



中国电气装备

China Electrical Equipment

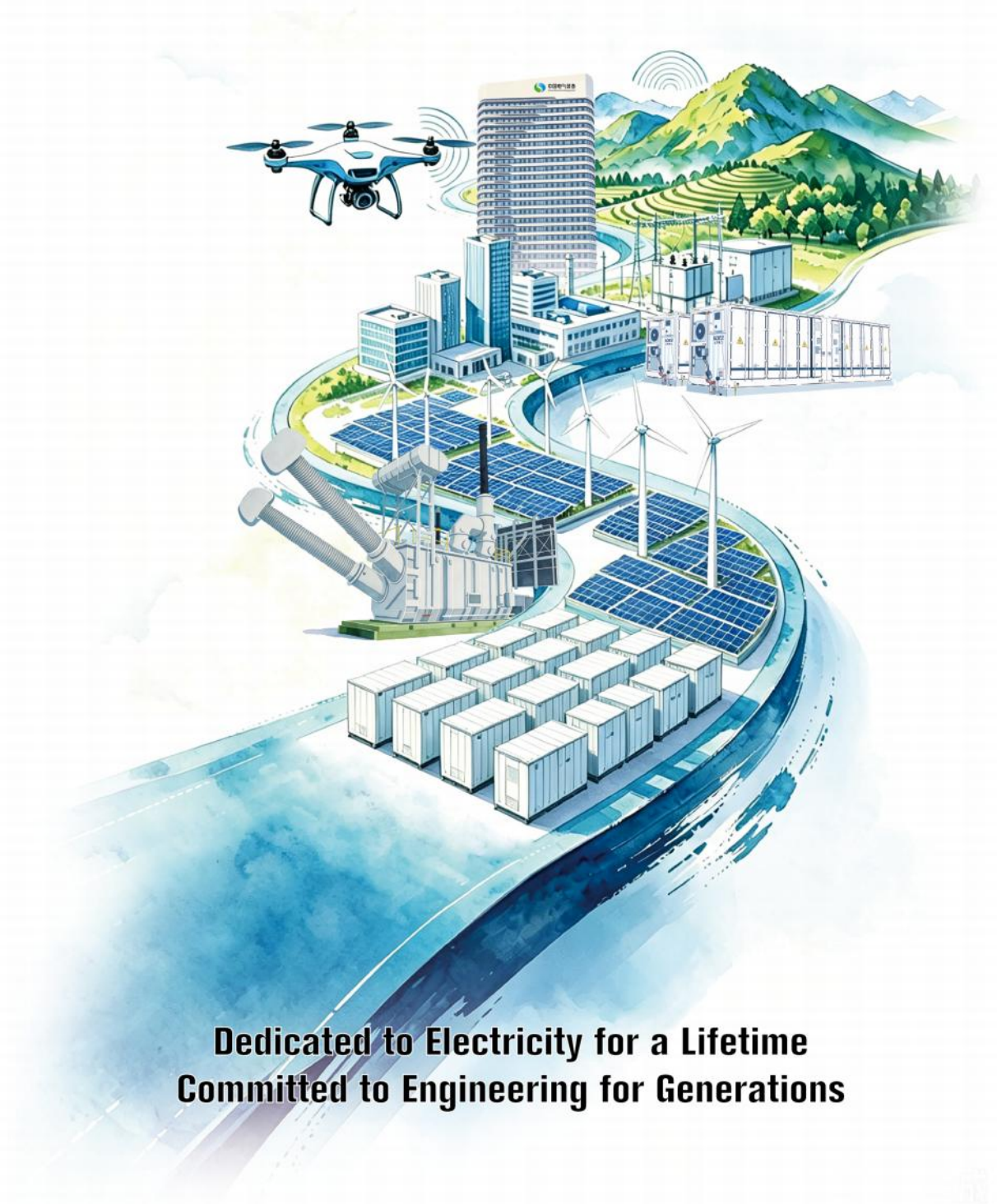
山东电工电气集团有限公司

SHANDONG ELECTRICAL ENGINEERING & EQUIPMENT GROUP CO.,LTD.

**Shandong Electrical
Engineering & Equipment**

SEE

All one's life is dedicated to electricity
All one's career is in the field of engineering.



**Dedicated to Electricity for a Lifetime
Committed to Engineering for Generations**

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ABOUT SDEE

Group Overview

Shandong Electric Engineering & Equipment Group Co., Ltd., a subsidiary of China Electrical Equipment Group Co., Ltd., is one of China's largest power transmission and transformation industry groups.

As one of the country's largest leading suppliers of power equipment and integrated solutions. Its core business focuses on power transmission and transformation equipment such as transformers, high-voltage switchgear, cables, and smart distribution networks.



1100⁺
People of High-end
R&D team

60⁺
National-level enterprise
technology centers and
academician workstations

1200⁺
Authorized patents

Organizational Structure



It comprises more than **30** subsidiaries located in Shandong, Beijing, Chongqing, Jiangsu, and other provinces and municipalities.

Transformer

- Shandong Power Equipment Company Limited
- SDEE Changzhou Toshiba Transformer Company Limited
- Shandong Power Transmission and Transformation Equipment Company Limited
- Chongqing BORI Power Equipment Company Limited

Cable & Conductor

- Chongqing Taishan Cable Company Limited
- Shandong Tisense Submarine Cable Company Limited

GIS & GIL

- SDEE Hitachi High-Voltage Switchgear Company Limited

Intelligent Distribution

- SDEE Intelligent Electric Company Limited
- SDEE Xinneng Science & Technology Company Limited
- SDEE Distribution Net Tech Development Company Limited

Intelligent Equipment

- Beijing Guowang Fuda Science and Technology Development Company Limited

Others

-

Global Flagship Projects



◆ Partner





© 230 kV San Esteban Substation
Expansion in the Philippines

EPC Project:

Covering engineering design, supply of transmission, transformation and distribution equipment, civil construction, and on-site commissioning and energization.

© The 500 kV Preah Sihanouk Transmission Line in Cambodia

Scope of supply:

11,455 tonnes of transmission towers and **3,490** km of overhead conductors.

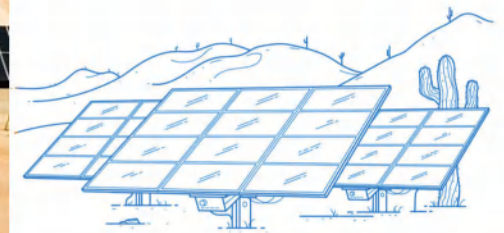


©PEA' s first public works
demonstration project for
distribution network upgrade

Scope of supply:

TTU (Transformer Terminal Unit)
smart integrated terminals



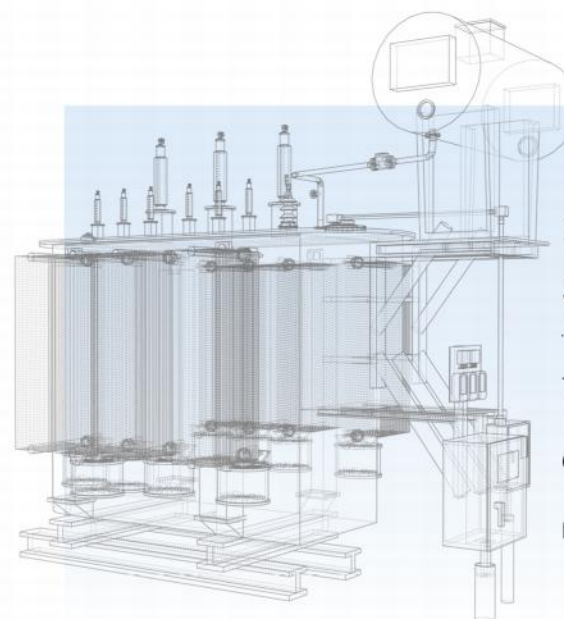


© Large-scale integrated wind, solar and storage energy project in Tajikistan

EPC Project

Project highlights: By substituting conventional energy with wind and solar power, the project saves roughly **5,000** tce per year and cuts CO₂ emissions by around **14,000** tonnes annually.





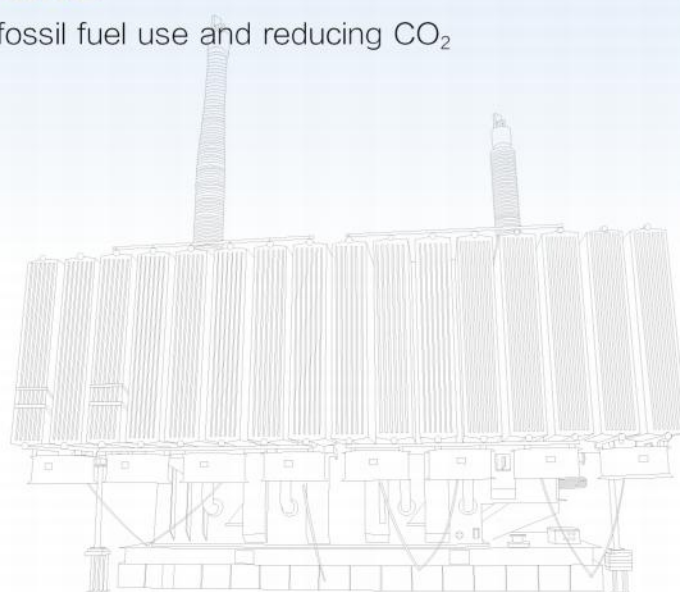
© 400 kV Transformers for the Koumoundourou Substation in Greece

The project supplied **400** kV auto-transformers, and after commissioning, it has substantially enhanced the power supply reliability and operational safety of the grid serving Athens and Attica.

© Complete equipment supply for the large-scale wind power project in Georgia

Scope of supply:

Once operational, the project will supply roughly **600** GWh of clean power to Georgia' s grid each year, substantially lowering fossil fuel use and reducing CO₂ emissions by some **400,000** tannually.





© Specialty transformer project for the Metlen aluminium plant in Greece

The transformers supplied comprise the ZHSFP 31500/18 rectifier transformer and the OSFPZ 36600/15 auto transformer.



500kV, 200MVA single-phase high-capacity transformer at the Inca Substation in Ecuador



© Delivered 23 × 500 kV and 8 × 400 kV power transformers.

As one of the country's largest T&D projects in recent years, it has greatly enhanced regional power supply and boosted local industry and livelihoods.



400kV, 165MVA three-phase transformer at the Santa Cruz New Energy Substation in Mexico



Transformers for the Substation at the Conexus Milan Data Centre in Italy



Main transformer for substations serving several inter-provincial transmission lines in Ecuador



Sustainable Development & ESG Commitment

As a professional power equipment manufacturer, we firmly embed ESG considerations into every link of our value chain – from product research and development, manufacturing, and supply chain management, to global sales and after-sales service. We are unwavering in our pursuit of green production, continuous innovation in energy-saving technologies, stringent safety protocols, and active fulfilment of social responsibilities. Our ultimate mission is to provide sustainable, reliable, and high-performance power solutions for global infrastructure projects, while consistently reducing our ecological footprint and creating long-term value for all stakeholders.

Environmental Management

We are committed to minimizing environmental impact through systematic management and technological upgrades. Our facilities operate under the **ISO14001** Environmental Management System certification, ensuring compliance with international standards. We actively promote clean production processes, implement comprehensive factory energy-saving renovations, reduce waste generation, and optimize resource efficiency.

Social Responsibility

People are at the heart of our business. We hold **ISO45001** Occupational Health and Safety Management certification, reflecting our dedication to providing a safe and healthy workplace for every employee. We enforce rigorous production safety standards and project delivery management to ensure zero incidents. Beyond our own operations, we invest in industrial talent cultivation through training programs, and we actively engage in public welfare initiatives that contribute to the communities where we live and work.



Corporate Governance

Integrity, transparency, and strict compliance form the cornerstone of our corporate governance. We are certified under the **ISO9001** Quality Management System, ensuring consistent product quality and customer satisfaction. Beyond quality and technical compliance, we have established a robust compliance management framework that encompasses anti-bribery and anti-corruption measures. All employees and business partners are required to follow our code of conduct and integrity commitment, which explicitly prohibits any form of bribery, kickbacks, or improper benefits. Through these rigorous governance practices, we ensure sustainable growth, safeguard the interests of all stakeholders, and earn lasting trust from our partners and clients.



BUSINESS AREAS



Wind power generation

Hydropower generation

UHV AC substation

Photovoltaic (PV) power generation

Transmission line operation and maintenance

Smart distribution network

Emergency maintenance station

Energy storage power station

GIL integrated pipe gallery

UHV converter station

Substation operation and maintenance

Data center

Park-level integrated energy

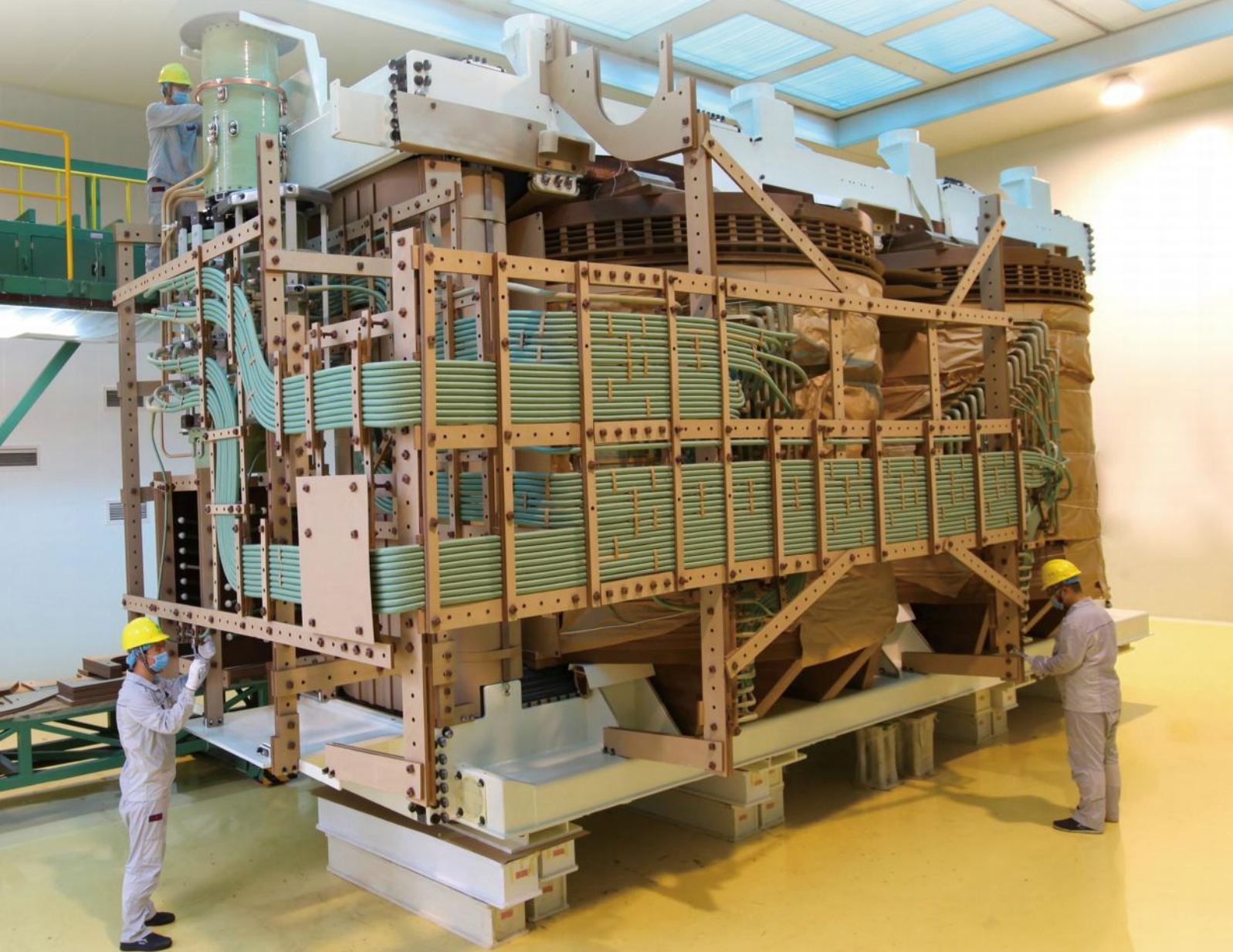
EV charging and swapping station

Urban smart utility tunnel

Offshore booster station / offshore substation

Submarine cable

2 CORE PRODUCTS AND SOLUTIONS



Transformer

We possess the R&D and manufacturing capabilities for AC/DC transformers and reactors across all voltage levels and complete product series, with product performance reaching a world-leading level.

01

The world's highest
Voltage level DC transmission project

Converter Transformers for Changji- Guquan $\pm 1100\text{kVUHVDC}$

This project creates **28,000** jobs
saves over **16** million tons of standard coal annually
reduces carbon dioxide emissions by more than **43** million tons



02

The world's first

500 kV power transformer using natural ester insulating oil,Featuring the **largest** rated capacity,the **highest** voltage rating, and the most complex structural configuration.



03

The **1000** kV UHV AC transformer, which features the **highest** voltage rating and the maximum capacity per limb.



04

The first generator transformer

in the industry meeting the Chinese national standard for Class 1 energy efficiency.



05

The world's first 220 kV mixed insulating oil transformer.



06

The world's first

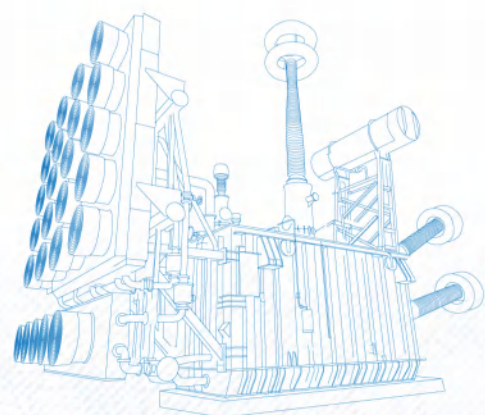
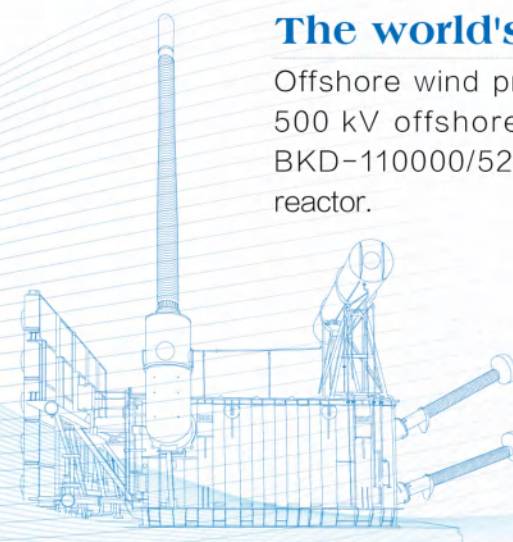
Vehicle-mounted mobile 220 kV large-capacity three-phase three-winding auto-transformer.



08

The world's first

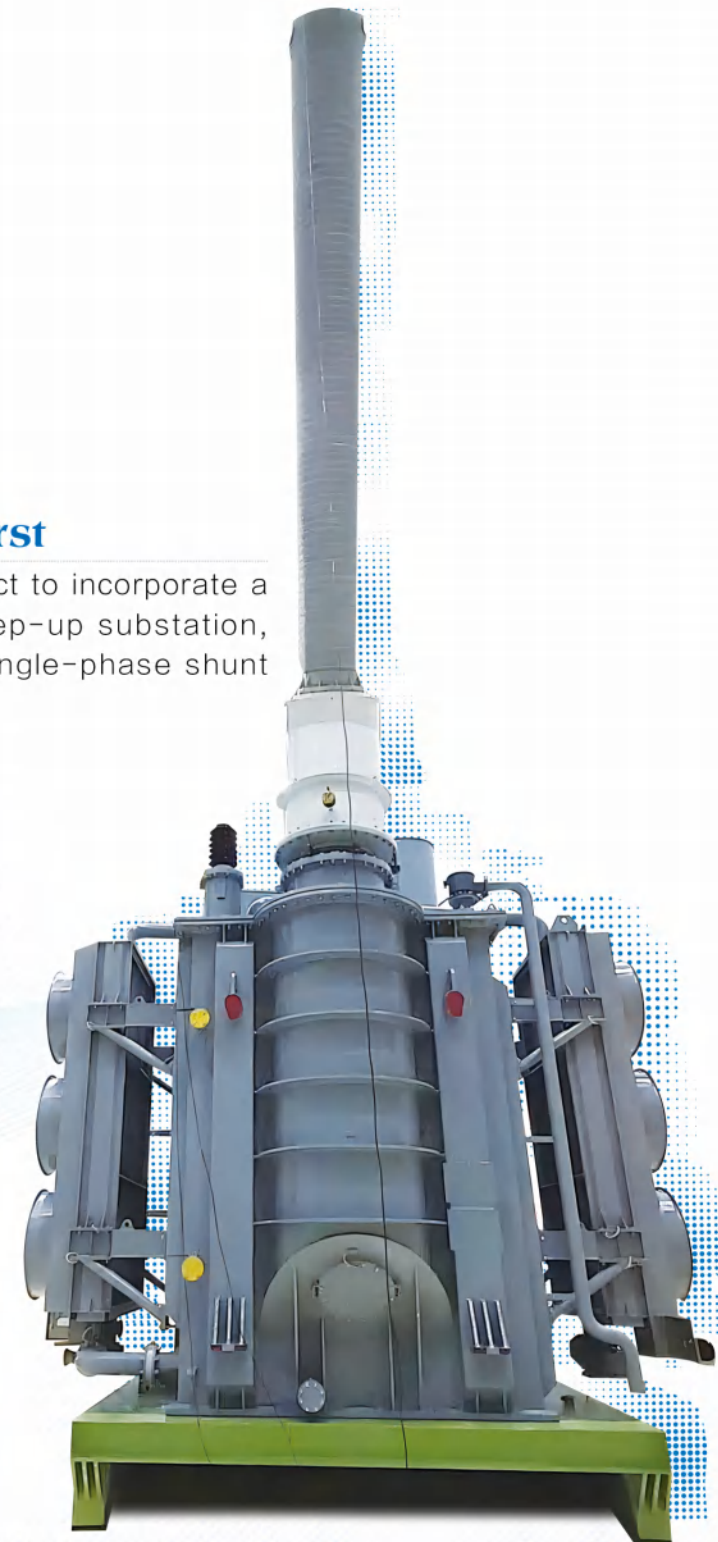
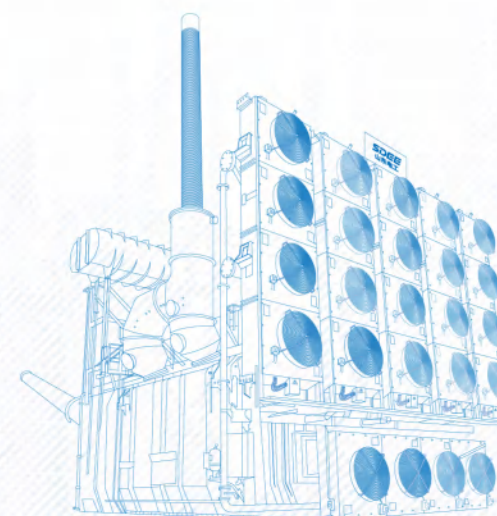
Offshore wind project to incorporate a 500 kV offshore step-up substation, BKD-110000/525 single-phase shunt reactor.



07

The world's largest-capacity

Shunt reactor – the BKD-400000/1100-145 UHV shunt reactor.



Our transformer technology complies with the vast majority of international standards (**e.g., IEC, IEEE, ISO, EN, ANSI, GOST**), and we can offer customized products tailored to your specific requirements.

Cable & Submarine Cable

We possess independent R&D and large-scale production capabilities for 1100 kV AC/DC overhead conductors, AC/DC cables up to 500 kV and below, submarine cables, cable accessories, specialty cables, and smart cables. We have mastered multiple core technologies, and our business scale ranks among the forefront of the industry.

Conductor



Overhead conductors up to 1000 kV and below

Cables



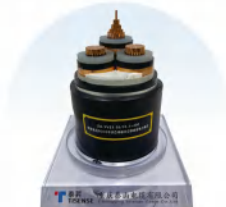
Smooth aluminum-sheathed power cables up to 500 kV and below



Polypropylene-insulated power cables up to 110 kV and below



500 kV power cables



35 kV environmentally friendly non-crosslinked polyethylene-insulated power cable



±535 kV DC cables



10 kV AC optoelectronic composite submarine cables



±500 kV HVDC submarine cables

Cable Accessories



66 kV aluminum-alloy conductor submarine optoelectronic composite cables



500 kV intermediate joints



500 kV outdoor terminations



500 kV GIS terminations

Typical Application Scenarios

Overhead transmission lines, urban underground grids, industrial parks, new energy stations, offshore wind projects, cross-sea power links and island power supply worldwide.





100,500 m²

The base has a total construction area

1,300 km

for submarine cables and umbilical cables

700 km

for onshore cables.

Leveraging world-leading submarine cable production technologies, we have established a smart and efficient "lights-out" submarine cable manufacturing base. The base has a total construction area of approximately 100,500 m², comprising one VCV (Vertical Continuous Vulcanization) tower, three large steel-structured workshops, and several auxiliary buildings. It possesses a production capacity of 1,300 km for submarine cables and umbilical cables, as well as 700 km for onshore cables.



International Standards for Cables

(1) IEC Standards:

IEC 60228, IEC 60502-1~7, IEC 60245-1~10, IEC 60332-1~3, IEC 60754-1~2, IEC 61034-1~2, IEC 60227-1~7, IEC 60840, IEC 60811-1~501, IEC 62067, IEC 60364-5-52+AMD1 CSV, IEC 60287-2-1, IEC 60287-3-1

(2) EN Standards:

EN 50618, EN 50525-1~4, EN 50575

(3) ICEA Standards:

ICEA S-95-658, ICEA S-94-649

(4) UL Standards:

UL 44, UL 83, UL 1581

(5) GOST / TR CU Standards

TR CU 004, TR CU 020

GOST 16442, GOST 17599, GOST 55025, GOST 34834, GOST 31996

(6) Other Standards:

DIN VDE 0276-620, HD 620 S3, UNE 211620, UNE 211632-4A, BS 6485, BS EN 50397-1

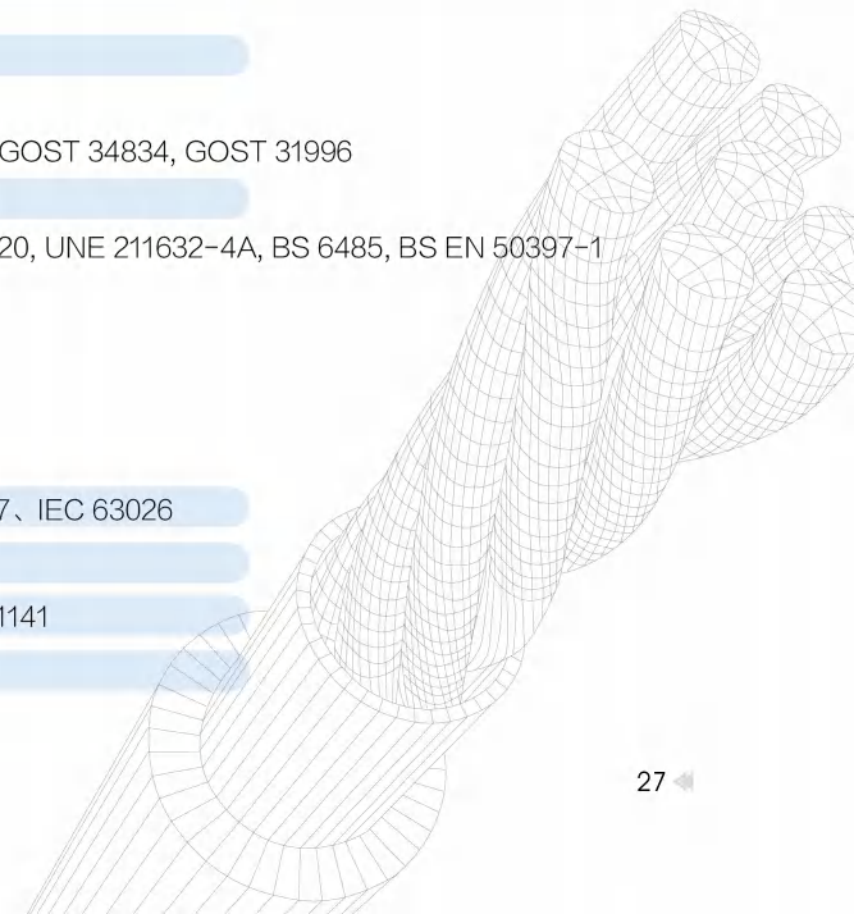
International Standards for Submarine Cables

(1) IEC Standards: IEC 60055-1~4, IEC 62067, IEC 63026

(2) EN Standards: EN 60055-1~4

(3) ASTM Standards: ASTM D3951, ASTM D1141

(4) GOST Standards: GOST 24334



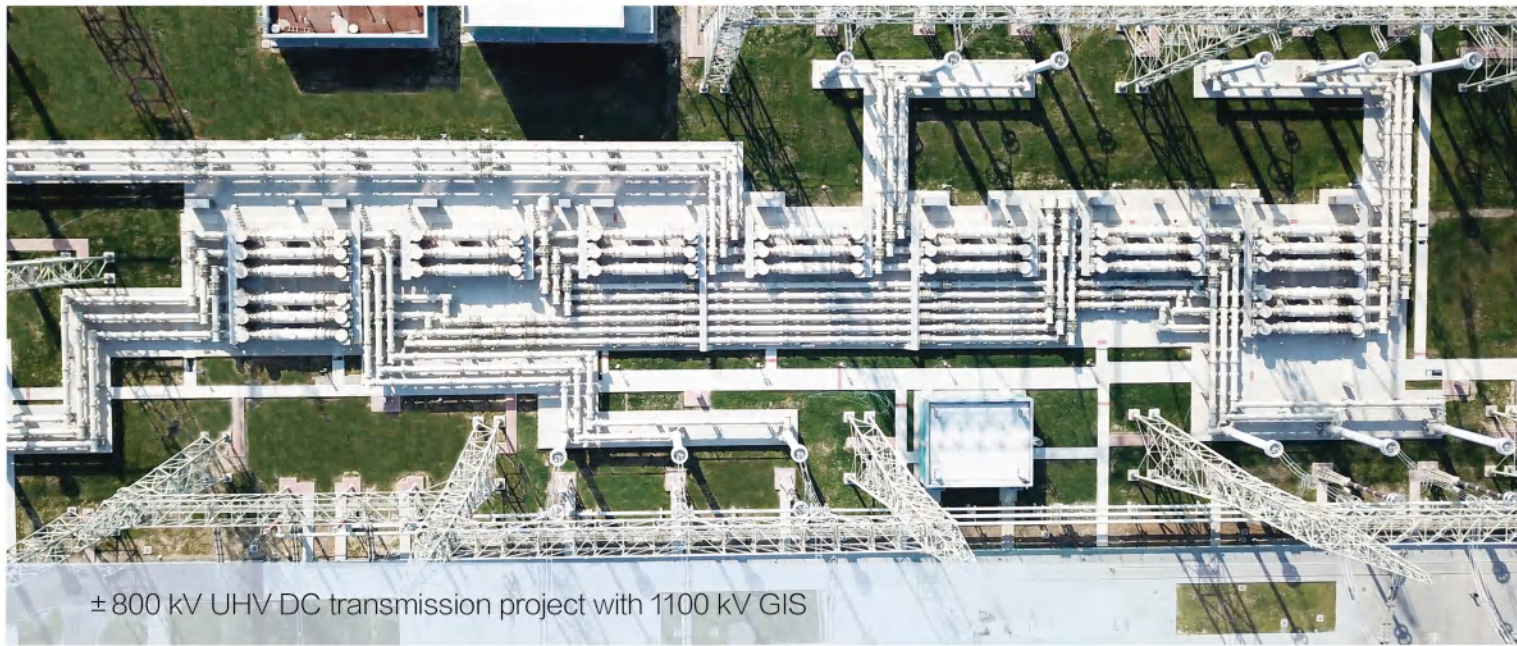
High-voltage Switchgear

We possesses the R&D and manufacturing capabilities for gas-insulated switchgear (GIS) and gas-insulated transmission lines (GIL) across the full voltage range from 126 kV to 1100 kV. It has comprehensively mastered core patented technologies at the 1000 kV (million-volt) class, actively participated in the formulation of multiple industry standards, and established a high-voltage switchgear technology system that is both independently controllable and internationally advanced.



Huainan-Nanjing-Shanghai 1000 kV AC UHV power transmission and transformation project:

The world's first UHV gas-insulated transmission line (GIL) demonstration project, with the world's highest voltage level and the most advanced technical standards.



± 800 kV UHV DC transmission project with 1100 kV GIS



Substation with 252 kV GIS



1000 kV UHV AC transmission and transformation project with 1100 kV GIS



1000 kV substation expansion project with 1100 kV GIS



1000 kV UHV AC transmission project with 550 kV GIS



± 800 kV converter station with 550 kV GIS

Distribution Grid

In the distribution network sector, we prioritize the development and promotion of products such as distribution transformers and switchgear, primary-secondary integrated complete assemblies, distribution automation devices, and power quality control devices, which are fully aligned with the smart grid requirements for intelligence, energy efficiency, environmental friendliness, and high reliability.



10 kV three-phase oil-immersed type
On-load capacity and
voltage-regulating transformer



10 kV wide-range (voltage
regulation) type
On-load tap-changing transformer



HPLC dual-mode communication
unit(Single-phase, three-phase,
concentrator module)



Environmentally friendly
gas-insulated ring main unit (RMU)



Integrated
distribution cabinet



10 kV amorphous alloy closed-core type
Three-dimensional wound-core
transformer



Three-phase epoxy cast-resin type
Dry-type transformer



Integrated energy storage PCS
step-up unit (PCS =
PowerConversion System)



Landscape underground
prefabricated type Substation



Compact (pad-mounted) substation
(Including wind power and
photovoltaic)



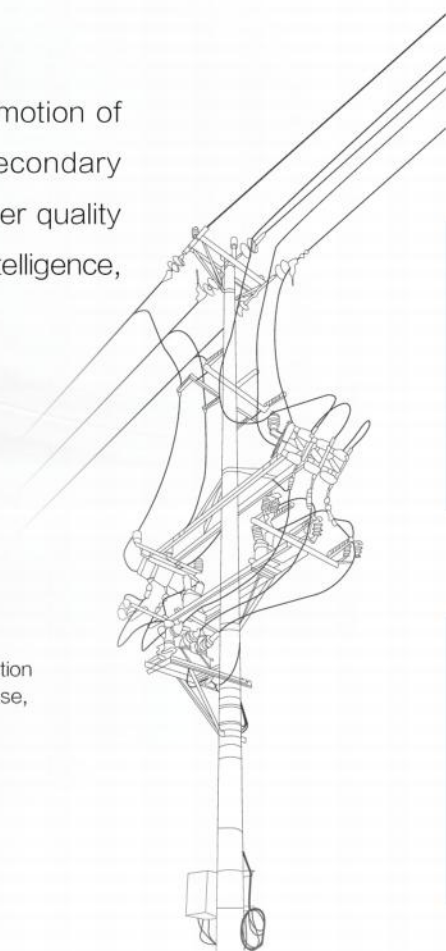
Prefabricated cabin / enclosure



Pole-mounted transformer
complete set



Primary-secondary integrated
pole-mounted circuit breaker



Digital and intelligent integrated solution for medium and low-voltage distribution networks

◎ Self-healing protection scheme for medium-voltage lines



Feeder terminal unit (FTU)



Drop-out intelligent fuse



Standardized centralized
substation terminal unit (STU)



Magnetically-actuated
pole-mounted circuit breaker

◎ Distributed photovoltaic (PV) management scheme



Smart integrated terminal for distribution
transformer area (TA-ITU)



PV protection switch



PV protocol converter

◎ Power quality control scheme



Distributed hybrid compensation device



Line automatic voltage regulator
(AVR)



Hybrid compensation device for
distribution transformer area

◎ Energy storage and charging solution



Split-type DC
charging stack



Integrated DC
charging pile



Outdoor commercial and
industrial (C&I) energy
storage cabinet



Stackable residential energy
storage system



Primary-secondary integrated
complete ring main
cabinet (or RMU)

Intelligent Equipment

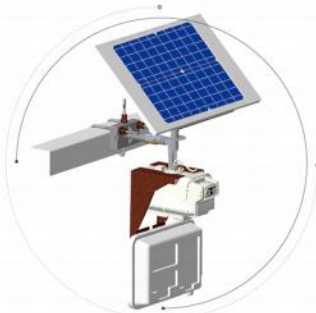
Covering industries such as transformers, power towers, power cables, and distribution network switches, the company comprehensively deploys intelligent equipment R&D and system design across various levels including process stations, production lines, workshops, and factories. It has established a smart manufacturing system with comprehensive infrastructure and clear system architecture. Additionally, it actively extends its smart manufacturing digital transformation and integrated solutions to sectors like energy, transportation, and infrastructure.



Integrated monitoring platform of Smart substation auxiliary system



Online monitoring device of Transmission line wind, ice and galloping monitoring



External damage prevention - millimeter-wave radar + AI



Sheath circulating current monitoring device



Power transmission and transformation edge intelligent terminal



Transformer storage and transportation online monitoring device



Four-in-one multifunctional fault online monitor



Transmission line AI monitoring edge intelligent terminal



Overhead line ultrasonic detector



Transmission line tower fall-prevention device



Distribution network monitoring and recording device



Comprehensive transformer condition monitoring device



Cable tunnel inspection robot



Transmission line inspection robot



Intelligent tower climbing machine



Substation inspection equipment



Track robot



Area control unit (ACU)



confirmation device for switch and disconnector position status



Internal inspection equipment for oil-immersed transformers



Online monitoring device for transformer on-load tap-changer (OLTC)

3 FUTURE PROSPECTS

To build a world class manufacturer and service provider of power transmission and transformation equipment.

SDEE





WeChat
Official Account

Marketing
Service Account



Service Hotline: **400 604 8288**

AUG 2026 Edition

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