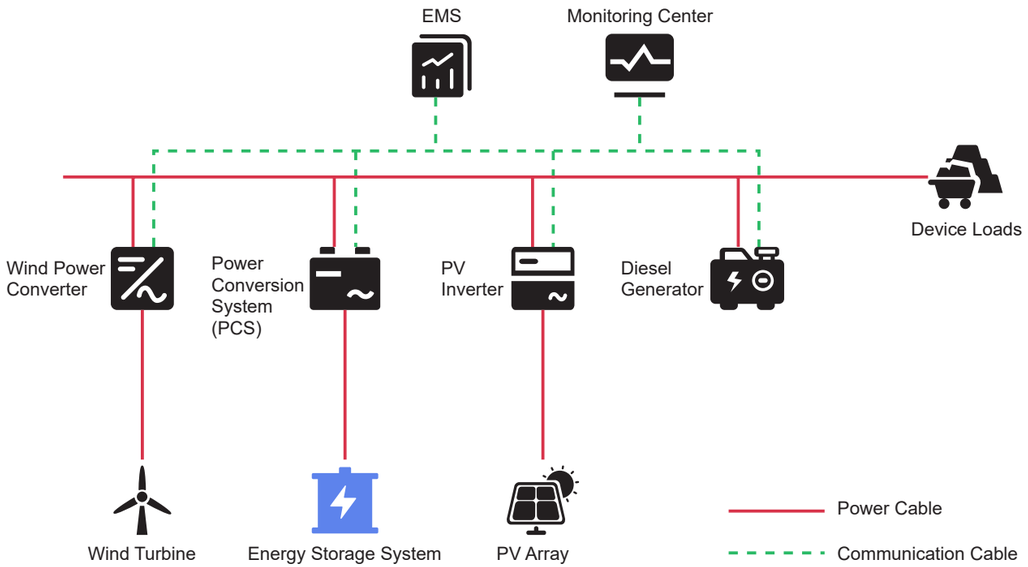
• Devices support plug-in charging & power consumption, ensuing stable and reliable operation.

智慧矿山、绿色冶炼综合能源供给解决方案

INTEGRATED ENERGY SUPPLY SOLUTIONS FOR SMART MINING & GREEN SMELTING

Ore extraction and smelting production processes both require substantial energy for operation and supply. Energy conservation and emission reduction have become top priorities for enterprises. Effectively utilizing natural resources while leveraging site conditions to drive energy reform promotes the development of “smart mining and green smelting.”

Integrating PV, energy storage, cogeneration, generators, and grid connection enables comprehensive energy supply, making significant contributions to capacity expansion, electricity cost reduction, and emission reduction!



Sustainable Energy Microgrid

- Design, investment, and operation of wind-solar-storage microgrids
- Long-term power purchase agreements with mines

Contributing to Smart Mining, Advancing Green Smelting

- Committed to zero-carbon green mine development, enabling harmony between mining and nature
- Harnessing energy to empower zero-carbon mines and smelting, opening a new chapter in sustainable mining development

户用 / 工商业光储系统

RESIDENTIAL/C&I PV + ESS

- Rack-mounted design for easy installation and flexible expansion;
- Full-dimension remote intelligent control;
- Fast charging, ultra-long battery life;
- Intelligent temperature control, multiple safety protections;
- Sleek design for clear equipment status visibility;
- Compatible with multiple operating modes with flexible capacity configuration;

Residential/C&I PV + ESS

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 PV + ESS

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

COMMERCIAL & INDUSTRIAL ESS

- Full-range battery cell temperature collection + AI monitoring and early warning;
- Intelligent temperature control system, temperature/smoke detection + PACK-level and cluster-level composite fire protection;
- Intelligent AI technology and smart energy management system (EMS) to improve equipment operating efficiency;
- QR code-based fault query + data monitoring for clear display of equipment status data;
- Flexible customization of operation strategies, better matching load characteristics and power consumption habits;
- High-efficiency and flexible PCS configuration + 314Ah battery cell large-capacity system

Commercial & Industrial ESS (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

Commercial & Industrial ESS (Liquid-Cooled)

ICESS-T 0-105/208/L

ICESS-T 0-130/261/L

分布式微电网系统

DISTRIBUTED MICROGRID SYSTEM

- Adopts a highly protective split structure of “one unit per compartment / one cabinet per compartment”;
- Independent temperature control and O&M; capacity ranges from 241 to 723 kWh;
- Equipped with intelligent BMS + AI energy management system to improve equipment operating efficiency;
- Supports LAN/RS485/CAN remote monitoring;
- Equipped with full-range battery cell status collection + 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 that allows combined deployment on demand;
- One temperature control system per cluster, one fire protection system per cluster, full-range battery cell temperature collection + AI monitoring and early warning;
- IP54 high protection rating, supporting a wide temperature range of -30°C ~ +55°C;
- Equipped with multiple protections including over-voltage, under-voltage, over-current and over-temperature;
- Supports AC/DC startup, with grid-connected/off-grid switchover 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

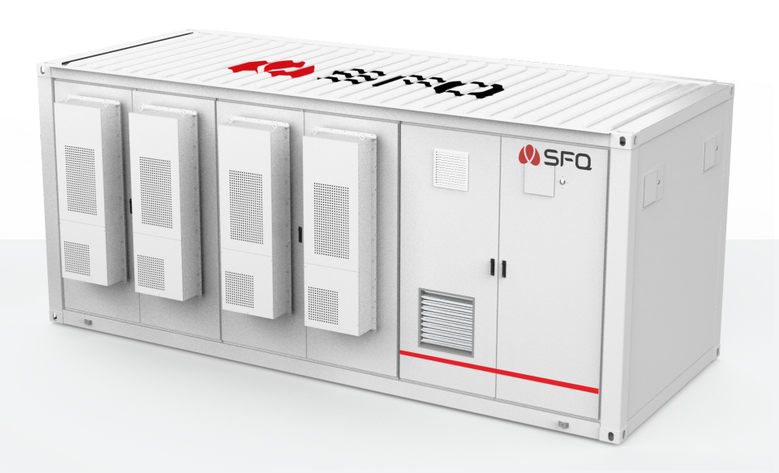
TCESS-S 120-130/522/L

TCESS-S 180-130/783/L

集装箱微电网系统

CONTAINER MICROGRID SYSTEM

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



Container Microgrid system (air-cooled)

SCESS-T 250-250/1028/A

SCESS-T 400-400/1446/A

SCESS-T 720-720/1446/A

- Adopts liquid cooling solution with superior temperature control precision;
- Stably supports 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/RS485, enabling real-time remote monitoring of operating status;
- PV input voltage ranges from 200V to 1,100V (supports 1-20 channels of MPPT);
- Supports customized multi-energy integration: “Wind/PV/Diesel (Gas) - Storage - Grid”;

Container 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

CONTAINER ENERGY STORAGE SYSTEM

- Adopts independent liquid cooling/air cooling dual cooling solutions (optional as required);
- Equipped with compartment physical isolation, suitable for stable heat dissipation of large-capacity energy storage;
- Full-range battery cell temperature collection combined with AI predictive monitoring for early warning of abnormalities;
- Compatible with multiple communication interfaces including LAN/CAN/RS485, enabling remote monitoring of operating status;
- Capacity covering an ultra-wide range from 2,170kWh to 5,015kWh;
- Supports customized busbar output, compatible with various PCS access and configuration schemes;

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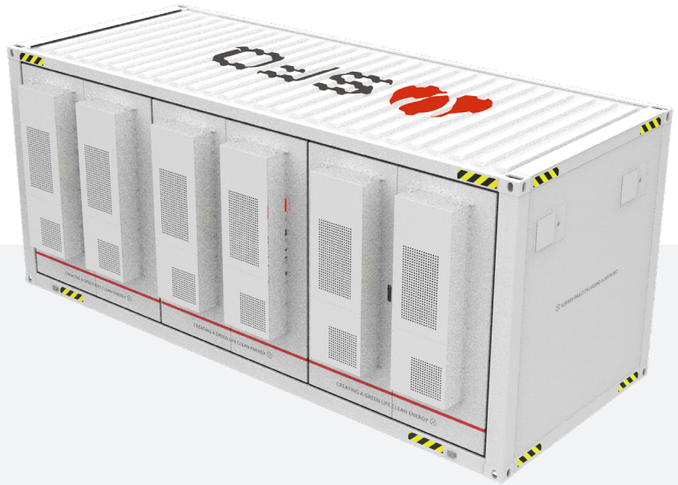


Container ESS (Air-Cooled)

ICS-DC 2170/A/10

Container ESS (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

MULTI-ENERGY INTEGRATED SMART MICROGRID SYSTEM

- Standard container design with high protection rating, adaptable to various harsh environments;
- Multi-level energy protection, fault monitoring, and early warning;
- Intelligent AI technology and smart energy management system (EMS) to improve equipment operating efficiency;
- Intelligent microgrid management technology and a random fault exit strategy to ensure stable system operation;
- Intelligent integration system of wind, solar, diesel (gas), storage and grid, with optional selection and on-demand expansion;
- Combined with local resources, it maximizes the access to multiple energy sources and improves energy collection capacity;

Multi-Energy Integrated Smart Microgrid System

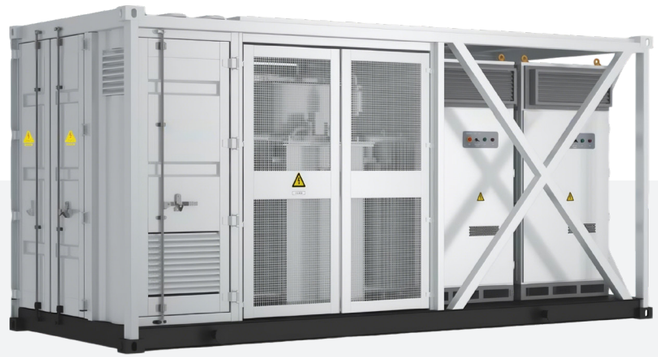
ICS-AC XX-400/54

ICS-AC XX-1000/54

升压一体机

ESS & PCS INTEGRATED MACHINE

- Full four-quadrant operation, equipped with a bidirectional power conversion system;
- Adopts advanced three-stage technology with high conversion efficiency;
- Operates at full power under 1,500V, and supports a wide DC voltage range;
- Convenient modular design allows easy access to all components during maintenance;
- Pre-assembled solution, configured and tested to reduce site labor and project timelines;
- Comply with international standards including CE, VDE, ISO, EN, etc.



2.5MW ESS & PCS integrated machine

升压一体机

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5MW ESS & PCS integrated machine

6.3MW ESS & PCS integrated machine

升压一体机

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- Comply with international standards including CE, VDE, ISO, EN, etc.

10MW ESS & PCS integrated machine

EnergyLattice EMS 能源管理系统

ENERGYLATTICE ENERGY MANAGEMENT SYSTEM (EMS)

Product Overview

As core of on-site energy storage systems, it features high speed, and stable EMU, contributing to more reliable cloud-edge collaboration. Through mass data acquisition, AI algorithm analysis, and intelligent strategy execution, it ensures safe, economical, and reliable system operation while maximizing comprehensive benefits of the energy storage system.

Key Features

Safety Protection / Fault Handling

- Intelligent coordination with BMS for real-time battery health assessment and high-speed grid anomaly detection, triggering protective actions to reduce safety risks
- Supports active/standby switchover, ensuring stable operation during partial system failures

Energy Forecasting / Intelligent Decision-Making

- Smart load forecasting, and optimized charge/discharge depth for improved charge/discharge efficiency
- Model Predictive Control (MPC), and Dynamic Programming (DP) algorithms for real-time storage operation strategy adjustment

Reliable Edge Acquisition

- High-speed acquisition chips for millisecond-level centralized control
- Local integrated strategy library + OTA remote upgrades
- Standardized device protocols for flexible configuration

Intelligent Networking

- EMS dynamic host allocation mechanism for uninterrupted network connectivity
- High-speed microgrid coordinator for intelligent microgrid strategy execution with EMS

Intelligent Hardware

Smart Data Collector / SFQ-212

A new-generation multi-purpose ARM monitoring host designed for modern intelligent systems, energy storage systems, and other critical sites. It supports data processing and coordinated control, replacing manual inspection to significantly improve maintenance efficiency while reducing management costs.

Smart Data Collector / SFQ-215

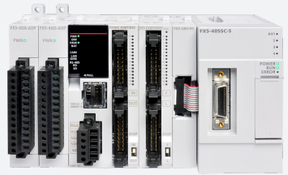
It is ideal for applications with fewer connected devices, and requires no local display requirement. It offers optimal cost-effectiveness. The compact size suits space-constrained cabinet installations

Smart Data Collector / SFQ-412

Supporting local touchscreen is the key feature of this device. It is suitable for standard cabinets, enabling local users to view internal parameters and real-time data. The touchscreen provides an excellent visual experience

Microgrid Coordinator

It supports ultra-high-speed interaction, enabling acquisition, calculation, and control within <200ms. Therefore, it is suitable for extreme scenarios requiring frequency regulation, and seamless switching between grid-connected and off-grid operation, delivering fast, precise microgrid response.



Microgrid Integrated Control Cabinet

It is an integrated energy storage controller for rapid on-site integration and deployment at energy storage power stations. Internally, it integrates EMS system, system server, microgrid coordinator, UPS, environmental monitoring, smoke detection, network transmission equipment, and AC/DC distribution components.

EnergyLattice 智慧能源云平台

ENERGYLATTICE SMART ENERGY CLOUD PLATFORM

Product Overview

Built on SaaS architecture, this Cloud Platform has integrated Huawei Cloud technology, big data analysis, AI algorithms, and IoT for secure, intelligent, open, and collaborative energy storage management. A comprehensive management system integrating energy monitoring, intelligent dispatching, and predictive analytics.

Key Features

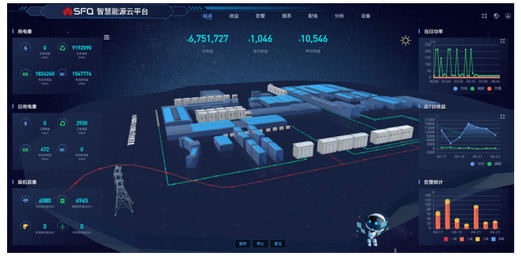
Smart Safety Alert & Proactive O&M
- Fault prediction modeling and expert database
- O&M coordination with proactive issue resolution
- Lifecycle safety data management

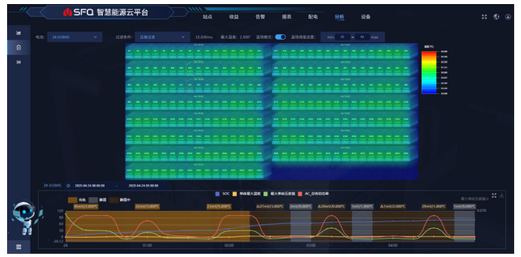
Multi-Dimensional Data Analytics & Energy Efficiency Optimization
- Charge/discharge efficiency and health analysis
- Comprehensive carbon emission insights and recommendations
- In-depth energy consumption analysis for improved energy efficiency

AI Smart Models
- AI large model integration, covering voice/text interaction, and intelligent search
- Battery charge/discharge analysis, SOH/SOC calculation, PV generation forecasting
- Accurate, context-appropriate responses to all inquiries

Multi-Terminal Collaborative and Efficient Management
- PC: Digital twin, visual reporting, full functionality
- APP: Data display, quick views, simple reports, revenue tracking
- WeChat: QR code scan for equipment data

System Interface





Applicable Scenarios

Shared/Independent Energy Storage Power Stations

Microgrids

Distributed PV + Storage + Charging

Low-Carbon Parks

Transformer-Side Storage

System Modules

DashBroad	Revenue Management	AI Interactive Query
Digital Twin Simulation	Data Analysis	Reports & Statistics
AI Assistant	Alert Management	Smart O&M
Real-Time Monitoring	Strategy Management	Health Assessment
Data Forecasting	Notification Services	System Setting

项目案例
PROJECT CASES

微电网储能
MICROGRID BESS

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

工商业储能
C&I BESS

Project: Kanuka Mining Area PV-Diesel-Storage Smart Microgrid
Capacity: 250kW/548kWh
Location: Democratic Republic of Congo
Completion Date: 2024
Installation Type: Outdoor
Application Scenarios: Ground-mounted PV, Energy Storage, Diesel Generator

项目案例
PROJECT CASES

微电网储能
MICROGRID BESS

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

工商业储能
C&I BESS

Project: Zimbabwe - Farm PV + Energy Storage Project
Capacity: 100kWp / 100kW / 128.88kWh * 4
Location: Zimbabwe
Completion Date: 2025
Installation Type: Indoor
Application Scenarios: Ground-mounted & Roof PV, Energy Storage

项目案例

PROJECT CASES

工商业储能

C&I BESS

Project: CNMC Huaxin Hydrometallurgy Co., Ltd. PV + Energy Storage Project

Capacity: 13MWp (PV) +8MWh (energy storage)

Location: DR Congo

Status: Under construction

Installation Type: Outdoor

Application Scenarios: Ground-mounted PV + PV-diesel-storage smart microgrid

工商业储能

C&I BESS

Project: Huipeng Mining 12745 Tin Mine Plant PV + Energy Storage Project

Capacity: 3.4MWp (PV) +10MWh (energy storage)

Location: DR Congo

Status: Under construction

Installation Type: Outdoor

Application Scenarios: Ground-mounted PV + Outdoor Energy Storage

项目案例

PROJECT CASES

工商业储能

C&I BESS

Project: Zambia ZESCO Limited "GreenCity" Project

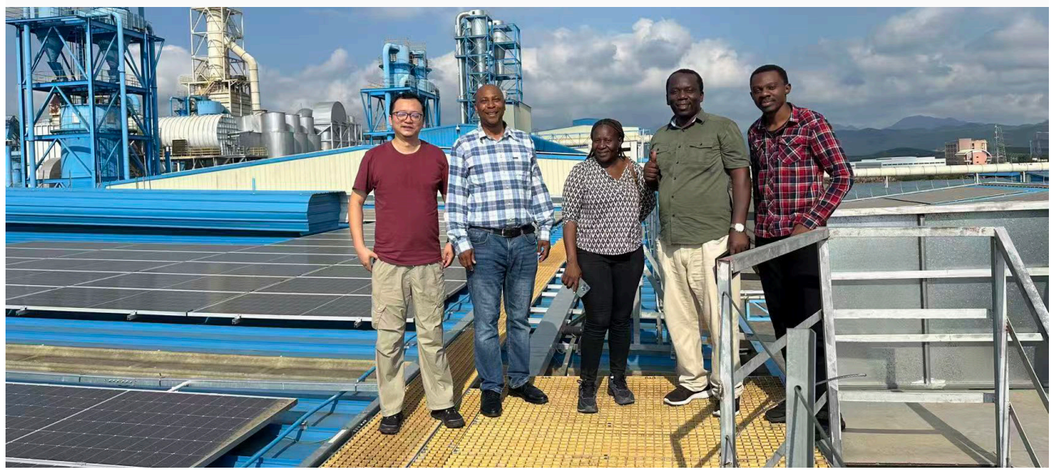
Capacity: 25MWp (PV) + 20MWh (energy storage)

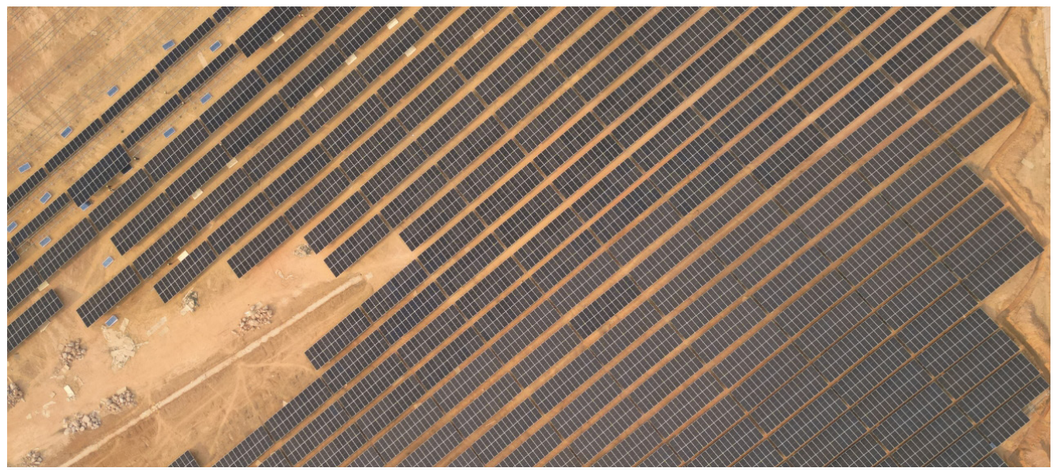
Location: Lusaka, Zambia

Status: Under construction

Installation Type: Outdoor

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





工商业储能

C&I BESS

Project: Zimbabwe Tongaat Hulett Sugar Mill Project

Capacity: 40MWp (PV) +37MW/37MWh (energy storage)

Location: Zimbabwe

Status: Under Construction

Installation Type: Outdoor

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

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 Congo
Completion Date: 2024
Installation Type: Outdoor
Application Scenarios: Ground-mounted 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 Co., Ltd, Guangdong
Completion Date: 2025
Installation Type: Outdoor
Application Scenarios: Plant Ground-mounted & Roof PV, Energy Storage

项目案例
PROJECT CASES

工商业储能
C&I BESS

Project: Sichuan Yajiang PV + Energy Storage Street Lighting Project
PV Capacity: 240kW/495kWp
Energy Storage Capacity: 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
PV Capacity: 7MWp/7MW
Energy Storage Capacity: 2.3MW/5.4MWh
Location: Taishan Weilibang Wood Industry Co., Ltd
Completion Date: May 2024
Installation Type: Rooftop PV, Ground-mounted PV, Energy Storage

项目案例

PROJECT CASES

工商业储能

C&I BESS

Project: Guangdong Fengkai Energy Storage Project

Capacity: 3MW/6MWh

Location: Guangdong Fengkai

Status: Completed in December 2024

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

Status: Completed in December 2024

Installation Type: Outdoor

Application Scenarios: Outdoor Energy Storage