

SIEYUAN ELECTRIC CO., LTD.

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Sieyuan Electric Co., Ltd.

2022 Edition

Choose

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vision

Providing first-class electrical equipment and services to worldwide customers and helping customers to use and maintain electricity safely, reliably and efficiently



Sieyuan Electric Co., Ltd.

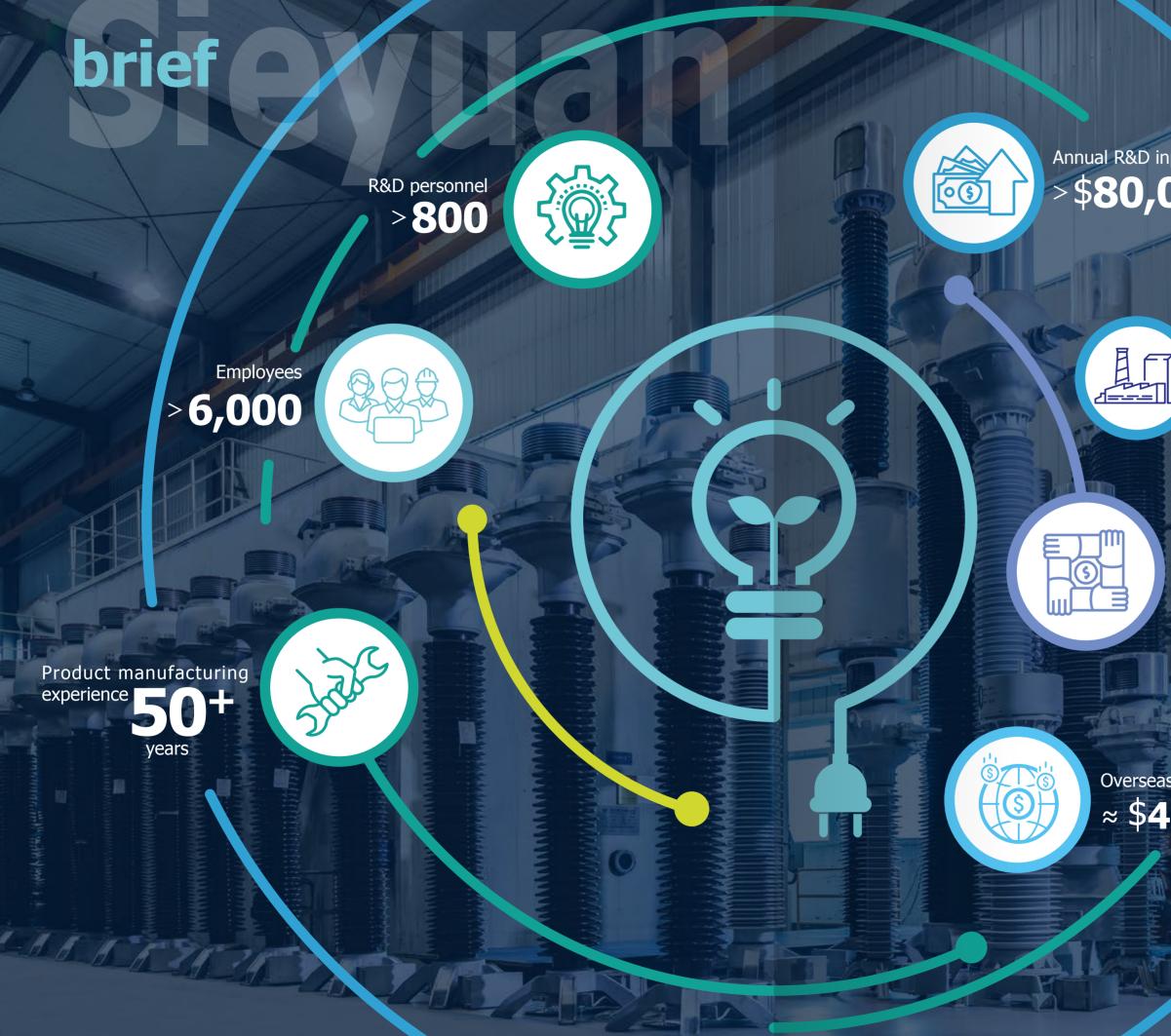
our mision

Sieyuan is continuously improving its R&D, production, and quality management capabilities to meet the challenges of the energy industry. We are committed to making power transmission and distribution safer, more controllable, and more efficient by providing products, solutions, and engineering services.



Safe

Sieyuan Electric Co., Ltd.



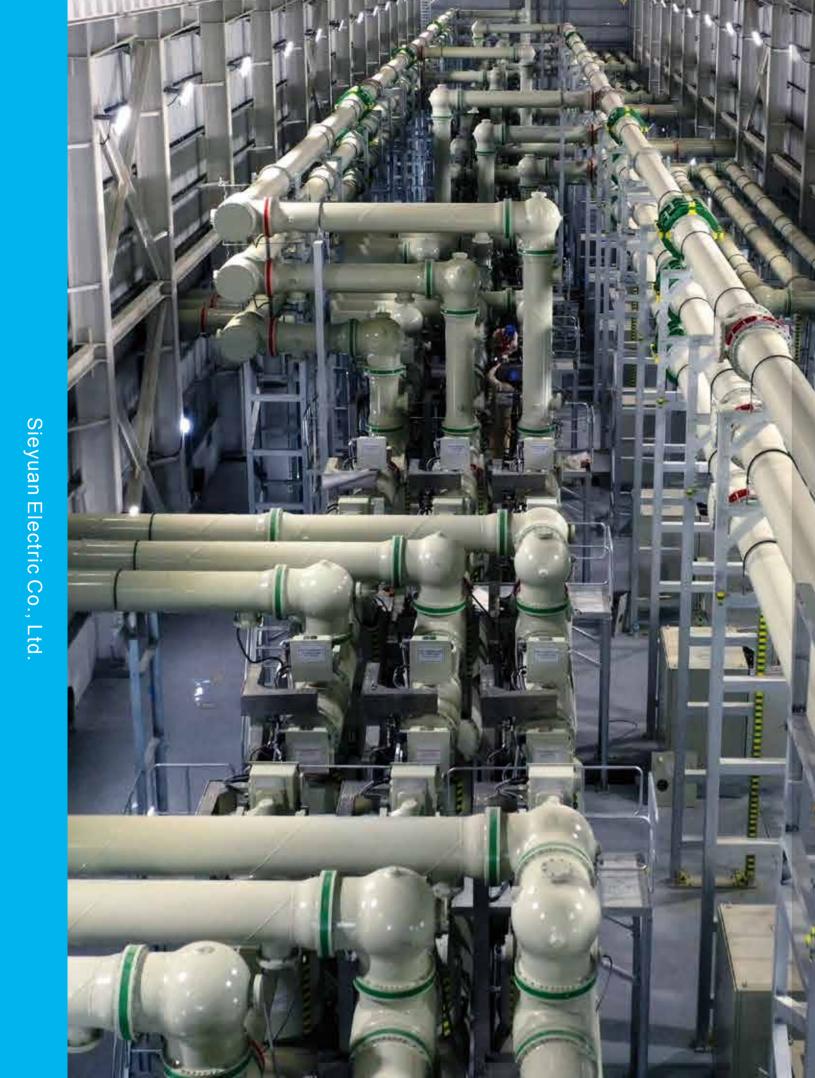
Annual R&D input > \$80,000,000

Manufacturing entities

12+

overall turnover in 2022 ≈ **\$2 billion**

Overseas turnover in 2022 ≈ **\$430 million**



HV AC Power Substation Primary Equipment

In each link of the alternating current power transmission and distribution, the substation is an important hub. Due to diverse natural conditions, different countries and regions have various requirements for the floor area, rated current, short-circuit current, and insulation level. It puts forward higher requirements for electric equipment manufacturers who are facing the international market.

Relying on the strong R&D, production, and manufacturing capabilities of its multiple primary equipment manufacturing plants. Sieyuan can provide the solutions for various combinations of products including power transformers, gasinsulat[¬]ed switchgear, air-insulated switchgear, medium voltage switchgear, instrument transformers, station service voltage transformer, reactors, capacitor banks, and STATCOM for high short-circuit current breaking requirements, compact substations with limited space, and more flexible and adjustable reactive power compensation system.



business scope Sieyuan

NGCP Tacurong Project in Philippines





Changzhou Sieyuan Toshiba Transformer Co.,Ltd

Zarzal,115kV,Power Transformer,Colombia

Jiangsu Rugao High Voltage **Electric Apparatus Co., Ltd**

Bumbuna, 252kV, Circuit Breaker, Sierra Leone

Jiangsu Sieyuan Hertz **Instrument Transformer Co.,Ltd**

Beijing west, 1000kV, Capacitive Voltage Transformer, China

Sieyuan Qingneng

Phuoc Huu Wind farm, 22kV, STATCOM, Vietnam

Shanghai Sieyuan

Power Capacitor Co., Ltd

Shanghai Sieyuan High Voltage Switchgear Co.,Ltd

Jindongnan, 1000kV, series compensation, China

Viamo 3, 245kV, GIS, Brazil

Shanghai Sieyuan **Optoelectronics Co.,Ltd**

IPTO Acharnon, 33kV, Reactor, Greece

Jiangsu Rugao High Voltage **Electric Apparatus Co., Ltd**

Aktogay, 550kV, Disconnector, Kazakhstan

Jiangsu Sieyuan Medium Voltage Switchgear Co.,Ltd

Yushi, 35kV, MV Swithgear, State Grid China



Electric & Electronic Co., Ltd



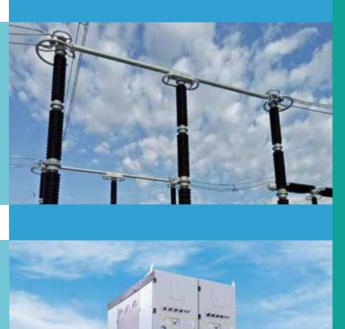
Jiangsu Sieyuan High Voltage Switchgear Co.,Ltd

Akktei Energia, 72.5kV, HGIS, Chile









Sieyuan Electric Co., Ltd

business scope

HVDC Power Substation Primary Equipment

With the application of high-power electronic devices, HVDC transmission technology has received widespread attention from power operators in various countries due to its advantages of low investment cost and less power loss during operation. Relying on the power electronics development platform and the preicipitation of related core technologies such as switch breaking, control, and protection, Sieyuan has developed the 500kV me-chanical DC circuit breaker with innovations such as the 3-col¬umn parallel structure of the valve; The HVDC RIP bushing adopts the whole roll of wide wrinkle paper, automatic winding, vacuum drying, casting, curing molding, to ensure there is no partial discharge; The AC filter capacitor bank used in HVDC substation has the high seismic ability and small capacitance deviation.



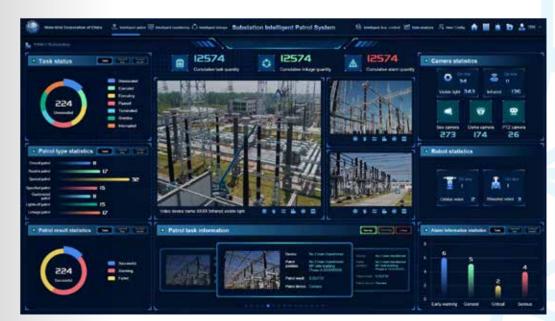
Fujian-Guangdong Interconnected Converter Station Project in China





Substation Automation, Protection, **Control & Monitoring**

Information collection and processing is an indispensable part of modern power grids. The emergence of new technologies such as new types of sensors, network communications, and computer technologies make the power system smarter and more efficient, it also greatly simplifies the operation and maintenance management of primary equipment. Sieyuan has more than 15 years of experience in substation automation. Based on the IEC 61850 architecture, it provides complete relay protection, SCADA, on-line monitoring, intelligent inspection, and communication solutions, which can be supplied in a stand-alone, subsystem, or whole substation, installed in a centralized control room or distributed to interval equipment, and has good environmental adaptability and communication interoperability.





Substation Intelligent Patrol System

business scope

Energy Storage System Solution

Accompanied by renewable energy development such as solar and wind power, there are higher requirements for the energy storage system. Sieyuan can provide various solutions for gridscale, industry & commercial, and residential systems. The large-scale energy storage solution adopts battery-friendly single-cluster control architecture, integrated design, multi-level security design, and management, supports online maintenance, and rapid deployment; it can provide frequency and peak regulation, reactive power compensation, and network support for the power grid system.

The residential energy storage solution can adapt to complex household loads, and the switching time of on-grid and off-grid connections is as low as O ms. While ensuring selfconsumption, it can also send electricity to the grid with high prices in countries and regions supported by the policies, increasing user's revenue.



Distributed Battery Energy Storage System (D-BESS)





Supercapacitor energy storage

Due to the fast response speed(millisecond response), long life, wide temperature range, and high power of the ultra-capacity energy storage system, it can make solar and wind energy smoothly connected to the grid, reducing the impact of its randomness, intermittency, and volatility influence on the grid, improving the transient load capacity of the grid, and improving the continuity of the output power of renewable energy generation. At the same time, the ultra-capacity energy storage system has good low-temperature performance (-40~65 ° C), excellent power density, and more than 1 million cycles in the fields of automobile automation and intelligence, railway vehicle braking energy recovery, and emergency power supply.



Supercapacitor energy storage module



business scope

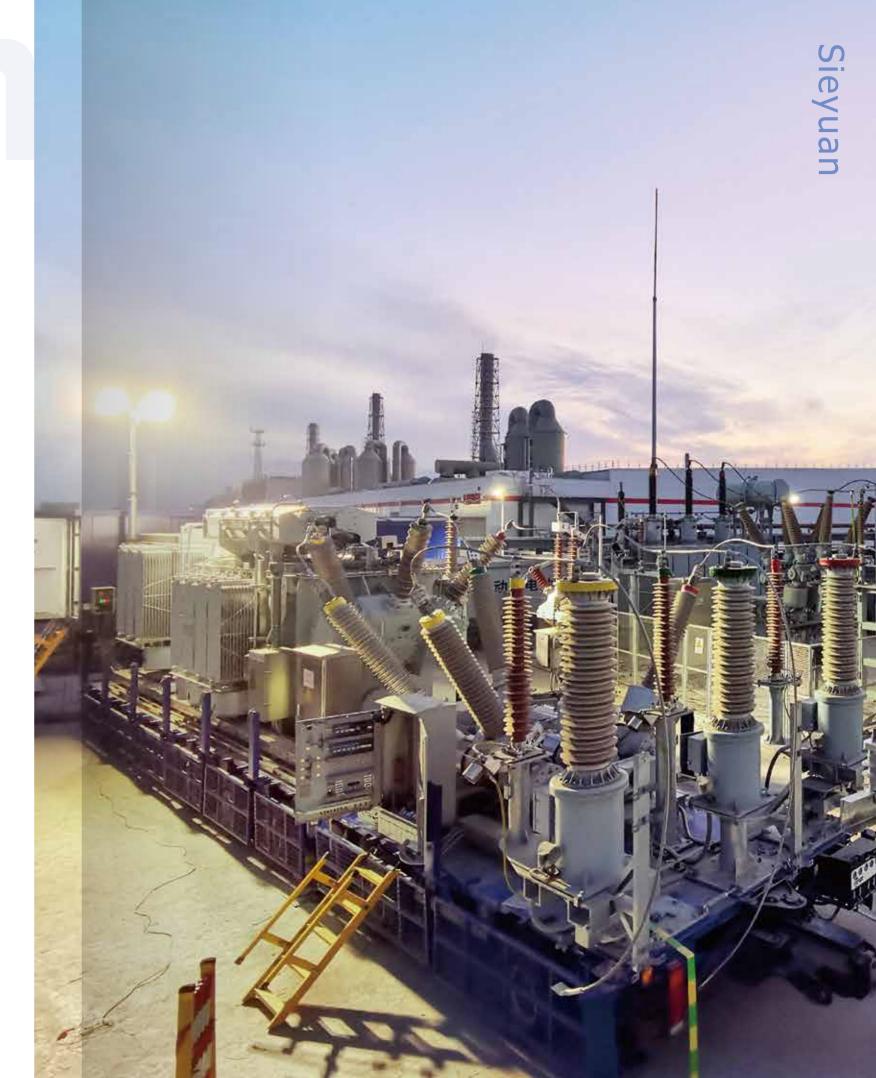
E-house and integrated Prefabricated Substation Solutions (Modular)

In the case of emergency restoration of power supply in harsh natural environments and in the project scenarios with extremely short lead time, there is more usage requirement of Sieyuan mobile substations and integrated prefabricated substation solutions.

The mobile substation solution of Sieyuan meets the transportation requirements of complex roads through multiple reinforcement designs; It adopts two structures, vehiclemounted and skid-mounted types, which can achieve plug and play on site and put into operation quickly; By fully considering the design principle of "maximum plant workload and minimum on-site workload" and adopting modular design, the prefabricated cabin modular substation solution realizes factory integration, one-stop transportation, and building block construction, so that fast construction and commissioning can be completed in as little as four months.



Hutang E-house Substation in China





Turn-key Substation Solution

Complete engineering solutions including substation design, procurement, and construction are one of our core competitiveness.

The ability of in-depth research on power system simulation analysis;

The technical experience accumulated in the process of power equipment R&D, production, and manufacturing; Experienced project team which has delivered hundreds of international projects in Europe, Africa, and Asia; Mature global supply chain management system, etc;





Kengen 220kV EPC project in Kenya

R&D system

We have accumulated rich experience in different fields such as high voltage insulation testing, power system simulation analysis, electronic circuit simulation analysis, electromagnetic field analysis, mechanical strength analysis, automobile electronic electro-magnetic compatibility analysis, battery cell capacity test, and ultracapacitor pack testing.

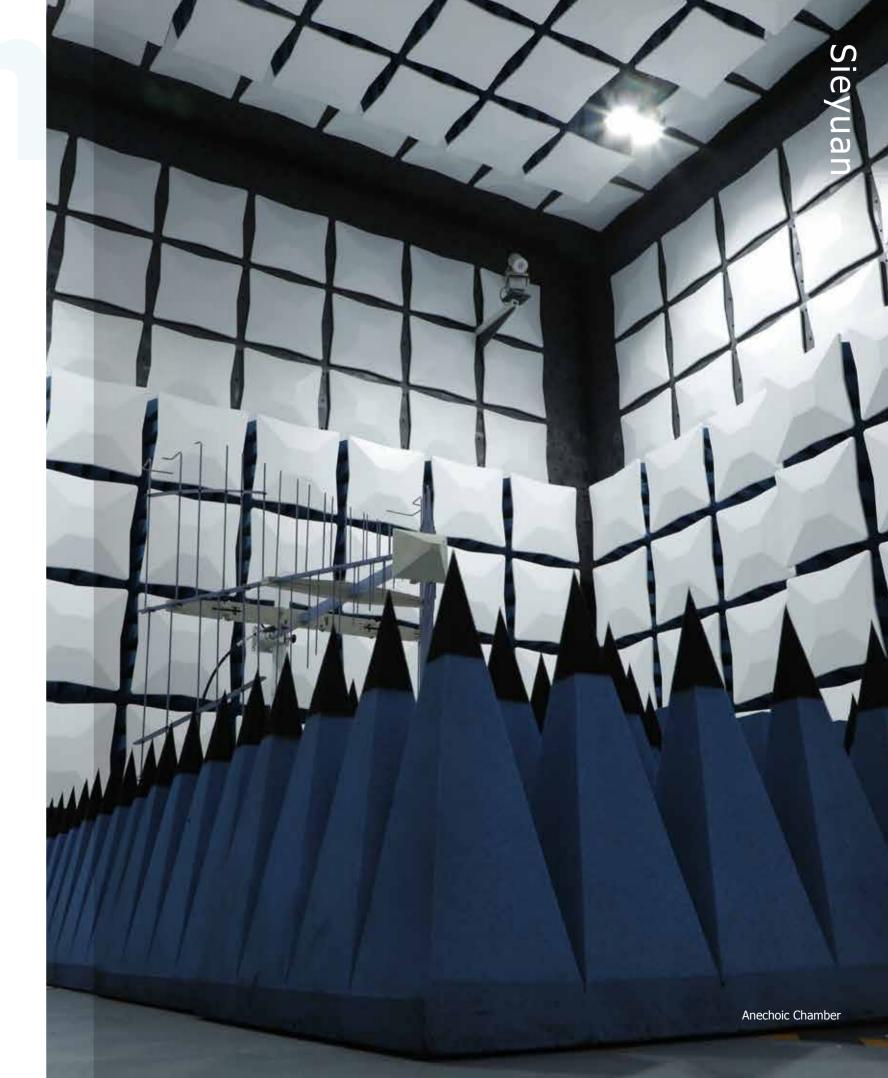
Most of the labs have passed the CNAS certification.



The RTDS simulation system for ultra-high voltage protection and power electronics

1000kV AC breaking testing lab and ±800kV DC breaking testing lab

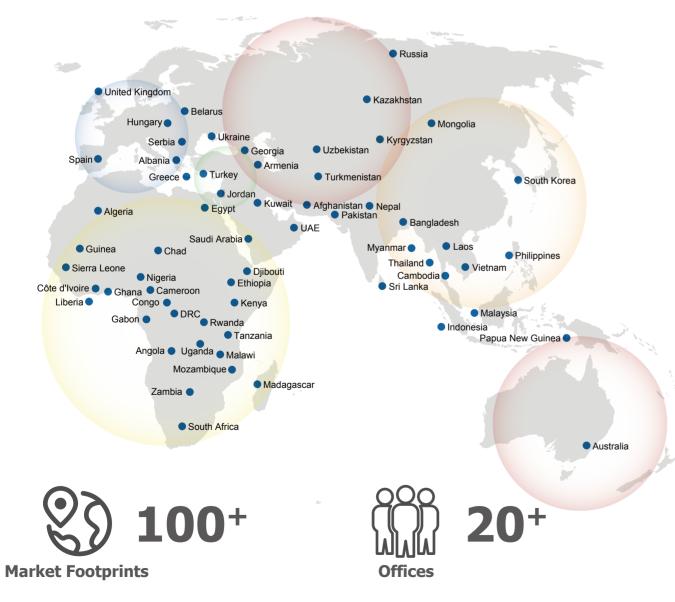




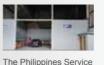
overseas footprint

Service Center & Office

Sieyuan's products and solutions have reached more than 60 countries in Europe, America, Africa, Oceania, and Asia. In the power grid, a power generation system. renewable energy and industrial engineering industries, Sieyuan's solutions ensure that power transmission and distribution is safer, more controllable, and more efficient. To provide more efficient solutions and services to global customers on time, Sieyuan has set up offices or subsidiary companies in 100 countries worldwide; 5 service centers, and local spare parts warehouses.











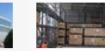
Center

Europe

Africa

Center





Center



Europe Service Center

America





Africa Service Center

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The Philippines Servic Center



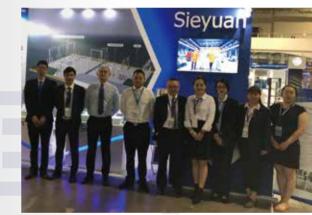
America Service Cente



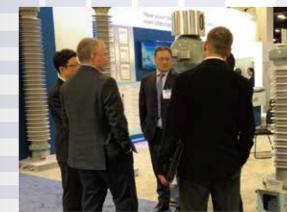




CONCAPAN XL 2022 PANAMÁ hosted by IEEE Centra America



RVP-AI/2018 hosted by IEEE Section Mexico and CFE



IEEE PES T&D 2018 hosted by IEEE

Sieyuan overseas footprint The exhibition







1st time attended to IEEE PES T&D 2018 hosted by IEEE



2nd time attended to MEE Dubai

certificate

The products of Sieyuan have completed a series of certifications for power grid customers such as State Grid China, National Grid UK, ENEL Spain, IPTO Greece, CFE Mexico, TNB Malaysia, NGCP Philippines, MEW Kuwait, and so on. Meanwhile, the EPD carbon footprint certifications of the company and products are also completed. The supplier management, EHS management, and human resource planning of the company have also passed the Achilles certification.





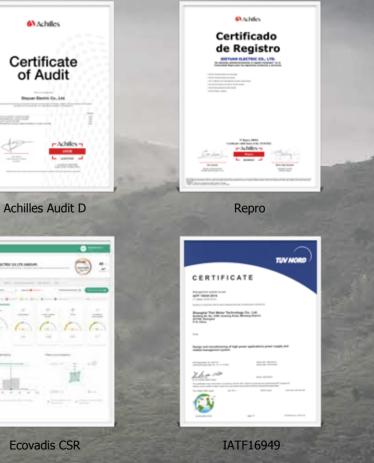
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social responsibility









Sieyuan maintains business operations in compliance with the standards and requirements of ethics, laws, and the public. Committed to ensuring the interests of all stakeholders, we also adhere to respect for human rights and concerns about the sustainable development of the global society. Besides, we resolutely resist corruption and continue to invest in the research and development of low-carbon and environmentally friendly products.





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