2023
Environmental, Social and Governance Report

Shanghai Electric Group Company Limited

Notes for Report Preparation

Overview

Shanghai Electric Group Company Limited ("Shanghai Electric", "Group", "Company" and "we") began to prepare and disclose its 2009 Social Responsibility Report in 2010 and began prepare and disclose its Environmental, Social and Governance ("ESG") report since 2016, and issued the report on an annual basis. This is the Eighth ESG report of our Group, truthfully revealing the Group's performance of its responsibility to shareholders, customers, partners, employees, environment, communities and other important stakeholders. And it shows the Group's performance in environment, society and governance.

Basis of Preparation

This report is mainly prepared with reference to the Guidelines No. 1 for the Self-regulation of Listed Companies on the Shanghai Stock Exchange – Standardized Operation, the Environmental, Social and Governance Reporting Guide (the "ESG Reporting Guide") contained in Appendix C2 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ("HKEx") and the ESG Indicator System for Shanghai State-Controlled Listed Companies, and partially refers to the GRI Standards 2021 of Global Reporting Initiative, aiming to disclose information on environmental, social and governance performance of the corporate for relevant parties and shareholders. The content of this report is determined according to a set of established procedures, including identifying and ranking important stakeholders and ESG issues, collecting relevant data of the report, and reviewing quantitative data in the report.

Scope and Boundary of the Report

The policies and data provided in this report cover the Group's headquarter, internal divisions, branches, wholly-owned subsidiaries and holding companies, and the environmental data includes the important production-oriented subsidiaries of the Group. The data disclosure is from January 1, 2023 to December 31, 2023. Unless otherwise specified, the currency mentioned in the report is RMB, and the density data is based on revenue data in 2023 annual report of Shanghai Electric.

Source of Data and Guarantee for Reliability

The data and cases in this report mainly come from the Group's statistical reports and related documents. The report has not been verified by a third party. The Board of Directors of the Group undertakes that this report does not contain any false records or misleading statements and is responsible for the truthfulness, accuracy and completeness of its contents.

Confirmation and Approval

This report was confirmed by the management of the Company, and then approved by the Board on March 28, 2024.

List of Companies Mentioned in the Text of this Report

Full Name	Short Name
Shanghai Electric Thales Transport Automation Control System Co., Ltd.	Shanghai Electric Thales
Shanghai Boiler Works Co., Ltd	Shanghai Boiler Works
Shanghai Mitsubishi Elevator Co., Ltd.	Shanghai Mitsubishi Elevator
Shanghai Electric Group Co., Ltd. Central Academe	Central Academe
Shanghai Electric Wind Power Group Co., Ltd.	Electric Wind Power Group
Shanghai No.1 Machine Tool Works Co., Ltd	Shanghai No.1 Machine Tool Works
Shanghai Electric Power Equipment Co., Ltd. Generator Plant	Shanghai Generator Plant
Shanghai Renmin Electrical Apparatus Works	Renmin Electrical Apparatus Works
Shanghai Electric Power Generation Equipment Co., Ltd. Turbine Plant	Shanghai Electric Turbine Plant
Shanghai Electric Group Shanghai Electric Machinery Co., Ltd.	Shanghai Electric Machinery
Shanghai Hydrogen Age Technology Co., Ltd.	Hydrogen Age
Shanghai Electric Power Generation Group	Shanghai Electric Power Generation
Shenzhen Yinghe Technology Co., Ltd	Yinghe Technology
Shanghai Electric SHMP Casting & Forging Co., Ltd.	SHMP Casting & Forging
Shanghai Electric Nuclear Power Group Co., Ltd.	Shanghai Electric Nuclear Power
Shanghai Electric Group Digital Technology Co., Ltd	Electric Digital Technology
Shanghai Electric Nuclear Power Equipment Co., Ltd	Shanghai Electric Nuclear Power Equipment
Shanghai Electric New Energy Development Co., Ltd.	Shanghai Electric New Energy Development
Shanghai Electric Hengxi Photovoltaic Technology (Nantong) Co., Ltd.	Hengxi Photovoltaic
Shanghai Electric Group Property Company Limited	Shanghai Electric Property
Shanghai Prime Machinery Company Limited	Shanghai Prime

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Chairman's Statement

Wu Lei

Secretary of Party Committee
Board Chairman

The year 2023 was the first year to comprehensively implement the spirit of the 20th National Congress of the Communist Party of China, a crucial year for Shanghai Electric to carry out the tasks defined by the 14th Five-Year Plan and an extremely important turning point in the development history of Shanghai Electric for more than one century. During the year, Shanghai Electric adhered to the principle of "making progress while ensuring stability, keeping to the right path while making innovations, and firmly sticking to the path of high-quality development", embracing the new pattern of high-quality development.

Committed to the technological innovation, we promoted the industrial transformation and upgrading. We accelerated the high-end, green and intelligent development through transforming existing industries and orderly establishing presences in new industries and segments, thus reshaping our industrial layout driven by the integrated development. Under the guidance of China's "3060" goals for "Carbon Peaking and Carbon Neutrality" and our own "Carbon Peaking and Carbon Neutrality" goals, Shanghai Electric focused on new industries and actively created a comprehensive new solution system for our industrial customers. Meanwhile, we kept progressing amid stability and continued our efforts in traditional businesses, strengthening our inherited industry experience and manufacturing expertise.

We practiced the green development philosophy to give new impetus to the sustainable development. We promoted green technologies and green investment, fueled the low-carbon development, strengthened the cooperation in key fields such as green transportation, green energy and green infrastructure, thus realizing the synergy between environment and economic development. During 2023, we cemented the international cooperation on environmental protection and the exchanges and cooperation on climate changes, and supported events including the 28th session of the Conference of the Parties (COP28) to the UN Framework Convention on Climate Change (UNFCCC), through which we promoted the harmonious co-existence of human beings and the nature and contributed our efforts to green development.

We deemed talents as the most important resource and build a high-quality talent team. We adopted a strategy of boosting the corporate development by talents. We focused on introducing and training technological innovation talents who can support the Group's strategy, creating a favorable talent development ecosystem. We carried out special pilot work for joint training of engineering masters and doctors with Shanghai Jiaotong University and East China University of Science and Technology, and explored personalized mode of school-enterprise cooperation with many universities to reserve talents for key fields. We formulated diversified talent development plans, further improved the assessment and evaluation system, and closely linked talent development with scientific and technological innovation.

We improved our modern corporate system and strengthened our capacity of modern governance. We integrated the leadership of the Party into corporate governance to enhance economic competitiveness, innovation, control, influence, and risk resilience. We built a more comprehensive and diversified ESG management system, assuming our responsibility as a state-controlled listed company for sustainable development. In 2023, we were included into Hang Seng (China A) Corporate Sustainability Index, Hang Seng (China A) Corporate Sustainability Benchmark Index, and Hang Seng (Mainland and HK) Corporate Sustainability Index. We maintained an A grade in the MSCI ESG rating, and our ESG management practices were widely recognized in the capital markets.

We pursue innovation, embark on a new journey, write a new chapter. The year 2025 is the 75th anniversary of the founding of New China, and a critical year to realize the strategic objectives and tasks of the "14th Five-Year Plan". With a focus on serving the national strategy and demands, Shanghai Electric benchmark against the world-leading technologies, industry leaders and national models. We will position ourselves under the context of the international labor division and collaboration, make plans in line with the national strategy of building a manufacturing power and shoulder responsibilities to help tackle the challenges in bottleneck technologies. We will propel the independent high-level technological innovation, further strengthen talent training, consolidate the defense lines for risk management and inherit the spirit of Shanghai Electric people, thus contributing to the undertakings of pushing forward the construction of a modernized and powerful China and the rejuvenation of the Chinese nation.

President's Statement

Liu Ping

Deputy Secretary of Party Committee
President

In the face of the external environment with both opportunities and challenges in 2023, Shanghai Electric adhered to the general keynote of "seeking progress while maintaining stability, upholding integrity and innovation, and unswervingly pursuing the road of high-quality development". We comprehensively implemented the guiding principle of the 20th National Congress of the Communist Party of China, actively responded to the national strategy, orderly propelled all tasks, optimized industrial layouts, sped up the innovation and made all efforts to drive the Group's high-quality development to a new level.

Keeping in mind the responsibilities, we cemented the foundation for high-quality development. We upheld the leadership of the Party, improved the Party conduct, deepened the reform, and constantly refined the corporate governance system, and solidly advanced the implementation of the Group's strategy during the "14th Five-Year Plan" period. We strictly controlled product quality, strengthened market synergy, improved service quality, and built a premium domestic brand. We practiced green and low-carbon development and made full use of all kinds of resources to reduce pollutant emissions and enhanced the level of green manufacturing. We actively explored carbon management, declared carbon pilot projects, built a carbon management platform, and strived to promote and realize the goal of "dual carbon". We adhered to the people-oriented approach, implemented production safety, protected the rights and interests of employees, created a perfect talent training system, improved the quality of life of employees, and provided a stage for their development. We focused on people's well-being, contributed to charity, and comprehensively promoted rural revitalization and "Belt and Road Initiative", so as to jointly build a better life and a harmonious society.

With innovation as a driver, Shanghai Electric demonstrated our significant role in the national development. As the year 2023 was a year of scientific and technological innovation at Shanghai Electric, we adhered to the principle of science and technology as the primary productivity, strengthened internal and external collaboration, increased investment in technological innovation, constantly deepened the technological innovation strategy characterized by "small internal think tank + large external brain storm". We sped up the green energy business by focusing on energy equipment, industrial equipment and integration services. Through comprehensively improving the technological innovation level, we promoted the industrial transformation and upgrading. We accelerated the data governance and constantly updated the "SEunicloud" Industrial Internet Platform to drive the integration of digital technologies with the manufacturing industry and providing important support and guarantee for the technological innovation.

We were committed to openness and cooperation to share opportunities arising from industrial development. The rapid development of Shanghai Electric is inseparable from the support of the government, investors, customers, business partners and other friends from all walks of life. In 2023, we enhanced the communication with all stakeholders, responded to concerns of all parties, improved the information disclosure, and actively shared our experience. We worked together with all parties to seek common development, and we reinforced exchanges and cooperation with government agencies, universities and industry partners for the purpose of mutual complementation and win-win cooperation. We endeavored to build a sustainable supply chain, further optimized the supplier management information platform and enhanced exchanges with suppliers through various channels such as the supplier conference, aiming to establish long-term stable cooperation.

Looking forward to 2024, Shanghai Electric will uphold the technological innovation and serve the national strategy, stay true to our original aspiration, remember our mission, forge ahead with determination, and resolutely follow the path of high-end, green, and intelligent development. We will work hard to accelerate the construction of a world-class equipment company.

Topic 1

Serving National Strategy and Writing A New Chapter of Common Development

Staying true to our original aspiration, Shanghai Electric organically aligns the national strategy with the high-quality development. Focusing on three primary segments, namely energy equipment, industrial equipment and integration services, Shanghai Electric accelerates the construction of the modern energy system and reinforce technological innovation to grasp unlimited development opportunities. Based in Shanghai, the Group aims to establish a global presence.

Modern Energy System

Shanghai Electric has been closely following national policies such as the 14th Five-Year Plans on Renewable Energy Development and the 14th Five-Year Plans on Modern Energy System to comprehensively explore new business fields, promote the upgrading of the new-type electric power equipment industry, actively facilitate the optimized combination of traditional energy and new energy, through which we fully support the construction of a safe, clean, efficient and sustainable modern energy system.

Wind energy

In the field of wind power, Shanghai Electric continues maintaining our leadership in the offshore wind power, ranking first in the country in terms of newly installed capacity of oshore wind power for eight consecutive years. Shanghai Electric continues to promote the development strategy of "leading overall solutions under technology leadership", consolidating and improving the construction of two core competitiveness: "technology research and development" and "agile organization". It also vigorously promotes the deep integration of "digital design and intelligent manufacturing".

Solar energy

In the field of solar energy, Shanghai Electric actively follows the trend of "keeping pace with the development of centralized and distributed photovoltaic industry", closely focusing on the manufacturing core links of advanced photovoltaic cells and modules, and establishing open cooperation alliances with enterprises having industry chain advantages. Combining the Group's existing basic advantages in pan-semiconductor intelligent manufacturing and the comprehensive market advantages of "photovoltaic+" integrated solutions, with institutional and mechanism innovation as the guarantee, Shanghai Electric promotes the construction of the Group's core value in the photovoltaic equipment industry chain.

Energy storage

In the field of energy storage, Shanghai Electric further agglomerates and improves the development strength of the Group's energy storage industry, expands and enriches the segmented application scenarios of each energy storage technology, and cooperates to create more valuable energy storage system solutions for customers. In the fields of pumped storage, molten salt energy storage, compressed air energy storage, and flywheel energy storage, Shanghai Electric relies on the existing industrial foundation of nuclear power, boilers, steam turbines, and generators to expand its energy storage business, effectively integrating traditional manufacturing advantages with emerging energy storage businesses, and forming a benign development pattern of a huge market for "new energy storage".

Hydrogen energy

In the field of hydrogen energy, Shanghai Electric focuses on breakthroughs in key core equipment in the four major links of "production, storage, processing, and utilization", contributing to overcoming the bottleneck issue of large-scale and low-cost development of the hydrogen energy industry. Shanghai Electric works with industry partners to jointly create a public platform for industrial measurement and testing services across the entire industrial chain, lifecycle, and traceability chain of hydrogen storage equipment, focus on tackling the "bottleneck" core technology and equipment, fully exploits its integration advantages across the two major industries of electricity and chemical industry, promotes the large-scale development of renewable energy utilization and raw material energy utilization, and explores economically feasible implementation paths for achieving "deep carbon reduction" in the energy and industrial fields.

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Development Driven by Innovation

The year 2023 was the year of scientific and technological innovation at Shanghai Electric. In this year, we deeply implemented the national innovation-driven development strategy. Centering around the Group's strategic objectives during the 14th Five-Year Plan, Shanghai Electric adhered to the two-pronged approach of "independence & self-reliance" and "openness & innovation", aiming to build an open, collaborative and win-win technological innovation system, attract innovative resources and arouse the innovation vitality.

Wind energy

- Launched the 16+MW wind turbine, one of the new-generation Poseidon platform's whole ocean area high-capacity series products, which was the offshore wind turbine that had won the bidding with the largest unit capacity and the largest rotor diameter in the world;
- Vigorously developed the offshore wind power, and introduced Asia's first two offshore wind SOV mother ships;
- Equipped with Shanghai Electric's equipment, the world's first deep-sea floating wind energy project integrated with marine ranching was completed.

Solar energy

- Unveiled the 20GW heterojunction PV module solution, and strived to master the core technology of the N-type new-generation PV to forge ahead into the "nanocrystalline silicon" era;
- The high-efficiency N-type photovoltaic component for the Hengxi PV Phase I project was put into operation, marking that Shanghai Electric has the fully independently developed PV product.

Energy storage

- In the field of energy storage technology, Shanghai Electric released 500kW/3,000kWh redox flow energy storage system, which fully demonstrates our technological precipitation in the field of all-vanadium redox low energy storage by virtue of the effect of "superposition" of form, function and efficiency.
- In the field of solar thermal molten salt energy storage, we undertook the world's largest 950MW photovoltaic power generation complex project. This project can provide unique value for the market-oriented and large-scale development of China's wind and solar power bases;
- In the emerging fields of compressed air and flywheel energy storage, we were able to develop and manufacture a series of products, winning bids for projects in Dingxi, Jiuquan, Taian and Mexico, among others.

Hydrogen energy

- Focused on the core equipment for "production, storage, refueling and use" of hydrogen energy, and completed the construction of the first "Green Hydrogen Production-Storage-Use" integration demonstration project;
- In the field of hydrogen energy technology, we launched the 2,000Nm^3/h alkaline electrolyzer product, which was the water electrolysis hydrogen production product with the largest single unit hydrogen production capacity in China at then;
- In the field of hydrogen energy storage, the establishment of the Shanghai Hydrogen Storage Equipment Industry Metrology Testing Center laid a solid foundation for high-quality development of the hydrogen energy industry;
- In the field of hydrogen energy refueling, we focused on overcoming the bottleneck technologies for the core diaphragm compressors, providing customers with integrated solution of "'production, storage and refueling" for renewable energy;
- In the field of hydrogen energy utilization, we prioritized hydrogen-blended gas turbines and integrated "power-to-hydrogen" applications. In conjunction with the Group's implementation of the largest domestic 160,000 tons/year carbon capture and synthetic methanol demonstration project, we drove the scale development of renewable energy integration and green raw materials.

Upgrade to Digital and Intelligent Manufacturing

The Development Plan for Intelligent Manufacturing during 14th Five-Year Plan guides the transformation and upgrading of China's manufacturing industry. Shanghai Electric fully understands that intelligent development is a key driver for promoting high-quality development in manufacturing and building a modern industrial system. By engaging in multi-level, multi-scenario intelligent manufacturing practices, Shanghai Electric is deepening the integration of new-generation information technologies such as artificial intelligence, 5G, and industrial Internet with the manufacturing industry. This includes constructing smart factories to facilitate the upgrade to intelligent manufacturing and enhance digital manufacturing capabilities.

In 2023, Shanghai Electric included the new three-year intelligent manufacturing action plan in the Party Committee's top priority task. The Group's digitalization and informatization department led the formation of the "Three-year Intelligent Manufacturing Action Plan" task force, conducting comprehensive research, analysis, and exploration of typical enterprise scenarios and demonstration benchmarks. This resulted in the creation of documents such as "Summary of Shanghai Electric's Previous Round of Intelligent Manufacturing", "Shanghai Electric 2023-2025 Three-Year Intelligent Manufacturing Action Plan", and "Situation of Shanghai Electric's Previous Round of Intelligent Manufacturing Demonstration and Excellent Cases", guiding and driving the Group's overall intelligent manufacturing development.

At the same time, the Group accelerates the improvement of "digital intelligence" capabilities. The following plants were successfully included into the list of "Shanghai Top 100 Smart Plants": Shanghai Electric Turbine Plant's smart plant for core equipment of turbines, Shanghai Generator Plant's smart plant for large steam turbines, Shanghai Mitsubishi Elevator's smart elevator plant and SEC-KSB Nuclear Pumps&Valves Co., Ltd.'s smart plant for nuclear pumps and valves, among others.

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Development in Regions Along the BRI

With the proposal of the "Belt and Road" and "Interconnection" initiatives, Shanghai Electric has taken the lead in promoting Chinese technology and standards globally, achieving new successes in international business development. This effort has not only enhanced infrastructure in Belt and Road countries but also promoted local employment and boosted regional economic vitality. Importantly, it provided significant opportunities for Shanghai Electric's transformation and development.

The Dubai project is one of the representative projects promoted by Shanghai Electric in the Belt and Road Initiative countries. Once fully operational, it will provide clean electricity to over 300,000 households in the local area, reducing carbon emissions by over 1.6 million tons annually. This project holds significant importance for implementing a clean energy strategy in the region. During the COP28 conference in December 2023, the Dubai 950MW concentrated solar power and photovoltaic hybrid power generation project achieved grid connection and held a grand completion ceremony for the one-tower-three-trough units. This milestone signifies a significant breakthrough for China's complete sets of electromechanical equipment in the high-end market in the Middle East. By successfully relying on 100% renewable energy for continuous stable power generation 24 hours a day, this project serves as a world-class example of the value of scale energy storage demonstrated by a market-based electricity pricing mechanism. It holds epoch-making significance for global energy transformation.

The Thar project is an exemplary project in the energy sector cooperation between China and Pakistan under the Belt and Road Initiative. It serves as an energy engine driving economic and social development in Pakistan and sets a new green benchmark for Shanghai Electric's high-standard power plant construction overseas. Once operational, the project will annually provide approximately 9 billion kWh of clean electricity to the local grid, meeting the electricity needs of nearly 4 million households. This not only effectively alleviates local power shortages but also contributes significantly to lowering energy prices, improving energy structure, alleviating energy import crises, and enhancing energy security in Pakistan. In 2023, the Thar Block 1 Coal Power Plant Limited saw two 660MW high-parameter ultra-supercritical units successfully complete a 168-hour full-load reliability test and officially enter the commercial operation phase, marking substantial progress in the construction of the integrated coal and power project in Thar Block 1.

Integrated Development in Yangtze River Delta Region

Guided by the national strategies such as the Yangtze River Economic Belt and the Integration Plan of Yangtze River Delta Region, Shanghai Electric, based in Shanghai, leverages its comprehensive strength to enhance the urban energy level and core competitiveness of cities in the Yangtze River Delta Region.

In recent years, Shanghai Electric has made investments and established a presence in various industries in the Yangtze River Delta region, with projects located in Jiangsu, Anhui, and other areas. Our investments primarily focus on industries such as wind power, photovoltaics, energy storage, lithium battery equipment, with a total project investment of approximately RMB20 billion.

In the realm of government-enterprise cooperation, we have signed strategic cooperation agreements with cities in the Yangtze River Delta region such as Suzhou, Yancheng, Taizhou, as well as district governments in Shanghai such as Yangpu, Putuo, Fengxian, Lingang. These collaborations aim to establish a layout of high-end equipment industries in the Yangtze River Delta region, and set up a new model of collaborative cooperation in such fields as green low-carbon energy and high-end intelligent manufacturing.

In the field of green and low-carbon industries, our offshore wind farms in Lingang, Zhoushan, Dongtai, Jiaxing, and other coastal areas continuously provide green electricity to the local communities. In cities such as Nantong and Wuhu, our energy storage batteries, solar photovoltaics, and new energy vehicle components have already taken root and begun to flourish.

In the field of infrastructure, the waste incineration cogeneration project we invested in Jiangsu can not only process 650,000 tons of domestic garbage annually, but also realize a clean heating capacity of 1 million tons; the thermal desalination project we constructed in Zhejiang provides water security for the green petrochemical base on Yushandao Island; and the independent energy storage demonstration project we participated in constructing in Jinzhai, Anhui has been successfully commissioned, which will play an active role in solving the problem of new energy consumption and strengthening the peak shaving capacity of the power grid in the local area.

In the field of public services, we have participated in the construction of many urban rail lines in Hangzhou, Hefei, Wuxi, Jiaxing and other places, providing travel convenience for tens of millions of citizens; from the Hongqiao International Open Hub and Oriental Hub to the renovation of old houses, our tens of thousands of elevators provide a comfortable experience for the public 24 hours a day, benefiting more people's well-being.

Shanghai Electric ranked 42nd in the list of "2023 Top 100 Yangtze River Delta Enterprises" released in 2023, and 26th in the sub-list of "2023 Top 100 Manufacturing Enterprises in Yangtze River Delta Region".

Topic 2

Making Joint Efforts for Promising Zero-carbon Future

Climate change is a common challenge facing by the whole world, which is related to the future of mankind and the sustainable development of the Chinese nation. Shanghai Electric actively supports the national "dual-carbon" goals and the transformation into a "low-carbon" society, and has set the goal of "carbon peaking by 2030, carbon neutrality in operation by 2035, and carbon neutrality across entire value chain by 2055", unswervingly promoting the high-quality, green and low-carbon development.

Energy and industry are the "main battlegrounds" to achieve the "dual carbon" goals. Building upon our own "dual carbon" goals, Shanghai Electric, with diverse business forms and innovative technologies, provides green solutions for more energy and industrial enterprises, supporting them in transitioning to green and low-carbon development and contributing to the construction of a beautiful China.

Governance and Strategy

Shanghai Electric has established a climate change management mechanism that considers climate change-related issues in our strategic assessments and reviews. The top decision-making body for climate change matters at Shanghai Electric is the Board of Directors, and the management body for climate change matters is the ESG Management Committee. Each year, members of the ESG Management Committee report directly to the Board of Directors on the implementation results of climate change work.

Based on the investigation and research results of significant issues, the Group has convened interviews with all responsible departments related to climate to identify, determine, and evaluate significant risks and opportunities. The discussion results are confirmed by the ESG Management Committee. The Group develops goals and countermeasures based on the assessment of climate change risks and opportunities, and conducts education and training. At the same time, the Group monitors, evaluates, and reviews the progress of policies, management, performance, and related goals related to climate change issues.

Risks and Opportunities

To comprehensively enhance our resilience to climate-related risks, the Group has identified and assessed key climate risks and opportunities, and has developed targeted climate risk response plans. In 2023, the Group focused on risks and opportunities in various areas such as strategy, market, finance, operation and legal affairs. The identification results are as follows:

Risks

Category		Description	Countermeasures
Transformation risk	Policies and laws	After China proposed the "dual carbon" goals, the report of the 20th National Congress of the Communist Party of China pointed out that it is necessary to accelerate the green transformation of development mode, continuously optimize the industrial spatial layout, improve the regulation and control of total energy consumption and intensity, and accelerate the R&D, promotion and application of advanced technologies for energy conservation and carbon reduction. Without taking effective measures to prevent and mitigate climate changes, the Group will be at a disadvantage in the face of more stringent policies and assessment mechanisms.	Embrace a "zero carbon" future and establish a special ESG Management Committee to manage matters related to climate changes; Develop and execute strategies, goals and action plans for climate changes; Stay abreast of policy developments from industry regulatory authorities and local provincial and municipal governments, and incorporate policy risks that may affect the Group's operations into risk management.
	Technology	To achieve the "dual carbon" goals, the estimated total installed capacity of wind and solar power in China is expected to exceed 1.2 billion kilowatts by 2030. Large-scale access of the renewable energy resources exposes the system to the challenges of intermittency, volatility, and instability.	Leverage technological innovation for efficient energy utilization, and develop solutions for more scenarios to promote the application of renewable energy.
	Market	The market may be affected by climate change, including direct or indirect impacts on macroeconomic conditions, adjustments in national policies, investment scale in infrastructure construction, urbanization processes, cyclical fluctuations in industry development, and the supply-demand relationships of products and services.	Actively participate in the national energy transformation strategy of "building new power system with new energy as the main body" to achieve the transformation and upgrading of the manufacturing industry and improve the modernization level of the energy industry. Continue to pay attention to and regularly analyze the possible impact of global and domestic macroeconomic trends on the Company so as to develop responsive measures in a timely manner. Timely adjust management measures to raise its management efficiency, continuously improve core competitiveness and actively develop its business model in an innovative manner to address all challenges from changes in the markets. Strengthen the monitoring and management of the quality of economic operation, pay close attention to changes in the operation quality, business structure and profitability of each business segment of the Group, continue to optimize the supply chain management system, further improve our cost control and pricing capabilities of purchase to actively control the risks on the Company from the fluctuations of raw material prices.
	Reputation	Climate change affect the opinions of customers or the society on the low-carbon transition of an enterprise. Failure to effectively deploy industry and energy structure optimization and upgrades may affect the ability to address long-term risks and lead to a series of reputational and commercial impacts.	The Board of Directors, the ESG Management Committee and the ESG Work Group continue supervise and guide the strategy and its execution.
Physical risks	Acute and chronic risks	Extreme weather (such as floods, thunderstorms, tornadoes, hail, frost, etc.) and climate change (e.g., global warming and sea level rise) have certain effects on project site selection and construction and the safe operation of electrical facilities. For example, extreme heat could cause wind turbine equipment to overheat and shut down; extreme cold could cause PV stations to have no solar radiation energy available for conversion; heavy wind and storm could endanger wind power equipment such as falling.	Focus on product design and process improvement, implement strict whole-process quality management, improve product quality and adaptability, and reduce the incidence of failures; Continuously build up digitalization capability, provide intelligent operation and maintenance services such as remote monitoring, remote diagnosis, fault alarm and predictive maintenance to ensure stable equipment operation; Always pay attention to the early warning information issued by meteorological department, and managing risk prevention and control and response under extreme weather.

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Energy and industry are the "main battlegrounds" to achieve the "dual carbon" goals. Building upon our own "dual carbon" goals, Shanghai Electric, with diverse business forms and innovative technologies, provides green solutions for more energy and industrial enterprises, supporting them in transitioning to green and low-carbon development and contributing to the construction of a beautiful China.

Opportunities

Category	Description	Countermeasures
Benefits from resource allocation	Against the backdrop of extensive active response to climate change across the society, urban and rural infrastructure construction will fully consider the impact of climate change and design the response capability in the construction of various urban lifeline systems such as electricity supply and transportation. If we can seize the opportunities in infrastructure construction, focus on energy efficiency improvement, and contribute to intelligent infrastructure development, we will be able to achieve more remarkable results.	Give full play to the advantages of Shanghai Electric in the fields of power generation, transmission and distribution to accelerate the research and development and application of technologies and products and improve energy efficiency; Enhance external cooperation and integrating our own advanced experience and technologies to increase the efficiency in utilization of rail transit; Assist affiliates improve their technology and innovation, and leading them to follow the path of high-quality development and make continuous progress in smart buildings.
Energy sources	With the influences of factors such as the "dual carbon" goals, modern energy systems, and reforms on the consumption side, both energy consumption and energy production sides require green transformation. If the Group can timely seize the tremendous development opportunities brought about by green transformation and embark on the path of high-quality development, there is much potential for significant progress.	Roll out the layout of emerging energy focusing on "wind, solar, storage, and hydrogen" and so on. The Group is responsible for coordinating the new energy strategic deployment, including special planning, investment management, and industrial coordinated development of new energy; Accelerate the R&D and application of low-carbon technologies such as hydrogen energy, energy storage and carbon capture; Advance the development and construction of new energy projects by leveraging Shanghai Electric's advantages in developing, constructing and operating new energy projects as well as the supply of high-quality equipment; Improve the layout for comprehensive energy services and enhance the capability to digestion of renewable energy.
Market	Achieving the "dual carbon" goals requires the large-scale application of renewable energy, with key infrastructure being indispensable. If the Group can seize the opportunities presented by the new power system and focus on high energy efficiency, multi-scenario, and strong adaptability characteristics, it will gain a broader range of market opportunities.	Actively develop new energy technologies to empower the zero-carbon economy and the new power system.

Category	Description	Countermeasures
Products and services	The industrial trend towards digitalization and intelligence is continuously permeating and integrating into the field of high-end equipment manufacturing, promoting the digital transformation of the manufacturing industry and thereby driving the realization of intelligent manufacturing. The green development trend requires the industrial sector to accelerate the realization of green and low-carbon transformation, strive to take the lead in achieving carbon peaking, accelerate the implementation of green manufacturing projects, strengthen the green transformation of key industries, increase the supply of green technology and equipment products, actively promote the recycling of industrial resources, and advance the integration of digital, intelligent and green development in the industrial sector. The service-based development trend is driving the shift from production-based manufacturing to service-based manufacturing. The Group will enhance its comprehensive competitiveness if it promotes the integration of digital, intelligent and green development in the industrial sector.	Take scientific and technological innovation as the primary driving force to provide the industry with highly competitive safe, green and low-carbon energy equipment and solutions and consolidate the advantages in industry clusters for the core energy equipment; grasp the opportunities presented by digital, green and service-based development trends, put emphasis on the dual drive from industry intelligentization and service industrialization, and provide industrial-grade green intelligent equipment and system solutions for industries such as automotive, marine, rail transportation, aviation, buildings, power, and petrochemicals.

Risk Management

Climate-related risks may potentially impact the strategies, assets, operations, supply chain, and brand value of Shanghai Electric. We have included certain climate-related risks in our risk management scope and regularly conduct risk identification and assessment to develop measures for effectively addressing these climate-related risks.

Goals and Actions

Today, extreme weather events are occurring more frequently around the world, and the window for global emissions reductions is rapidly closing. As a result, countries are joining hands to address the serious situation of climate change. Shanghai Electric is accelerating the transformation from "energy expert" to "carbon steward", comprehensively charting the new course, further strengthening the exploration of the zero-carbon economic development model, and contributing to building a zero-carbon society together.

Case **Shanghai Electric delivered speech at COP28**

The 28th Conference of the Parties to the UN Framework Convention on Climate Change was held in Dubai, United Arab Emirates, from November 30 to December 12, 2023. At the opening ceremony of the China Corner and the Ecological Civilization and Beautiful China Practice side event, Shanghai Electric said: "With diversified business formats and innovative technologies, Shanghai Electric is providing green solutions for more energy companies and industrial enterprises. We will continue to push hard to achieve mutually beneficial cooperation with partners so we can all share a new green future and contribute to the construction of the beautiful China."

Shanghai Electric delivered speech at COP28

Topic 2

Making Joint Efforts for Promising Zero-carbon Future

Climate change is a common challenge facing by the whole world, which is related to the future of mankind and the sustainable development of the Chinese nation. Shanghai Electric actively supports the national "dual-carbon" goals and the transformation into a "low-carbon" society, and has set the goal of "carbon peaking by 2030, carbon neutrality in operation by 2035, and carbon neutrality across entire value chain by 2055", unswervingly promoting the high-quality, green and low-carbon development.

Energy and industry are the "main battlegrounds" to achieve the "dual carbon" goals. Building upon our own "dual carbon" goals, Shanghai Electric, with diverse business forms and innovative technologies, provides green solutions for more energy and industrial enterprises, supporting them in transitioning to green and low-carbon development and contributing to the construction of a beautiful China.

In 2023, we officially released Shanghai Electric Group's "Carbon Peaking and Carbon Neutrality" Action Plan, which puts forward the development goal of "ensuring peak carbon dioxide emissions by 2030, pursuing carbon neutrality in operations by 2035, and achieving carbon neutrality in the entire value chain by 2055". Meanwhile, Shanghai Electric will, aiming to achieve a carbon emission peak by 2030, face two scenario solutions, and build four platforms along three paths.

Ensuring that the Carbon Peaking Goal Will Be Realized by 2030

"Two Major Application Scenarios"

New Power System

To help build a new power system, Shanghai Electric has been focusing on developing new energy industries such as "wind, solar, storage and hydrogen" in recent years, deploying solutions across different fields, and independently developing various types of products.

Zero Carbon Industrial Park

Under the goal of "double carbon", the low-carbon transformation of industrial parks is imminent. In 2023, Shanghai Electric and more than ten eco-partners joined hands and announced on the site of the first Carbon Expo that they will work together to formulate the "Planning and Evaluation for Implementation Paths of Zero-Carbon Industrial Parks", which will help industrial parks in the low-carbon transformation.

"Three Paths"

Energy Alternative

Shanghai Electric adheres to the combination of "safe carbon reduction" and "deep decarburization", vigorously carries out the multi-point layout of "wind-solar-storage-thermal-hydrogen" multi-energy complementation and "generation-grid-load-storage" integration business, increases the capacity of new energy consumption, and promotes the transformation of using new energy alternative fossil fuels to build a new power system with new energy as the main body. In the field of traditional thermal power, the main equipment systems provided by Shanghai Electric continuously refresh the world's lowest coal consumption indicators.

Energy Efficiency Increase

In the field of driving business, we rely on our core equipment advantages to provide systematic energy efficiency increase transformation services for industries such as electric power, metallurgy, petrochemical, and building materials; In the field of rail transit, we have greatly improved the efficiency of rail transit use; In the field of smart buildings, Shanghai Mitsubishi Elevator has developed a smart elevator energy feedback device, which will reduce the "carbon footprint" during each lifting process; In the field of new energy vehicles, we provide whole industry chain services, including low-carbon industrial plant design, lithium battery and vehicle assembly intelligent production lines, and new energy vehicle thermal management systems, to assist in the process of "low-carbon transportation".

Resource Circulation

Shanghai Electric has the core process design and system equipment capabilities for flue gas treatment, water treatment, and solid waste treatment, providing systematic solutions for the recycling development of industrial parks. In addition, Shanghai Electric has effectively combined carbon dioxide capture technology with green hydrogen energy, actively promoting the implementation of demonstration projects such as carbon dioxide hydrogenation to methanol, providing a feasible implementation path for achieving the green utilization of raw material and the "deep carbon reduction" process.

"Four Platforms"

Dual Carbon Strategy Platform

Establishing a "dual carbon" strategic center at the group level, with top-level planning and design of the Group's "dual carbon" strategy and path for the next 5-10 years, providing support for group decision-making.

Carbon Technology Platform

Based on the capabilities of two major system solutions, Shanghai Electric provides customers with carbon consulting, carbon accounting, carbon trading, carbon certification, and carbon asset management services, empowering industry customers.

Industrial Innovation Platform

Industrial Driven Industrial Innovation Center, "Wind-Solar-Optimal-Storage" Industrial Innovation Center, "Wind and Solar Greening" Industrial Innovation Center, etc.

Industrial Capital Platform

Activating the "industry, academia, research, investment, and incubation" innovation ecological chain with the "industrial capital" platform, effectively utilizing external innovation and entrepreneurship resources, and forming an internal and external collaborative linkage mechanism.

Shanghai Electric actively implements the "dual carbon" goal and mission and takes the ESG elements into the consideration. In the new situation of zero carbon technology integration and innovation, Shanghai Electric continues to explore and has made many phased achievements.

2023 Highlights

Environmental Performance Indicators

Environmental Performance Indicators	2021	2022	2023
Total investment in environmental protection (RMB'0000)	12,162.85	10,786.04	7,002.41
Greenhouse gas emission density (tons of CO2 equivalent /RMB'00000000 operating revenue)	221.96	195.04	287.53
Hazardous waste (tons/ RMB'00000000 operating revenue)	2.5	2.5	2.9
Water consumption density (tons/ RMB'0000 operating revenue)	0.5401	0.5196	0.3224

Social Performance Indicators

SOCIAL PERFORMANCE INDICATORS	2021	2022	2023
Total number of employees	39,015	41,739	42,190
Employment contract execution rate	100%	100%	100%
Social insurance coverage rate	100%	100%	100%
The trade union membership rate	100%	100%	100%
Proportion of female management personnel	34.55%	42.0%	42.1%
Employees' medical examination coverage rate	100%	100%	100%
Total investment in employee training (RMB '0000)	10,150	10,455	10,600
Employee training coverage rate	98.1%	98.56%	98.66%
Training time per capita (days)	3.2	3.0	3.4
Employee turnover rate	3.9%	3.5%	3.4%
The number of working days lost due to work-related injuries (days)	6,265	4,305	7,850
New cases of occupational disease	0	0	0
Charitable donations (RMB'0000)	1,279	138.7	508.8
Tax contribution (RMB100 millions)	50	43	48

About Shanghai Electric

Shanghai Electric creates a bright future with creators

Mission, Vision and Core Values

Mission

Empower global industry, make life smarter

Based on high-end equipment industry, we focus on smart energy, intelligent manufacturing and smart infrastructure to promote the high-quality development of Chinese and global industries with technological empowerment.

We provide not only leading high-end equipment, technologies and services, but also green, low-carbon and smart solutions that meet diverse needs, in order to make life smarter.

Vision

To become a world-class equipment group leading the industrial development

To be a maker of important instruments of the state: We focus on high-end equipment as our main responsibilities and main business, undertake the important task of national industry development and concentrate efforts on high-quality development.

To be a leader of technological innovation: We lead the trend of industrial innovation with science and technology to achieve industrial intelligence and service industrialization.

To be a practitioner of green and low-carbon development: We firmly implement the dual-carbon goals and promote green and low-carbon development across the industry

To be a creator of smarter life: We create green and sustainable value for a better life of humankind with smart solutions.

Core Values

Strive for excellence, seek value innovation, pursue win-win cooperation and put customer success first

Strive for excellence: We promote engineering culture and craftsmen's spirit, and advocate dedication, down-to-earth attitude, rigorousness and constant improvement.

Seek value innovation: We encourage valuable innovation and advocate the use of technology and innovation to empower high-quality, green and sustainable development.

Pursue win-win cooperation: We maintain an open mind, advocate collaborative development and win-win cooperation with all stakeholders, and attach great importance to the continuous improvement of employees' happiness.

Put customer success first: We keep customer-oriented, and encourage to gain insight into customer needs, solve customer problems, and achieve customer value.

About us

Historical development

The history of Shanghai Electric can be traced back to at least 1902. In March 2004, Shanghai Electric Holding Group Co., Ltd. (former name: Shanghai Electric (Group) Corporation) implemented the shareholding reform through introduction of diversified investors and thus Shanghai Electric was incorporated. After that, we first listed H shares in Hong Kong in April 2005 and renamed as Shanghai Electric Group Company Limited; then in December 2008, we successfully entered the A share market and became an A+H listed company. As the cradle of China's power industry, we have created many Chinese and world firsts in this century-long history, and we promote the high-quality development of Chinese and global industries with technological empowerment to create green and sustainable values for the better life of human beings.

Spiritual Spectrum and Organizational Structure

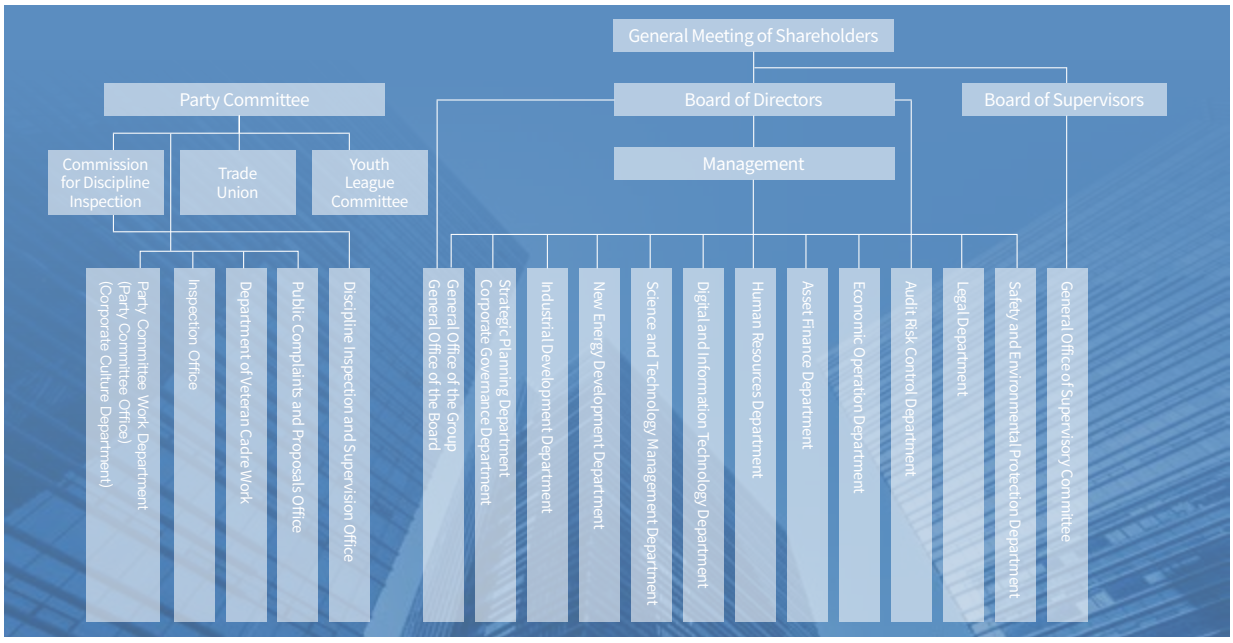
Spiritual Spectrum

We have given play to the spirit of innovation, spirit of perfection, spirit of shouldering, spirit of undertaking, spirit of ant and spirit of Li Bin. Generation after generation, the spirits of Shanghai Electric have been passed down, leading the people of Shanghai Electric to write glorious chapters and open up new dimension.

Organizational Structure

Shanghai Electric has established a governance structure meeting the governance requirements for listed companies in both the Mainland and Hong Kong as well as the regulatory requirements for state-owned enterprises. We practiced our responsibility as a state-owned enterprise from the aspects of operation compliance, transparency and guidance. On the basis of maintaining stability, our functional framework has been steadily optimized with the needs of industrial transformation and intelligent development of the Group.

Structure of Shanghai Electric's Functional Departments



2023 Top 10 News

01

Shanghai Electric contributed to construction of Hualong One projects

02

Thar Energy Project reaches milestone

03

Shanghai Electric selected as a Demonstration Enterprise in World-Class Specialized and Sophisticated Enterprise Cultivation Program

04

Thematic education at Shanghai Electric goes deeper

05

Shanghai Electric included into Forbes list

2023 Top 10 News

06

Shanghai Electric recorded brand value of over RMB172.5 billion

07

Shanghai Electric helped China's 4th-generation nuclear power station lead the world

08

Asia's first SOV for offshore wind power launched

09

Four innovative products made debut at 1st Carbon Expo

10

Shanghai Electric reached a new level with stable economic operation

Honors and Awards

Science and Technology Awards

No.	Name of Awarded Project	Name of Entity Awarded	Award Name
1	Key Technologies and Applications for Operational Optimization of Typical Process Industry	Shanghai Electric Power Generation Environment Protection Engineering Co., Ltd	1st Prize for Shanghai Science and Technology Progress
2	Processing Technology and Equipment for the Shape-Performance Collaborative Control of High-Performance Key Parts in Aerospace	Shanghai Machine Tool Works Ltd.	1st Prize for Shanghai Science and Technology Progress
3	Industrialization of Key Technologies and Equipment for Interconnection of Automatic Train Control Systems in Rail Transit	Shanghai Electric Thales	2nd Prize for Shanghai Science and Technology Progress
4	Key Technologies and Applications of Intelligent Perception Milling Robots for Complex Functional Curved Surfaces	Shanghai Electric Power Equipment Co., Ltd.	2nd Prize for Shanghai Science and Technology Progress
5	Key Technologies and Applications of Intelligent Power Quality Management Devices and Flexible Grid Connection Control	Shanghai Electric Power Transmission & Distribution Group, Shanghai Electric Power-Electronics Co., Ltd.	2nd Prize for Shanghai Science and Technology Progress
6	Tower-Type Boiler with Primary Reheater and Secondary Reheater	Shanghai Boiler Works	1st Prize of 2022 China Patent Award
7	Safety Inspection Device for Passenger Conveyance Equipment and Its Implementation Method	Shanghai Mitsubishi Elevator	2nd Prize of 2022 China Patent Award
8	A throat opening structure and a biomass gasifier containing said throat opening structure	Central Academe	3rd Prize of 2022 China Patent Award
9	Robotic spine surgery system	Central Academe	IDEA Industrial Design Award
10	Poseidon platform's 16+MW whole-ocean-area generation unit	Electric Wind Power Group	2023 Shanghai Top 10 Green and Low-carbon Innovative Technology Products

Quality Awards

No.	Name of Awarded Project	Name of Entity Awarded	Award Name
1	Quality Improvement of Main Equipment's Internal Components and Control Rod Drive Mechanism for the Hualong One Nuclear Reactor	Shanghai No.1 Machine Tool Works Co., Ltd	1st prize of Shanghai Key Product Awards for Breakthroughs in Quality
3	660MW Dual Water Internal Cooling Generator	Shanghai Generator Plant	2nd prize of Shanghai Key Product Awards for Breakthroughs in Quality
4	Quality and Performance Improvement of Onshore Intelligent Wind Turbine Platform	Electric Wind Power Group	2nd prize of Shanghai Key Product Awards for Breakthroughs in Quality
5	Quality Improvement of Integrated Assembly Steel Structure with Added Elevator Product	Shanghai Mitsubishi Elevator	3rd prize of Shanghai Key Product Awards for Breakthroughs in Quality
6	Reliability Improvement of RMW3 Series Intelligent Universal Circuit Breaker Products	Renmin Electrical Apparatus Works	3rd prize of Shanghai Key Product Awards for Breakthroughs in Quality

Intelligent Manufacturing Awards

No.	Name of Awarded Project	Name of Entity Awarded	Award Name
1	Intelligent Manufacturing Demonstration Factory of Shanghai Electric Power Equipment Co., Ltd.	Shanghai Electric Power Equipment Co., Ltd.	Winner of 2023 MIIT National Intelligent Manufacturing Demonstration Factories
2	Intelligent Manufacturing Demonstration Factory of Shanghai Mitsubishi Elevator	Shanghai Mitsubishi Elevator	Winner of 2023 MIIT National Intelligent Manufacturing Demonstration Factories
3	Intelligent online test	SEC-KSB Nuclear Pumps&Valves Co., Ltd.	2023 MIIT National Intelligent Manufacturing Excellent Scenes Designated by

Shanghai Youth Organization Awards

No.	Winner/Awarded Project	Name of Entity Awarded	Award Name
1	Structure Design Studio of Design Division at Technology Center	Shanghai Generator Plant	2023 21st Youth Civilization Unit
2	Zero-Carbon Wisdom Commando	Shanghai Electric Power Transmission & Distribution Group	2023 Youth Commando of Shanghai
3	Youth Commando for the Development of China's first 50 megawatt-class air-cooled regulator	Shanghai Generator Plant	2023 Youth Commando of Shanghai
4	Assembly Team of Gas Turbine Workshop	Shanghai Electric Turbine Plant	2023 Youth Safe Production Post of Shanghai
5	Youth Commando Team for the Electric Motor Project Supporting the Air Storage Compressor in Yingcheng, Hubei Province	Shanghai Electric Machinery	2023 Youth Commando of Shanghai Municipal State-owned Assets Supervision and Administration Commission
6	Youth Commando for Digital Demonstration Workshop of "Connected Turbines"	Shanghai Electric Turbine Plant	2023 Youth Commando of Shanghai Municipal State-owned Assets Supervision and Administration Commission
7	Youth Commando for Development of Main Equipment for 4th-Generation Lead-Bismuth Fast Reactor	Shanghai No.1 Machine Tool Works Co., Ltd	2023 Youth Commando of Shanghai Municipal State-owned Assets Supervision and Administration Commission
8	Youth Commando for Grinder Software Design	Shanghai Electric Automation Group Shanghai Machine Tool Factory	2023 Youth Commando of Shanghai Municipal State-owned Assets Supervision and Administration Commission
9	Digitalization Department of Engineering and Technology Research Institute	Electric Wind Power Group	2023 Youth Civilization Unit of Shanghai Municipal State-owned Assets Supervision and Administration Commission
10	Product Design Studio of Design Division of Technology Division	Shanghai Electric Power Generation Equipment Co., Ltd. Shanghai Power Station Auxiliary Equipment Plant	2023 Youth Civilization Unit of Shanghai Municipal State-owned Assets Supervision and Administration Commission
11	Technology Department of Solid Waste Business Unit	Shanghai Electric Environmental Protection Group	2023 Youth Civilization Unit of Shanghai Municipal State-owned Assets Supervision and Administration Commission
12	Technology Department	Hydrogen Age	2023 Youth Civilization Unit of Shanghai Municipal State-owned Assets Supervision and Administration Commission

Publicity Awards

No.	Awarded Project/Awarded Entity	Award Name
1	Shanghai Electric	Top 500 Asian Brands 2023
2	Rigorousness & Excellence, a microfilm shot by Shanghai Electric Power Generation	Outstanding Work Award of the Publicity Campaign Themed "Insights into New State-owned Enterprises - New Picture of a Strong Country"
3	"Shanghai Electric Joins Forces with Global Industrial Partners to Promote Strategic Layout of Multi-energy Coupling and Complementary Mode"	Excellence Award in the category of International Communication Works in the "2023 News of Shanghai State-owned Enterprises"
4	"Carbon in the Future: Crossing Mountains and Oceans, Encountering the Beauty of Biodiversity"	Excellence Award in the category of Media Convergence Works in the "2023 News of Shanghai State-owned Enterprises"
5	Shanghai Electric High-end Equipment Contributes to a Major Breakthrough in China's Underwater Archaeology	Excellence Award in the category of Written Works in the "2023 News of Shanghai State-owned Enterprises"
6	Microfilm Imperishable Flame of Spirit Makes Debut	Excellence Award in the category of Video & Audio Works in the "2023 News of Shanghai State-owned Enterprises"
7	Foreign Musician Visiting Shanghai Electric	Best Video Prize of the Shanghai Silver Dove Award

Shanghai Electric deeply understands that a sound governance structure, comprehensive risk management and open communication channels are at the core of building trust between the Group and its stakeholders, and are also important for sustaining high-quality development. The Group actively implements the leadership of the Party, adheres to institutional leadership, improves the governance system, strengthens risk management and compliance management, responds to the concerns and needs of stakeholders, and continuously improves our comprehensive competitiveness.

Laying Solid Foundation for Sustainable Development

01

- Striving to Build A Top-class Enterprise Under the Party Leadership
- Responsible Governance and Strict Self-discipline
- Fulfilling Responsibilities and Improving Communication
- Preventing Risks and Improving the System

Striving to Build A Top-class Enterprise Under the Party Leadership

Keeping in mind its original aspiration and mission, Shanghai Electric is firmly committed to its ideals and beliefs, integrating arty building into its governance work, promoting the integration and mutual reinforcement of Party building work and production and operation, and making greater contributions to the new journey of building a modernized socialist country in an all-round way.

Leadership by Party Building

The year 2023 marked the 102nd anniversary of the founding of CPC, the first year to comprehensively implement the spirit of the 20th National Congress of the Communist Party of China, and a crucial year to advance the strategy during the 14th Five-Year Plan period. Shanghai Electric comprehensively strengthened the leadership of the Party, deeply understood the general requirements of the Party building and the Party's organizational path in the new era, and adhered to the leadership of the Party building, enabling the high-quality party development through high-quality Party building.

Shanghai Electric issued certificates to grass-root Party committees with demonstration brands of Party building

The Group continues to strengthen its ability to integrate Party building into business governance by enhancing the corporate leadership system, improving the integrated governance system, implementing the Party committee's decision-making oversight procedures, and aligning strengthening the Party leadership with enhancing corporate governance. This ensures that the Party Committee can play its role in an organizational, institutional, and specific manners.

Strengthening the corporate leadership system and promoting the organizational role of party organizations

- Adhere to and improve the "two-way entry and cross- appointment" system for corproate leaders to address the relationship between the Party organizatons and the legal-person governance structure in terms of organizational structure. This sytem ensures the position of Party organizations in the legal-person governance structure from a leadership perspective.

Improving the sytem of integrating Party building into corporate governance, and advancing the role of the Party organizations from a systematic perspective

- Formulate a "1+4" system to promote the integration of Party leadership into corporate governance, including one "general operational opinion" - "Operational Opinions on Further Promoting the Integration of Party Leadership into Corporate Governance", which specifies the general requirements and work priorities; and four "supporting systems" setting out the specific operational methods.

Implementing the Party committee's decision-making oversight procedures to ensure the specific role of Party organizations

- Follow the principle of "the Party is in charge of cadres". The Party has clear leadership over cadre and personnel work and the management authority over key personnel.
- Strictly implement the "pre-approval process" requirements, establish a corporate governance mechanism where the Party committee, the board of directors, and the management roles are defined by law, coordinated, and effectively balanced. This mechanism ensures that the Party committee conducts a pre-approval review of significant operational and managerial matters, enabling the Party organizations to guide and oversee the overall situation, and ensure implementation effectively.

Shanghai Electric places institutional construction in a prominent position within the framework of the Party building, continuously refining its system and enhancing the level of institutionalization, standardization, and scientific method within the Party building. In 2023, the Group released the "Three-Year Action Plan for Shanghai Electric Group Party Committee's Leadership Efforts to Build a World-Class Equipment Enterprise" and "Implementation Measures for Strengthening Supervision over Top Leaders and Leadership Team by the Party Committee of Shanghai Electric Group". To enhance the quality of party building, it further revised the "Member Liaison System of Shanghai Electric Group's Leadership Team", " Rule of Procedures for the Party Committee of Shanghai Electric" and "Guiding Opinions on Strengthening the Construction of Grass-roots Party Branches by the Party Committee of Shanghai Electric ".

Shanghai Electric attaches great importance to the Party building research. In 2023, the Group deepened the construction of a specialized platform for Party building to promote the establishment of a three-tier platform ("1+2+1") for the Party Building Research Center, which includes research, exchange + consultation, and resources. In line with implementing the key tasks of the "88 Strategy", over 40 Party building topics were identified and initiated for research. To adapt to new situations and changes in grassroots Party building work, Shanghai Electric organized the Party building innovation seminar activities. Additionally, focusing on the development of characteristic Party courses tailored to the electrical industry, the Group systematically reviewed the red resources of the electrical industry and put forward an implementation plan for themed Party courses titled "New Concepts for Revitalizing Shanghai Electric".

Shanghai Electric makes great efforts to make Party organizations act more energetically. In 2023, the Group continued the Party building project of building dozens of Party building brands, 100-plus Party member commando teams and 1,000-plus Party member demonstration posts and engaging 10,000-plus Party members in commitment to their jobs, so as to advance the new round of strategy implementation. Shanghai Electric chose 80 Party Building Model Brands and Party Building Brands, established 184 Party member commando teams for new track programs, major projects and technological projects, created 152 Party members' responsibility zones and 2,143 demonstration posts for Party members. The Group organized 10,000+ Party members to make job commitments under the theme "Contributing to High-Quality Development". This initiative aimed to bring together grassroots Party organizations and Party members to tackle challenges collectively.

Case **Party building stimulates vitality, brand empowers development**

In order to implement the thematic activities of the Party Committee of the Shanghai Municipal State-owned Assets Supervision and Administration Commission and steadily advance the Shanghai Electric's Party Building "88 Strategy", the Group's Party Committee launched a new round of Party building branding activities in 2023. The aim is to further enhance the quality of Party building work of the Group's party organizations at all levels, giving their leading role into full play.

With the Party building brands as the basis, Shanghai Electric designed a "six-step" approach for creating Party building brands. The Group established the "12+80" Party building brand matrix, including 12 "Party building brands of Shanghai state-owned enterprises", 40 "Party building model brands" of Shanghai Electric, and 40 "Party building brands" of Shanghai Electric, effectively driving the synergies between Party building and business operation from leadership, service and integration dimensions so as to drive the Group's high-quality development.

Shanghai Electric's Paty Building Brand Review Meeting in 2023

Case Motivate commando teams to lead the efforts against challenges

Based on the Group's strategic objectives during the 14th Five-Year Plan period, Shanghai Electric focused on the research and development of key technologies and cultivating core competitiveness. To address scientific and technological innovation, major projects, the development in new tracks, urgent and dangerous tasks, the Group created and cultivated a number of innovative and aggressive Party members of the commando to demonstrate the model effect of the commando members.

Party Member Commando Team

The grassroots organizations are the Party's battlefields in the grassroots organizations of society, and the basis of all the Party's work and power. In 2023, more than ten Party organizations under the Party Committee of Shanghai Electric Group were named and commended by the Organization Department of Shanghai Municipal Party Committee and the Party Committee of Shanghai Municipal State-owned Assets Supervision and Administration Commission. They were rated as models with "outstanding political function", "strong and powerful team", "standardized basic work", "prominent pioneering role" and "strong public recognition".

Party Member Training

Shanghai Electric consistently focuses on Party member's quality development and ideological building. In 2023, the Group further strengthened the ideological and party education of leading cadres at all levels and party members at the grassroots level, deepened the understanding about the connotation of the learning, and expanded external exchanges to achieve true learning, true understanding, true faith, and true application, thereby building a solid the foundation of faith, spirit and ideology.

Case Training class for secretaries of Party committees

In June 2023, Shanghai Electric opened a special training class for Party secretaries on studying and implementing Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era at the Shanghai Electric Education Center Party School. This training program combined concentrated thematic courses and integrated learning approaches, focusing on four main themes including political literacy, state-owned enterprise party building, organizational development, and corporate governance. It was designed to further strengthen the capacity building of the Group's Party building team, enhance the understanding of Party secretaries, deputy secretaries, and heads of party-mass departments regarding the leadership role of Party committees in state-owned enterprises, and effectively elevate the level of Party building work within the Group.

Special training class for secretaries of Party committees

Case Thematic education activities

To deepen the study and implementation of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, the Shanghai Electric Party Committee has scientifically developed implementation plans for theoretical learning and book reading classes. Through activities such as group learning, concentrated sessions, and themed party courses, the Party Committee has made theoretical learning the main focus of the thematic education. Emphasizing reading original works, studying original texts, understanding principles, and integrating these with the actual work of the Group, the Party Committee further pushed the thematic education. Since the launch of the thematic education, the Party Committee has organized 15 sessions of book reading classes, totaling 7.5 days with 1,223 participants, as well as 18 sessions of group theoretical learning with 1,324 participants.

The Group's Party Committee has taken various measures to enhance the ideological and theoretical knowledge of its Party members as part of the theme education on studying and implementing Xi Jinping Thought. Initiatives such as launching online learning programs for all Party members, distributing designated study books from the Central Committee and Shanghai Municipal Party Committee, and compiling and distributing thematic educational materials have been implemented. Leveraging the online learning platform, these efforts assisted Party members in addressing their weaknesses and knowledge gaps, thereby enhancing their ideological and theoretical levels. During the theme education period, grassroots Party organizations conducted 2,057 special sessions, with a total of 10,920 party members participating and 115,700 hours of learning.

To effectively integrate theoretical learning with practical work, the Group's Party Committee developed learning and practical courses such as "Mobile Party Courses" and "Factory Party Courses". They also organized the production of microfilms such as "Rigorousness & Excellence", "Innovative Spirit", and " "Shoulder Pole Motor Spirit", providing Party members with an immersive learning experience.

Shanghai Electric's online Party course training

Shanghai Electric Finance Group's thematic book fair

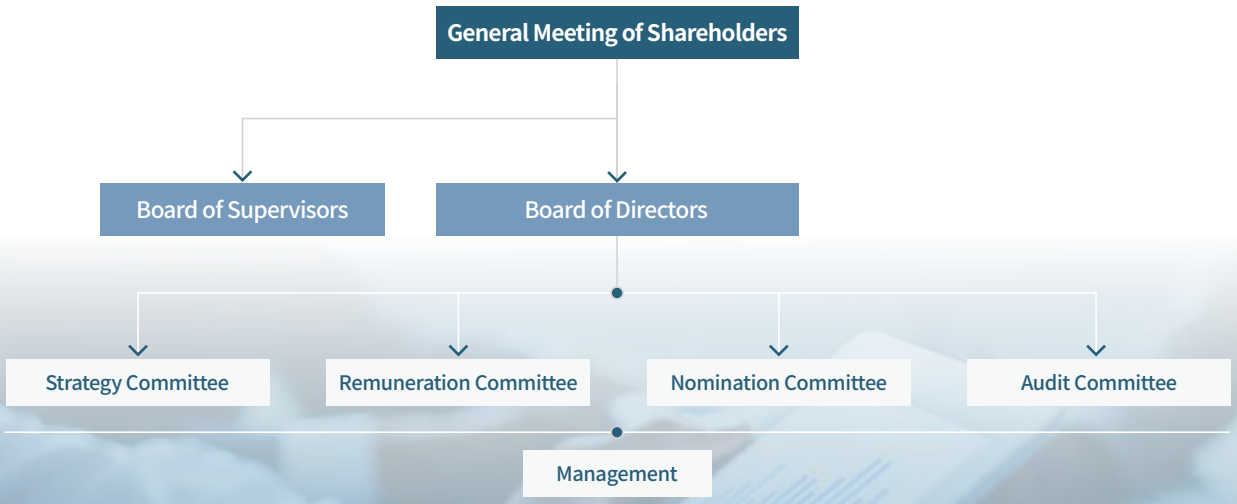
Responsible Governance and Strict Self-discipline

Strengthen the governance foundation, conduct compliant operations, and maintain high-standard governance.

Corporate Governance

Shanghai Electric strictly implemented the laws and regulations on corporate governance of listed companies, such as the Company Law of the People's Republic of China, Securities Law of the People's Republic of China, and Guidelines on Corporate Governance for Listed Companies, improved and built the corporate governance framework composed of the general meeting, the board of supervisors, the board of directors and the management, and set up the strategy committee, remuneration committee, nomination committee, audit committee and other governance bodies under the board of directors, so as to ensure the compliance and transparency of the Company's operation.

Shanghai Electric's Corporate Governance Framework



The Board of Directors is responsible for formulating the Group's overall development strategies, monitoring its financial performance, maintaining effective supervision over the management, safeguarding shareholders' long-term interests, and aligning the Group's business objectives and development direction with economic and market environments to achieve sustainable and high-quality development. Currently, Shanghai Electric has 8 members of the Board of Directors, including 3 executive directors, 2 non-executive directors, 3 independent non-executive directors and 5 external directors. They have different professional backgrounds, and boast expertise and experience in areas like corporate management, intelligent manufacturing, financial management, audit risk control, investment management, HR management and legal compliance.

Name of director	Position	Gender	Professional background
Wu Lei	Chairman, Executive Director	Male	Corporate management, intelligent manufacturing, financial management
Deng Ping	President, Executive Director	Male	Corporate management, intelligent manufacturing, financial management
Zhu Haokai	Executive Director	Male	Intelligent manufacturing, HR management
Shao Jun	Non-executive Director	Male	Investment management
Lu Wen	Non-executive Director	Female	Investment management, audit risk control
Xi Juntong	Independent Non-executive Director	Male	Intelligent manufacturing
Xu Jianxin	Independent Non-executive Director	Male	Financial management, audit risk control
Liu Yunhong	Independent Non-executive Director	Male	Legal compliance

The Board of Supervisors, as the supervision body of the Company, is responsible for overseeing the Company's operations, financial status and the performance of directors and senior management personnel, and making recommendations. As of the end of 2023, the Board of Supervisors of Shanghai Electric had 3 supervisors and assumed due responsibilities through division of labor and cooperation. For more detailed information on the Board of Directors and the Board of Supervisors of the Company, please refer to the 2023 annual report of Shanghai Electric.

Shanghai Electric promotes the standardized operation of the Board of Directors and the General Meeting of Shareholders, continuously follows up and implements the regulatory requirements of the capital market, formulates various management systems, and strives to improve corporate governance, so as to strengthen operation, implementation and management.

In 2023, Shanghai Electric held 27 meetings of the Board, general meetings and meetings of various specialized committees, including 1 annual general meeting and 2 extraordinary general meetings, which considered and approved 10 proposals in total; held 12 meetings of Board, 10 audit committee meetings, 1 nomination committee meeting and 2 compensation committee meetings, which considered 88 proposals in total.

As of the end of 2023, there were 9 senior management personnel in the management team of Shanghai Electric, and female senior management personnel accounted for 33%.

External directors conducted surveys

The Group's directors, supervisors and executives play a crucial role in corporate governance. In 2023, we fully leveraged the resources of regulatory platforms including China Securities Regulatory Commission, the Shanghai Stock Exchange and its academy, China Association for Public Companies and its training platform to organize online and offline training for our directors, supervisors and executives. In this way, we ensured that the directors, supervisors and executives performed their duties and promoted the overall improvement of the Company's governance level.

In order to closely follow regulatory policies, Shanghai Electric established a mechanism for continuous monitoring and feedback on regulatory developments. This system enables the collection, analysis, and timely dissemination of the latest regulatory information and capital market trends. The Group regularly compiled and interpreted the most recent regulatory policies, market rules, and relevant laws and regulations, and provided such information to the Group's management. In addition, we educated the Group's management team and the compliance departments of affiliates on changes in regulatory policies and their impact on their business operation, and informed them of their responsibilities in areas such as information disclosure, reporting of significant events and management of insider information. This proactive approach aimed to establish the compliance awareness across the Group thereby ensuring our stable development on the compliance basis.

In 2023, the Group organized several compliance training sessions focusing on the requirements of the compliance regulatory system; at the same time, the Group also organized and held special training classes on listing compliance and capital market value dissemination, which were lectured by compliance consultants and external experts to raise the compliance awareness among employees.

In order to better assist the outside directors in performing their duties and understanding the operating conditions of the Group's subsidiaries, the Group organized them to conduct research work at Yinghe Technology, Rudong Wind Power Base, Nantong Cogeneration Project and Wujiang Transformer in 2023. By exchanging views with the senior management of the enterprises and studying the production, management and market conditions of the enterprises, the outside directors gained a more comprehensive understanding of the operating conditions and development environment of the enterprises, which helped them to more objectively assess and supervise the operating conditions of the enterprises and better perform their duties of supervising the Group and providing opinions.

In the future, Shanghai Electric will continue improve the governance mechanism according to laws, improve the standardized operation, and advance the modernization of the corporate governance system and capability.

Compliance training

Clean Hands

Shanghai Electric consistently adheres to the principle of honesty and integrity in business operation, adopts a zero-tolerance policy for any violations against business ethics and anticorruption regulations, and strictly abides by the laws and regulations applicable to the Group in the places where it operates and the highest standards of business ethics. The Group formulated the Shanghai Electric Group's Implementation Opinions on Building a Mechanism That Can't Corrupt, Don't Dare Corrupt, and Don't Want to Corrupt, and Promoting the Construction of an Honest and Clean Management Team, which requires party members and cadres to respect for law and discipline, strictly protect the "red line" of discipline and the "bottom line" of law and always preserve the political character of integrity.

In order to truly realize the combination of management over personnel and matters, and the management over teams and business operations, and enhance the awareness of clean hands, the Group formulated the Operational Procedures (Guidance) for Dual Responsibilities for One Leadership Position, and continuously implemented the Measures for Prevention of Conflicts of Interest in Operation and Management Activities of State-owned Enterprises. We emphasized addressing weak links in building a clean leading body, linked the task of "Dual Responsibilities for One Leadership Position" with the assessment as an important basis for assessment, selection and appointment of cadres, and appraisal for advanced or excellent staff, and kept improving the credibility of the selection and appointment of cadres, so as to ensure the effective assumption of their responsibility for Party conduct improvement and integrity building. We also emphasized the involvement of the Discipline Inspection Committee of each directly affiliated enterprises in corporate operation and management, strengthening the control over enterprises outside Shanghai or China and newly joined (or established) enterprises, creating the integrity files for leaders and personnel in important positions of the enterprises, carrying out special inspections, and strengthening the communication and cooperation between Discipline Inspection Committees at all levels with relevant functional departments for problem solution, so as to enhance the capability to prevent and control integrity risks.

To deepen the construction of the long-term anti-corruption mechanism of "Can't Corrupt, Don't Dare Corrupt, and Don't Want to Corrupt", and intensify the punishment on corruption behaviors, the Group has established various reporting channels including letter reporting to obtain clues from internal and external parties.

The Group fully protects the legitimate rights of whistleblowers, keeps the parties involved and the content of the report strictly confidential, and requires that no organization or individual may retaliate against whistleblowers, leak or distribute the reporting materials or related information. Additionally, in line with the requirements of upstream administrative bodies, we identified responsibilities for dereliction and neglect of duty in which, for example, investigation and treatment of cases were impeded due to leaks of letters and visits, the accuser was retaliated against, or adverse effects and serious consequences resulted from delayed treatment of important letters and visits or emergency incidents, and dealt with them seriously in accordance with Party and political discipline.

In 2023, Shanghai Electric continued pushing ahead the Party conduct through holding activities and thematic study themed integrity, and deepened the "construction of the four-responsibility collaboration mechanism for a clean governance culture" in accordance with the requirements for comprehensively strengthening the Party discipline.

Case **Shanghai Electric's Month of Party Conduct Improvement and Integrity Building**

In October 2023, Shanghai Electric launched activities in the Month of Party Conduct Improvement and Integrity Building, themed "Strengthening Foundation, Cultivating Virtue, Staying Steady and Far-sighted, and Boosting Integrity and Development." The activities organized members of the Company's leadership, middle management and personnel in key positions to visit the clean governance education bases for Party history learning and the warning education, using typical cases to help participants directly experience the importance and urgency of comprehensively strengthening the Party discipline, cementing the foundation of integrity and enhancing the awareness of "Can't Corrupt, Don't Dare Corrupt, and Don't Want to Corrupt".

Case

Focusing on comprehensively strengthening the Party discipline, Shanghai Electric conducted thematic learning sessions

In October 2023, with the theme of "comprehensively strengthening Party discipline", Shanghai Electric studied General Secretary Xi Jinping's important remarks on comprehensively strengthening Party discipline through the online + offline session. At the meeting, Shanghai Electric pointed out that it is necessary to raise the political position, deeply understand the major decisions on "comprehensively strengthening Party discipline", carry out warning education, and enhance the awareness of clean practice; accurately grasp the dialectical relationship between strict management and supervision and promoting the role of play; support the construction of a world-class equipment manufacturer through the "Clean Governance Program"; guide Party members and cadres to firmly establish the sense of discipline and rules, give instructions through warning education, and prevent the loopholes through case education.

Learning Session Themed "Comprehensively Strengthening Party Discipline"

Case

Shanghai Electric Power Generation held integrity culture activities

In order to thoroughly implement General Secretary Xi Jinping's important remarks on strengthening the construction of a clean culture in the new era, guide Party members and cadres to continuously consolidate the foundation of integrity, and create a good culture of respect for honesty and anti-corruption, Shanghai Electric Power Station conducted a series of clean culture collection activities. Employees and their families created cultural works of various kinds, including calligraphy, painting, posters, handicrafts, videos containing elements of integrity.

Clean culture works

During the reporting period, there were no corruption lawsuits within the Group.

Preventing Risks and Improving the System

We further optimize the ESG system, attach great importance to effective ESG publicity and work with stakeholders to for win-win success.

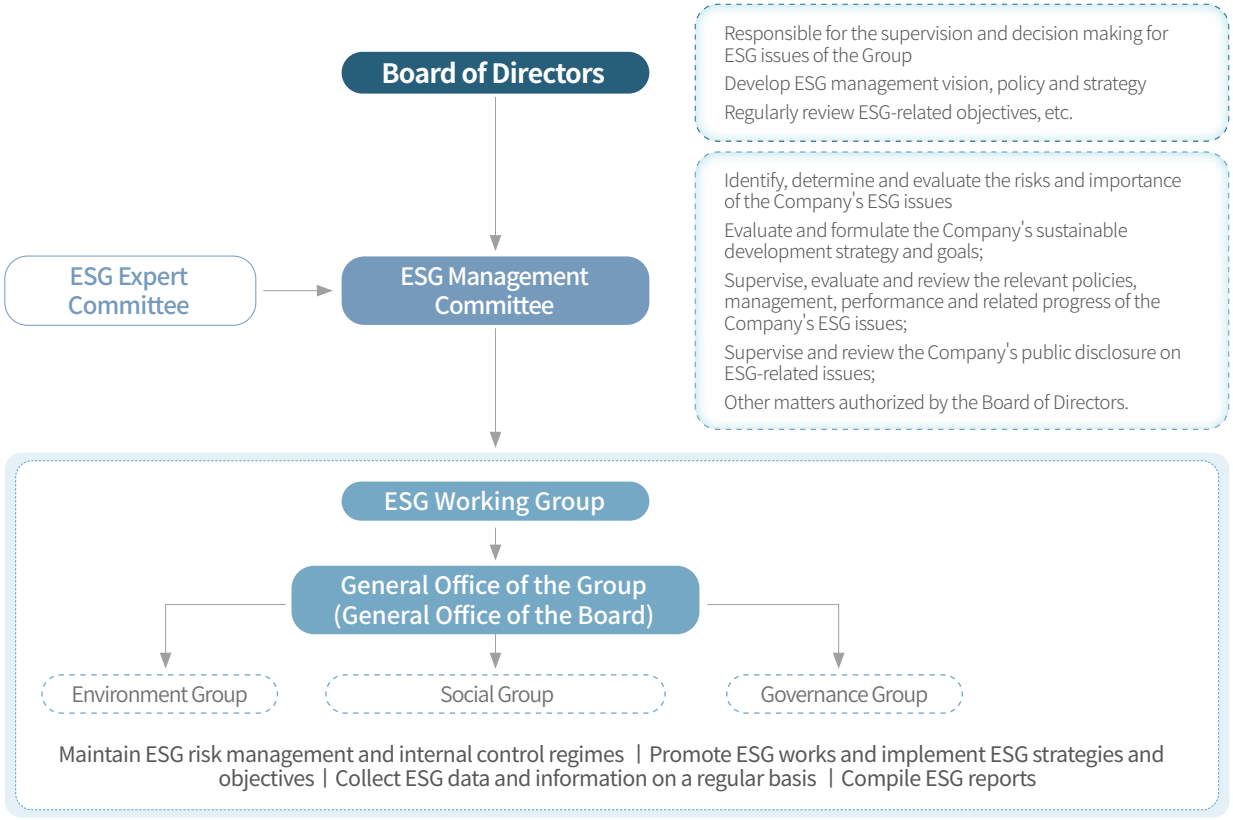
ESG Governance

Consistently serving the national strategies, Shanghai Electric has been improving its ESG management system and conducting ESG-related governance work based on the Group's low-carbon transition. Committed to be practicing the ESG concept, we integrate the ESG concept into our strategic goal and brand philosophy, and implement it throughout daily management and operations.

The Group has complied with the ESG Indicator System for Shanghai State-Controlled Listed Companies, the ESG Reporting Guide of the HKEx,, and the Guidelines No. 1 for the Self-regulation of Listed Companies on the Shanghai Stock Exchange – Standardized Operation to fully implement the Group's ESG governance, improved our ESG system and capability building, incorporated ESG responsibility in our organizational structure, and put in place a special ESG framework. We have built a comprehensive and rigorous governance model from top-level design to primary-level implementation, to constantly improve the ESG governance.

Our ESG governance structure is composed of the Board of Directors, the ESG Management Committee and the ESG Working Group from top to bottom. Among them, the ESG Management Committee governs the ESG Expert Committee. The ESG Working Group is composed of three sub-working groups which are composed of relevant functional departments and are responsible for contact and communication with relevant departments of the subsidiaries.

Shanghai Electric's ESG Governance Structure



Statements by the Board of Directors

The Board of Directors of Shanghai Electric has performed its duty to supervise the Group's ESG related matters. The Board of Directors has regularly reviewed the establishment and implementation of ESG objectives and the effectiveness of ESG risk management and internal control systems. For details, please refer to the section "Preventing Risks and Improving the System" and sub-sections "Stakeholder Engagement" and "Analysis of Major Issues". Also, the Board of Directors promises to be responsible for the authenticity, accuracy and completeness of the Report.

In 2023, the Group refined the compensation-related indicators for its management team. ESG-related "binding matters" such as material safety incidents, social stability and environmental protection events, were included in the performance task assignments for the management team. The assessment results are linked to the compensation of the management team.

In 2023, the Group held 2 ESG Management Committee meetings to assess the Group's ESG performance. The ESG Management Committee analyzed and evaluated the Group's performance in environment, society and corporate governance and proposed suggestions for improvement. The Group's environment, social responsibility, governance and other relevant departments attended the meetings to ensure that ESG policies were effectively executed.

Shanghai Electric's 1st ESG Management Committee Meeting in 2023

In January 2023, Liu Ping, Executive Director and President of Shanghai Electric, presided over a meeting of Shanghai Electric's ESG Management Committee, which reviewed the growth history of Shanghai Electric's ESG work and set the direction for the next steps.

Instructions of 1st ESG Management Committee Meeting in 2023

- Summarize the good experiences and practices in the process of promoting ESG work, and will further effectively integrate ESG into the Group's industrial development and business activities in the next steps.
- According to the characteristics of Shanghai Electric's business development and industrial characteristics, the ESG system should be highly integrated with the Group's strategic objectives during the 14th Five-Year Plan period.
- Strengthen the foundation of ESG work and evaluate ESG work on a semi-annual basis.

Shanghai Electric's 2nd ESG Management Committee Meeting in 2023

In November 2023, Liu Ping, Executive Director and President of Shanghai Electric, presided over a meeting of Shanghai Electric's ESG Management Committee. It conveyed the spirit of the document "Three-Year Work Plan for ESG Construction of Shanghai State-Controlled Listed Companies" issued by the Shanghai Municipal State-owned Assets Supervision and Administration Commission, and deployed the relevant work in 2024. While recognizing the Group's ESG achievements in 2023, the meeting pointed out that Shanghai Electric should take ESG as a key metric to build a more comprehensive and sound ESG management system, strengthen the ESG concept and cultural dissemination, and comprehensively standardize the daily management, strategy implementation and corporate culture.

Instructions of 2nd ESG Management Committee Meeting in 2023

- Improve the ESG work based on the objectives and principles.
- ESG work should align with carbon emission reduction and carbon asset management.
- Raise ESG awareness.
- Improve the ESG data indicator system and conduct regular analysis, evaluation and discussion to provide true, accurate and complete feedback.

Shanghai Electric's ESG Training

The Group actively promotes ESG training and education for employees to enhance their understanding and participation in ESG. By organizing internal ESG training, we help employees understand the importance of ESG so that they can better respond to the expectations of various stakeholders. At the same time, ESG management training can help the Group prevent and respond to environmental, social and governance risks, and improve the long-term competitiveness and stability of the Company.

In 2023, Shanghai Electric organized listed companies, relevant units disclosing social responsibility reports and functional departments of the headquarters to participate in the "ESG Disclosure and Practice Training", aiming to build a platform for ESG exchange and dialogue with relevant parties, so as to jointly explore the path of ESG investment of relevant parties under the ESG concept.

In addition, to encourage affiliates to focus on sustainable development and to promote positive corporate actions in environmental protection, social responsibility, and good governance, the Group publicized excellent cases with outstanding environmental performance, positive social impact, and high levels of corporate governance, from which affiliates could draw lessons and thereby adopt more sustainable measures.

In November 2023, the Group launched the 2023 Shanghai Electric Annual ESG Excellent Practice Case Selection. With the active participation of all industrial groups and enterprises, many excellent practice cases were collected, which fully demonstrated the excellent performance and successful experience of Shanghai Electric's various enterprises in the fields of environment, society, and governance, among others. Finally, 12 enterprises were successfully shortlisted as the annual ESG Excellent Practice Cases.

In 2023, as a result of active efforts and outstanding performance in various ESG areas, the Group maintained an A grade in the MSCI ESG rating and was included in the Hang Seng (China A) Corporate Sustainability Index, the Hang Seng (China A) Corporate Sustainability Benchmark Index and the Hang Seng (Mainland and HK) Corporate Sustainability Index. Meanwhile, the Group was included in the "2022 Annual ESG Blue Book of Shanghai State-owned Enterprises under Shanghai Municipal State-owned Assets Supervision and Administration Commission", the "State-Owned Enterprises CSR Vanguard 100 Index (2023)" of the State-owned Assets Supervision and Administration Commission. In addition, the Group received awards such as "Best ESG Practice" from the China Association for Public Companies and "Best ESG Practice of the Year" from jiemian.com, "ESG Pioneer Company" from Zerenyun, "Golden Lion" Annual Sustainability Development Pioneer Company from CFBond and many other ESG related awards.




ESG Awards

Stakeholder Engagement

Based on our technological advantages in the field of high-end equipment manufacturing, Shanghai Electric hopes to collaborate more deeply with stakeholders to achieve high-quality sustainable development. We value communication with stakeholders, try to understand their demands through diverse channels, and act to provide reasonable response so as to strengthen our ties with them.

Also, we hope that this ESG report will provide a more complete response to the issues that stakeholders are concerned about and disseminate our concept about sustainability and social responsibility values.

Stakeholder group	Communication Channel/feedback method	Key issues of concern
Investors	- General meeting of shareholders - Interpretation of announcements - Performance briefing - Roadshow activities - Investor research activities - Investor factory visit - Investor summit - Shanghai Stock Exchange (SSE) E-Interaction - Investor hotline - Company announcement - WeChat public account - Facebook homepage - Bimonthly Shanghai Electric News - Investor relations e-mail box of Shanghai Electric - Industry news communication - Executive interview	- Industry trends and policies - Governance structure - Technology and innovation - Product safety and health - Economic impact - Legal compliance - International trade situation
Employees	- Employee training - Employee activity - Employee satisfaction survey - Forum	- Occupational health and safety - Employee benefits and compensation - Sustainable development strategy - Employee rights and interests
Partners (including suppliers and contractors)	- On-site review - Supplier assessment - Technical training - Online communication	- Product safety and health - Renewable energy - Response to climate change

Stakeholder group	Communication Channel/feedback method	Key issues of concern
 Customers	- Customer satisfaction survey - Customer complaint handling - Brand promotion	- Product quality and aftersales maintenance - Customer privacy information protection - Product safety and health
 End users of products	- Brand promotion - Press release/information announcement	- Product quality and aftersales maintenance - Legal compliance
 Communities	- Community charity activities - Regular visits	- Exhaust emissions - Biodiversity in the place of operation - Charity and donations
 Media	- Press release/information announcement - Interview - Performance briefing	- Sustainable development strategy - Product quality and aftersales maintenance - Governance structure
 Regulatory Authorities	- Press release/ information announcement - Regular communication	- Renewable energy - Industry trends and policies - Legal compliance
 NGO or non-profit organizations	- Regular communication - Community charity activities	- Charity and donations - Community development support
 Colleges and universities	- Scientific research exchange and cooperation - Recruitment activities	- Waste water disposal - Exhaust emissions - Product quality and aftersales maintenance
 Scholars	- Scientific research exchange and cooperation	- Technology and innovation - Waste water disposal - Exhaust emissions
 Grantees	- Community charity activities - Regular visits	- Charity and donations - Community development support

Analysis of Major Issues

During the reporting period, we collected opinions from investors and other stakeholders on our ESG management and disclosure through interviews, surveys and road shows with stakeholders. In addition, we kept a close eye on the important documents released by governments, investment institutions and regulators to explore the ESG trends in the industry, and held discussions and exchanges to drive deeper communication with them. We confirmed the results of the analysis of major issues in 2023 by combining the focus and expectations of various stakeholders on Shanghai Electric with our review of the matrix of major issues for the previous year.

The identification process of Shanghai Electric's major issues

Screen the issues

Determine ESG-related issues related to Shanghai Electric through the following channels:

- Management recommendations
- Internal and external stakeholder expectations
- Media information analysis
- Docking with peers at home and abroad
- Issues of regulatory authorities' concern
- ESG rating report

Prepare the matrix

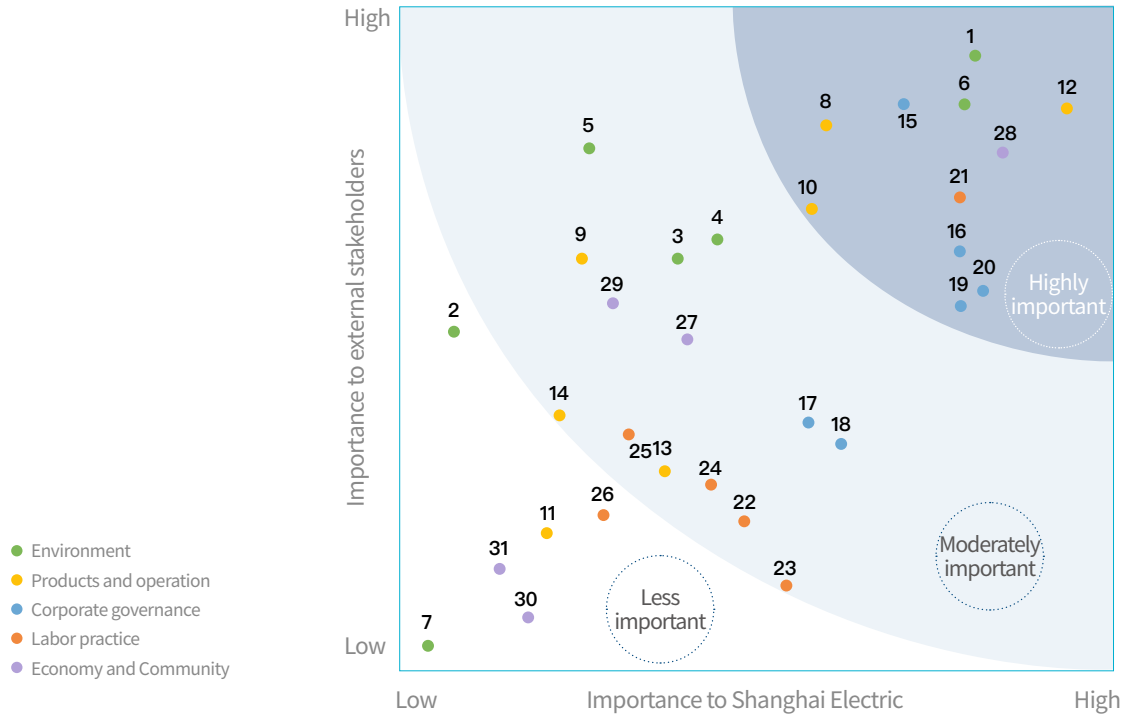
Communicate with internal and external stakeholders, evaluate and prioritize the survey results of the issues of stakeholders' concern, and finally form a matrix of major issues

Review the matrix

The ESG Committee reviews the matrix of major issues and submits it to the Board of Directors for consideration

Through the above identification process, we concluded 31 ESG issues, 11 of which are highly material ESG issues. For the future ESG development, the Group will continue to focus on the highly material ESG issues, which also constitute the key subjects disclosed in this report to varying extent.

The Matrix of Shanghai Electric's Major Issues



No.	Issue	No.	Issue
1	**Renewable energy**	17	Performance and remuneration for sustainable development
2	Water resource management	18	Anti-corruption
3	Wastewater discharge	**19**	**Risk and crisis management**
4	Exhaust gas emissions	**20**	**Legal compliance**
5	Solid waste treatment	**21**	**Occupational health and safety**
6	**Coping with climate change**	22	Employment and employee retention
7	Biodiversity in the place of operation	23	Employee benefits and remuneration
8	**Product quality and aftersales maintenance**	24	Education and training
9	The protection of customers' privacy information	25	Diversity and inclusion
10	**Product safety and health**	26	Human rights
11	Brand management	27	Economic impact
12	**Technology and innovation - Clean technology opportunities**	**28**	**The trends and policies of the industry**
13	Supply chain management	29	International trade situation
14	Raw material procurement	30	Support for community development
15	**Governance framework**	31	Charity and donations
16	**Strategy of sustainable development**		

Note: The issues in bold letters are highly material issues

Standardized Disclosure

The Group always adheres to the principle of timely, transparent, efficient and rigorous information disclosure, establishes a comprehensive and transparent information disclosure system, fulfills compliance disclosure requirements, and continuously improves the quality and effectiveness of information disclosure. Meanwhile, building the credibility of information disclosure is important for the Group to implement the concept about green development and accelerate high-quality development.

The Group has formulated the Articles of Association of Shanghai Electric Group Company Limited and the Information Disclosure Management System of Shanghai Electric Group Company Limited in accordance with laws and regulations and the requirements of the listing rules of Hong Kong and Shanghai, so that the public can have a comprehensive, accurate and timely understanding of the Group's performance and significant events.

In terms of disclosure content, the Group has closely followed the national deployment, optimized the ESG report year by year, enriched the disclosure content, reflected the Group's business strategy, risk management and social responsibility, and embodied the stance and responsibility of a large state-owned enterprise. By improving the ESG governance structure, optimizing the operation mechanism of the ESG Management Committee and refining the ESG report preparation process, the Group has further contributed to improving the corporate management and business decisions, thereby achieving better corporate governance and sustainable development. This report is the 8th ESG report disclosed by the Group, which, centering on national decision-making and deployment and the dual-carbon theme, conveys the Group's values and tells Shanghai Electric's ESG value and story from multiple dimensions and perspectives.

Interaction with Investors

The Group attaches importance to investor relations management and discloses to investors timely and accurately information relating to our financial status, operating conditions and major decisions to ensure that investors are informed about the true state of the Group's operations.

The Group provides more intuitive interpretations of regular reports through visual formats such as performance briefings and graphical annual reports. By presenting information in a lively and visual manner, the Group helps investors better understand the companies' business results, financial status, and development strategies. In regular reports, the Group also uses charts, data comparisons and other tools to make the information clearer and easier to comprehend. In addition, in 2023, the Group released an ESG report at a glance, introducing the Group's financial status and business operations to investors. This aims to strengthen closer connections with investors while demonstrating the Group's commitment and efforts in sustainable development and social responsibility.

In 2023, the Group held the performance briefing, timely responded to investor appeals, solicited opinions from investors and made corresponding improvements.

Case **Shanghai Electric held press briefing for H1 2023 results**

In September 2023, Shanghai Electric held its 2023 interim performance briefing, communicating to the market the Group's confidence and determination to achieve high-quality and sustainable development in the coming years.

Shanghai Electric proactively adapts to economic conditions and market trends by actively adjusting its development strategies, approaches, business models, and industrial layout, and introduces institutional and mechanism innovations to unleash corporate vitality. Leveraging Shanghai Electric's deep-rooted advantages in the energy and industrial sectors and guided by serving national strategies, the Group focuses its "dual-carbon" mission on the energy and industrial sectors, and promotes the implementation of integrated solutions for industrial Internet and intelligent manufacturing. Meanwhile, by continuously increasing research and development investment, the Group aims to quickly achieve its goals of internationalization and modernization, benchmarking against world-class peers.

In 2023, the Group optimized its investor communication channels by adopting various forms such as interpretation of announcements, interpretation of performance reports, industry news communication and executive interviews to have in-depth communication with investors. Meanwhile, the Group has established an effective shareholder feedback mechanism by opening a special investor hotline dedicated to handle with shareholders' inquires, suggestions and complaints; the Group regularly convenes general meetings of shareholders and investor communication meetings to have face-to-face exchanges with shareholders, listen to their opinions and suggestions, and answer their questions; and the Group makes full use of the Internet and new media platforms to optimize the means of shareholder communication.

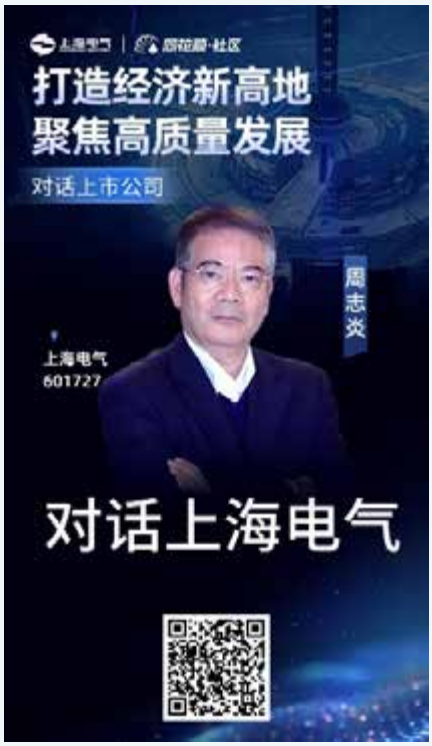
To make more investors better understand Shanghai Electric's industrial characteristics and business model and recognize Shanghai Electric's move to upgrade the traditional industry and enter a new industry, the Group worked to train the spokespersons to keep investors well informed of our strategy. Also, to increase interactions with investors in more aspects, based on diversified investor demands, the Group expanded and enriched the channels of interaction both online and offline.

Case **Join " Talk About Scientific and Technological Innovation" program**

In November 2023, Zhang Hongbin, director of Shanghai Electric's New Energy Development Department, participated in Yicai's special program "Talk about Scientific and Technological Innovation", focusing on the challenges of China's new energy system construction and discussing how scientific and technological innovation can help in this regard. The event fully demonstrated Shanghai Electric's new layout in utilizing talent resources, leading industrial science and technology innovation, and supporting the construction of a new energy system.

Case **Dialogue with Executives of Listed Companies**

In July 2023, Zhou Zhiyan, CFO and Secretary of the Board of Directors of Shanghai Electric, participated in the dialogue program of "Creating a New Economic Highland and Focusing on High-Quality Development" held by Hithink RoyalFlush Information Network. Mr. Zhou addressed the concerns of the capital market, and discussed topics such as Shanghai Electric's commitment to "building deep scientific and technological strengths, fostering the industry's spearhead, focusing on specialization and innovation, and building core competitiveness". This provided investors with more information and channels to learn about Shanghai Electric.



Dialogue with Shanghai Electric

Responsible Brand

Shanghai Electric continues to deepen its practices and explorations in brand building, communication, management, and innovation, steadily advancing comprehensive brand management and categorized brand management. The Group strictly adheres to the Advertising Law of the People's Republic of China, establishes the "Brand Management System," and creates a "Media Convergence Center" to further enhance the brand management expertise.

The Group's Corporate Culture Department is the core functional department for brand management, responsible for overall planning and coordination, formulating brand strategy planning, researching brand classification and management modes, and planning related activities. The Marketing Development Department and the Industrial Development Department participate in the formulation of strategies, activities, and management modes. The Market Expansion Department and the Industrial Development Department assist in formulating strategies, implementing activities, evaluating management modes, and reviewing applications for the use of trademarks and trade names. The General Office of the Group (General Office of the Board of Directors), the Human Resources Department, the Labor Union and the Youth League Committee are responsible for promoting shareholder branding and employee branding, among other things. Other departments and subsidiaries provide technical and legal support for brand management and facilitate the promotion and development of brand management.

The Group stipulates that the publicity information shall be reviewed under a hierarchical responsibility system, and that the "three times of review and three times of proofreading" procedure shall be strictly implemented to further standardize the marketing and publicity. Regarding the "three times of review" procedure, the publicity information written at all levels of the Group will be first reviewed by the person in charge of the department to which the information belongs, then by the person in charge of the publicity department of each unit, and finally by the leader in charge of the brand publicity of each unit. As to the "three times of proofreading" procedure, internal information written by Group companies and related departments will be first proofread by the editor, then by the media convergence editor-in-chief and finally by both the head of the department in charge of brand publicity and the head of the department in charge of confidentiality.

Focusing on the three business areas of energy equipment, industrial equipment and integrated services, Shanghai Electric is a leading global provider of industrial-grade green and intelligent system solutions. In the "2022 China's 500 Most Valuable Brands" list released by World Brand Lab in May 2023, Shanghai Electric topped the machinery industry category again with a brand value of RMB161.739 billion.

Case Shanghai Electric Unveiled "Media Convergence Center"

Following the instruction of the 20th CPC National Congress to "improve the systems for communications across all forms of media and create a new environment of mainstream public opinion", Shanghai Electric unveiled its "Media Convergence Center" In March 2023 to accelerate the construction of an enterprise-level media convergence center with strong expertise covering all forms of media. It is positioned as "the extension of publicity function of the headquarters and a professional operation platform" based on the organizational structure and business process reengineering, so as to support the publicity function of the headquarters, improve the synergies among the industrial groups, and further consolidate the Group's "broad publicity" pattern.

Case Shanghai Electric won Silver Dove Award

In February, the results of the Shanghai "Silver Dove Award" 2023 were unveiled. Focusing on the international expression of Chinese culture, global promotion of Shanghai's image, capacity building for global narrative and the expansion of the circle of international friends, the award rewards those exemplary and leading international communication works and projects that demonstrate precise communication, effective outreach, and innovative performance.

The "Dialogue with Shanghai State-owned Enterprises" and "Foreign Musician Visiting Shanghai Electric", two works made and submitted by Shanghai Electric, won the Award of Merit in Activity/Case Study Category and the Best Video Prize, respectively.

Award of Merit in Activity/Case Study Category

Best Video Prize

Preventing Risks and Improving the System

Shanghai Electric improves systematic risk management, strengthens the implementation of internal control and supervision systems, enhances the risk prevention and control capabilities, and helps the Group to achieve the strategic goal of high-quality development.

Shanghai Electric adheres to the governance of enterprises by law and compliance operation, strives for the construction of risk management and internal control system, attaches importance to the cultivation of rule of law culture and risk culture, and safeguards the sustainable development of the Group. In 2023, the Group focused on the "14th Five-Year Plan" strategic plan, did a good job in risk investigation and disposal, in combination of the annual key tasks, improved the audit risk control governance structure and the risk control and internal control operation mechanism, made more efforts for audit and supervision in key areas, and continued to enhance the effectiveness of risk prevention, internal control, audit & supervision, and the construction of the rule of law system by "resolving difficult issues, securing the implementation of key projects, preventing risks, and promoting development".

Risk Management and Internal Control

Pursuant to the provisions of the Basic Norms for Internal Control of Enterprises and its supporting guidelines and other internal control regulatory requirements, Shanghai Electric has established a sound risk management and internal control system, continuously carried out self-evaluation and management improvement, constantly improved the scientific, normative and effective level of the management and operation, and enhanced the capability of preventing various risks, so as to ensure the effective operation of risk management and internal control system, and safeguard the sustainable, stable and healthy development of various businesses.

The Board of Directors and the Audit Committee of the Group are responsible for overseeing and evaluating the integrity and effectiveness of the Company's risk management and internal control system, and examining and approving the risk management and internal control evaluation report; The Group's management is responsible for promoting the construction and improvement of the Company's risk management and internal control system, and reviewing the work plans and work reports on the corporate risk management and internal control.

The Group has established a comprehensive and systematic risk management "three lines of defense" and internal control framework to strengthen the systematic risk management.

Three Defense Lines for Risk Management and Internal Control of Shanghai Electric

First line of defense	**Various business departments** They are responsible for designing and implementing relevant business risk management and internal control system, and promoting the landing and implementation of the management and control measures.
Second line of defense	**Risk management department** It takes the lead in boosting the construction of risk management and internal control system, organizes and conducts risk identification, assessment, response and reporting on an annual basis, and supervises and urges the implementation of major risk response and rectification.
Third line of defense	**Audit and supervision department** It conducts a comprehensive internal audit of the Company's business and regularly assesses the effectiveness of risk management and internal control.

In terms of risk management, Shanghai Electric has continuously improved the risk management system and organizational system, developed the Risk Management Manual and Risk Management Implementation and Reporting, and further defined the risk management responsibilities, basic processes, standard establishment, risk identification and assessment of various departments of the Group, ensuring that there are rules and laws available to support risk prevention and control. The Group conducts risk identification and assessment at least once a year, prepares risk prevention and response plans for major risks, and regularly performs self-inspection of the implementation progress and effectiveness, so as to constantly enhance the risk management capabilities of the Company.

In 2023, the Group was at a critical stage of strategic transformation and innovative development, focusing on risks related to strategy, investment, operation, finance and legal fields. The Group continued to improve and effectively run the major risk prevention and control mechanisms, and to strengthen the investigation, judgment and disposal of potential risks.

Strengthening organizational guarantees for risk prevention and control

- Gave full play to the role of the leading group and working groups on risk prevention and control, and strengthened the overall leadership and arrangement on risk prevention and control.
- Continued to improve the risk prevention and control network of enterprises at all levels, and made joint efforts to boost the effective implementation of risk prevention and control.

Further deepening risk screening and judgment

- Strengthened risk screening and identification in key areas, and guided and urged subordinate enterprises to carry out investigation priorities and prevention & control measures based on their actual situations.
- Carried out both the State-owned assets supervision requirements and the Group's management & control requirements, combined with audit supervision and inspection, and conducted special risk investigation and special audit investigation in key fields.

Advancing the risk prevention and defusion in an orderly manner

- In light of risk occurrence probability, risk impact degree, enterprise' anti-risk capability and others, managed risks by grades and classifications, and defined the principal responsibility of risk prevention and resolution.
- Popularized the risk list and accountability system, and formulated risk-defusing schemes by "tailoring solutions for specific risk accidents" and advanced the implementation of such schemes.
- Continuously improved the risk prevention system in such fields as capital, investment, and engineering by drawing inferences about other cases from one instance

In terms of internal control, the Group has established and improved the internal control system, prepared the Internal Control Manual, and promoted it to all business departments and subordinate holding units by taking the method of focusing on key points and implementing it step by step. Nearly 100 subordinate enterprises of the Group have completed the preparation of localized Internal Control Manual, and promoted it to the newly established enterprises and M&A enterprises, effectively driving the constant improvement of the internal control system.

Continuously improving the construction of internal control system

- Systematically assessed the effectiveness of the Group's system building over the past five years, analyzed the weaknesses in internal control, and proposed the objectives and improvement measures for the next step.
- In line with the Group's management improvement requirements, developed the annual system improvement plans, and advanced the improvement of the key management and control systems in capital, engineering and other fields.

Strengthening the effectiveness of internal control execution

- Promoted employees' learning and understanding of the system by adopting "online + offline" means, focusing on key systems in major fields, and taking diverse forms of training and publicity targeted at business lines, and video-based micro lectures, so as to strengthen the execution effectiveness.
- Improved the multiple inspection mechanisms of "enterprise self-inspection + business line inspection + Group spot inspection", promoted self-inspection and self-correction, conducted internal control self-improvement, and strengthened the rectification of internal control defects and the implementation of internal control requirements.

Audit and Supervision

Shanghai Electric always adheres to the main line of "strengthening internal control, preventing risks and promoting compliance" and lays stress on the audit supervision of the Group's business projects. In 2023, the Group continued to establish and improve the well-balanced corporate governance structure in which the Board of Directors, the Board of Supervisors and the management earnestly fulfilled their own duties and coordinated with each other in work, gave the full play to the audit leading group under the leadership of the Party Committee, pressed ahead with the audit of key projects, strengthened the joint supervision over the application of audit results, and upgraded the audit work, further contributing to a centralized and unified audit supervision system with overall coverage and efficient operation.

- Established a leading group for audit under the leadership of the Party Committee, and further strengthened the centralized and unified leadership of the Party Committee over internal audit work.
- Strengthened the coordination with risk control, discipline inspection, inspection tour and other departments, established a working mechanism featuring information sharing, results sharing, work linkage and strength support, and gave full play to supervision synergy.

- Carried out regulatory requirements and major concerns of the Group, conducted audit projects such as internal control evaluation, special audit and economic responsibility audit, promptly disclosed problems and sent risk warnings, and helped improve the management.
- Stepped up the rectification of problems identified in audit, advanced the rectification from the source by analyzing reasons, and improved the rectification results by strengthening the system execution and clearly defining the rectification responsibilities.

- Deepen the leveled and classified management of audit, formulated and improved audit work standards, clarified management requirements, promoted plan management in a coordinated manner, strengthened process tracking and inspection, and enhanced the overall audit quality.
- Strengthened the capacity building of the audit team, reinforced the coordination and linkage between the upper and lower levels, and organized business training and exchanges by layer and classification such as economic responsibility audit and internal control evaluation, so as to enhance the professional ability and level of auditors.

Construction of the Rule of Law System

It's the foundation for survival and development of modern enterprises to govern enterprises by law. In strict accordance with the Anti-Monopoly Law of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China and other laws and regulations, Shanghai Electric put an end to unfair competition and ensured that the enterprise is governed according to law, and operated in compliance with relevant provisions. In the process of cooperation, the contracts of some subsidiaries of the Group have clearly required the partners to comply with all relevant laws and regulations applicable to their business activities, to strictly prohibit improper transactions, and to conduct good faith cooperation. In addition, the procurement text sample of the Group also included anti-unfair competition provisions in the Supplier Codes.

In 2023, through the in-depth integration of perfecting the legal governance system, improving the legal system mechanism, strengthening the legal awareness training, and creating a rule of law culture, Shanghai Electric comprehensively enhanced the professionalization, standardization, and normalization of the rule of law system construction, and endeavored to achieve law-based governance, compliance operation, and standardized management.

Improving the rule of law governance system

- Established a leading group and a working group on the Group's rule of law construction to strengthen the law-based compliance governance.
- Released the Implementation Plan of Shanghai Electric for the Rule of Law Construction as a State-owned Enterprise to secure the construction of the rule of law system.
- Prepared the Selected Cases of Shanghai Electric Legal Disputes (2023 edition) to enhance the law-based operation and management capability.
- Conducted annual thematic presentations on the rule of law construction by the leading members of the Party and the Company, to summarize the effectiveness of the rule of law construction.

Improving the rule of law system and mechanism

- Upgraded the Case Management System, regulated the Group's case management, defined the limits of functions and powers, and safeguarded legal rights.
- Upgraded the External Lawyer Management, and optimized the external lawyer recruitment, selection, assessment and execution inspection and other procedural requirements.

Strengthening the rule of law awareness training

- Prepared the Compilation of Leading Cadres' Responsibility for Performing the Duties, and listed the leading cadres' duty-performing responsibilities and key risks.
- Held salons for cadres to study laws, focusing on the rule of law ability and level of leading cadres, and providing a platform for exchanges.
- Carried out targeted legal training sessions on specific topics, such as the popularization and non-competition restrictions for human resources lines, and industrial injury infringement cases.
- Organized the collective learning on the theme of "corporate governance" through the combination of online and offline methods, to enhance the rule of law education for all employees.
- Arranged the training, assessment and evidence collection for external contractors.

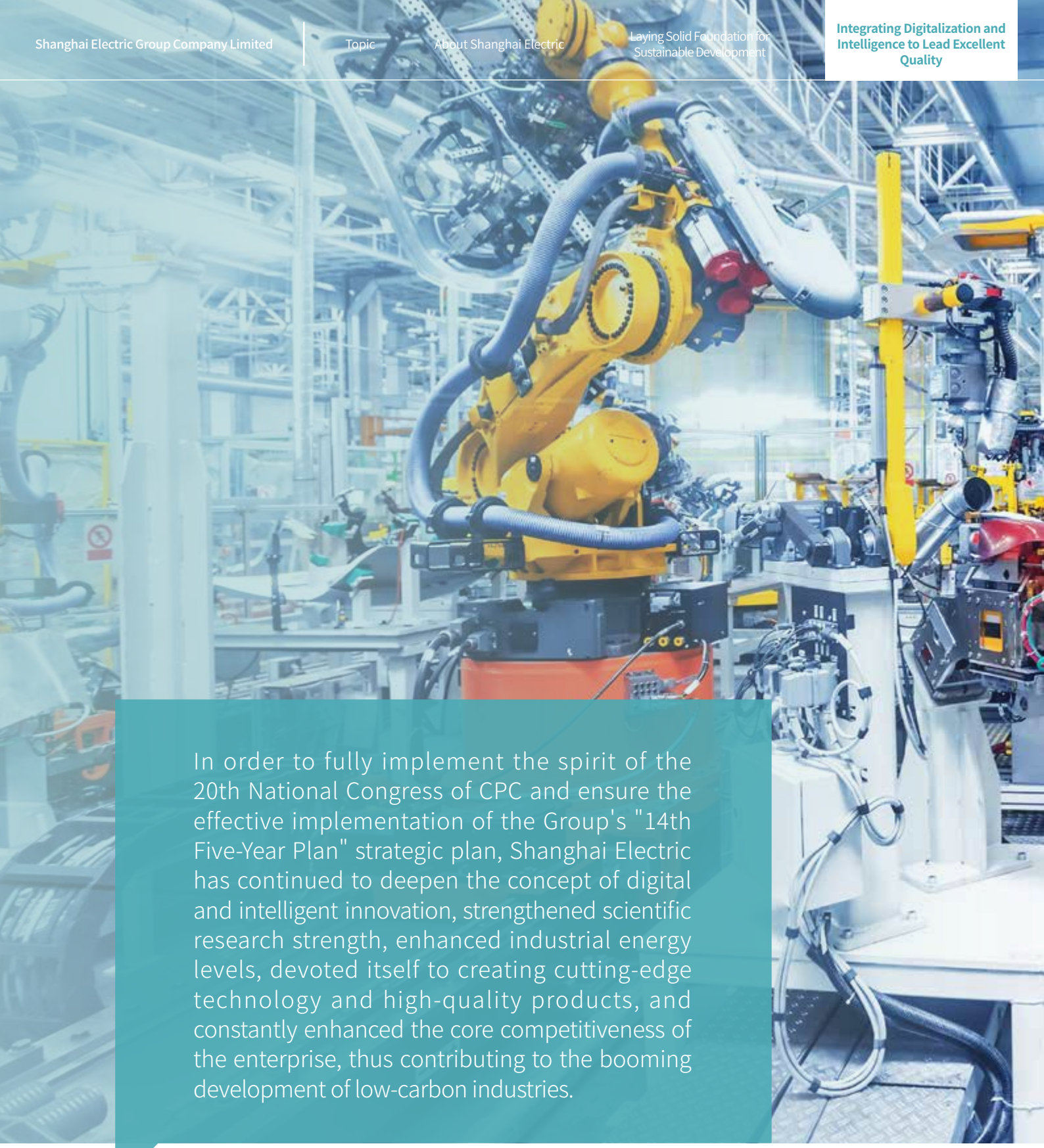
Creating a rule of law cultural atmosphere

- Held a series of activities on the rule of law theme, such as the Constitution Week Publicity and Intellectual Property Month lectures.
- Carried out online publicity, and launched the first batch of SASAC compliance guide videos at E-Xueyuan.

Constitution Week Publicity

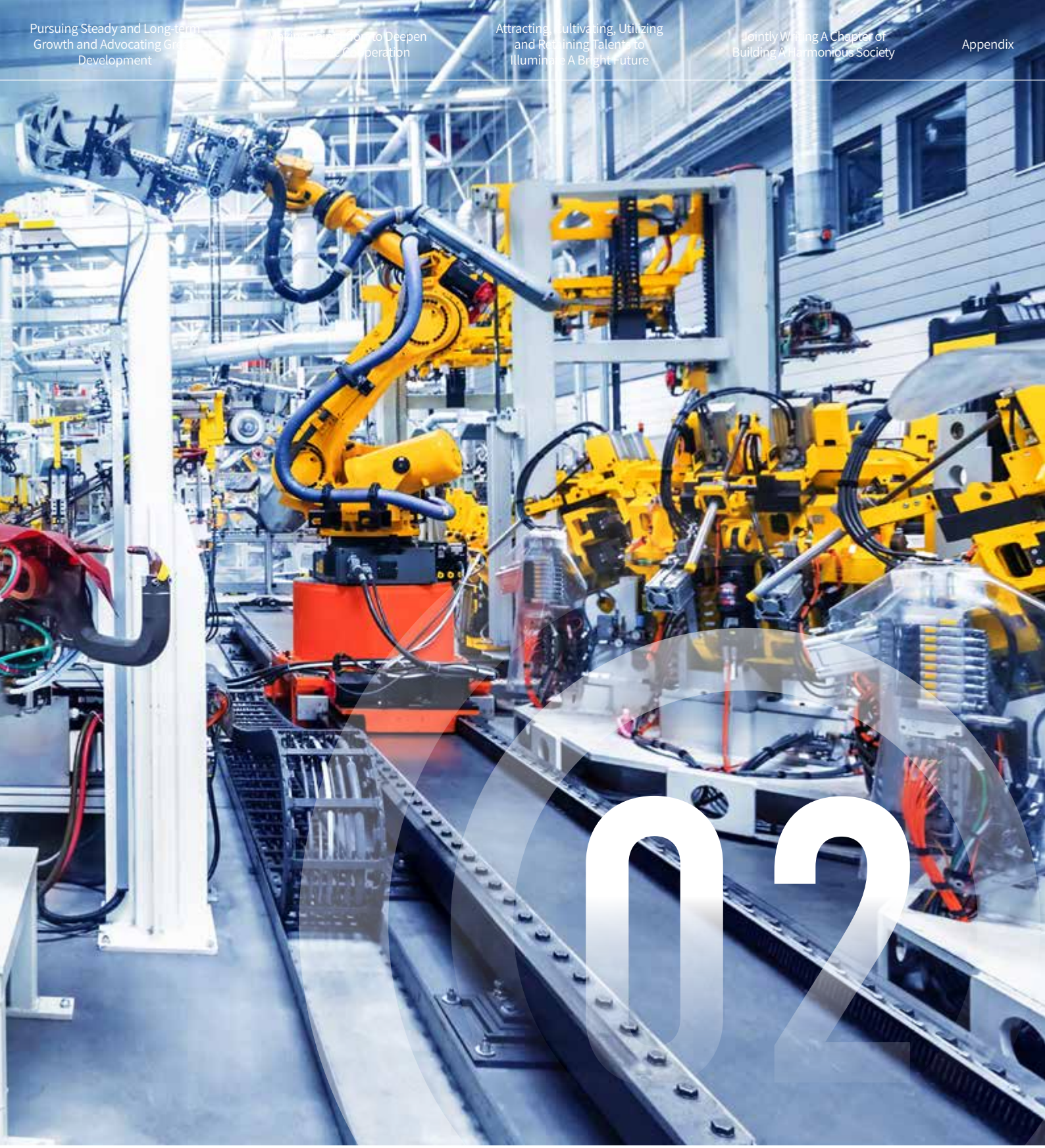
Series Lectures for Intellectual Property Month

Contract management serves as an important link of the Group to prevent legal risks. We must do a good job in the basic work of contract management, which is a fundamental requirement to bolster the construction of the rule of law system. In 2023, the Group continued to perfect the contract management system, conducted a large-scale survey on the institutionalization, standardization and information technology construction of contract management, identified the pains and difficulties in contract management, formed a research report, and brought forward the targeted system and management improvement suggestions in the main aspects; The Group enriched and optimized the contract template library and contract management system. A total of 7 sets of templates and systems, including the procurement contract template, EPC contract template, financial group guarantee contract template, and the group contract management system, were selected as "Outstanding Contracts and Excellent Systems of State-owned Enterprises". The Group has set up contract management positions, and conducted training and assessment of contract management personnel to cultivate a team of contract management personnel who can play a big role in preventing front-line risks.



In order to fully implement the spirit of the 20th National Congress of CPC and ensure the effective implementation of the Group's "14th Five-Year Plan" strategic plan, Shanghai Electric has continued to deepen the concept of digital and intelligent innovation, strengthened scientific research strength, enhanced industrial energy levels, devoted itself to creating cutting-edge technology and high-quality products, and constantly enhanced the core competitiveness of the enterprise, thus contributing to the booming development of low-carbon industries.

Integrating Digitalization and Intelligence to Lead Excellent Quality



02

- Technological Innovation and Intelligent Development
- Exercising Innovative Mind to Pursue Excellence
- Putting Customer First and Deepening Cooperation

Technological Innovation and Intelligent Development

Firmly center on the general tone of "focusing on national strategy, seeking progress while maintaining stability, achieving key breakthroughs, and realizing high-quality development", and heavily rely on science and technology, talents and innovation to embark on a new path of high-end, green and intelligent development.

Innovation-driven

All the time, Shanghai Electric has always put science and technology at the core position of the overall strategy, and regarded innovation as the primary driver for high-quality development. We always adhere to scientific and technological innovation, maintain the technological leadership, highlighting the responsibility for and the mission of "China's key projects".

In 2023, on the basis of in-depth probe into the Group's industrial development panorama, Shanghai Electric formulated the "Three-year Action Plan of Shanghai Electric for Tackling Key Problems in Science and Technology" for the sake of supporting business development and closely centering on the core idea of innovative development and transformation & upgrading. The Plan aims to "build chains in emerging industries, upgrade chains in traditional industries, supplement chains in short-board industries, extend chains in advantageous industries and enhance the continuity and competitiveness of industrial development", and endeavors to achieve breakthroughs in core technology, key technologies and landmark strategic products.

Innovation Strategy

Shanghai Electric continues to promote high-quality development through scientific and technological innovation, and establishes a sound scientific and technological innovation system. The Group continues to deepen the implementation of the scientific and technological innovation strategy featuring "big picture, joint efforts, integrated network", gradually forms a scientific and technological innovation mechanism characterized by planning as the guidance, project-based coordination and talent flow, promotes the firm-wide research and development cooperation, boosts the firm-wide advantage complement and resource coordination, and builds a multi-level and multi-field technology exchange platform across industry groups.

Getting a big picture in rational layout and R&D of the Group's science and technology

Share scientific and technological resources, jointly research common technologies, coordinate scientific and technological resources and R&D capabilities inside and outside the Group, encourage the establishment of multiple technological exchange mechanisms including maker clubs and professional technology alliances, thus promoting the rational layout and optimized allocation of scientific and technological resources.

Making joint efforts in the Group's technology and business

Strengthen the joint research and discussion on technology and business through major scientific research projects, and drive the cross-field technological exchange. Take the major scientific research projects in the key areas of the Group as the carrier to implement technical exchange and cooperation across the industrial groups, explore the establishment of project organizations across industrial groups, further integrate the Group's scientific and technological resources, and promote collaborative innovation across industries.

Building an integrated network for training and flow of the Group's scientific and technological talents

Share and co-manage the system of technological talent resources to accelerate the buildup of technological talents, and realize the systematic optimization of talents through expert engagement and on-the-job training across industrial groups.

Scientific Research Strength

Shanghai Electric has embraced the scientific and technological innovation strategy featuring "big picture, joint efforts and integrated network", and made the overall arrangement of scientific research work, demonstrating Shanghai Electric's strong scientific research accumulation and scientific research level.

A Big Picture

Shanghai Electric made good use of the three-tier scientific and technological innovation system with the Central Academe as the hub and platform, and continuously promoted the in-depth integration through the joint office of the Group's science and technology management department and the Central Academe. In terms of hardware resources, the Group and the Central Academe have jointly created a scientific and technological innovation resources sharing platform, empowering the coordinated development of industrial groups. In terms of technology research and development, relevant personnel have interspersed with each other, and technical experts from the Central Academe have participated in reviewing the Group's approved scientific research projects, and the science and technology management department have taken part in the research project approval review by the Central Academe. Both sides can support and promote each other.

In 2023, in light of the principle for the synchronization of "research, application and effect", we sorted out the "underlying technology" in the five directions: "advanced materials application technology", "product noise design technology", "extreme manufacturing technology", "electricity & electronics technology" and "additives manufacturing technology", and set up scientific and technological expert studios, aiming to give full play to the role of scientific and technological experts, promote "underlying technology" collaboration across enterprises, and enable the Group to raise its scientific and technological innovation capability. Among them, the "Advanced Materials Application Technology" expert studio has played a role in "fan service technology, Mitsubishi elevator welding technology" and others. In addition, the 3D printing technological achievement made by the "Additives Manufacturing Technology" expert studio has served the development of some products such as gas turbines and steam turbines.

As of the end of 2023, Shanghai Electric had 68 national high-tech enterprises, 7 national enterprise technology centers, 16 enterprise technology centers in Shanghai and other provinces and cities, 11 engineering technology research centers in Shanghai and other provinces and cities, 1 key laboratory in Shanghai, 17 CNAS-certified laboratories, 4 academician expert workstations, and 5 post-doctoral research workstations.

Joint Efforts

In order to integrate internal innovation resources and enhance the level of scientific research and innovation, we, on average, organized a technical seminar of "joint efforts" on a monthly basis, involving welding technology, measurement technology, reliability technology, noise reduction technology, digital simulation technology and other topics, so that a number of technical personnel within the Group could make "joint efforts" to discuss and explore common "underlying technology", which helps to boost the technical interoperability across industrial groups and enterprises, to promote the establishment of internal cross-enterprise technical alliances such as the "electricity & electronics technology" alliance of the Group, and to lay a solid foundation for the formation of joint force in scientific and technological innovation.

At the same time, we actively promoted external collaboration, established a scientific and technological innovation system featuring "small inner brain + big outer brain", and integrated external resources to promote the technological progress and product upgrading of the Group. In 2023, under the premise of clear-cut innovation direction and goals, we jointed hands with external units to speed up the innovation work. We have cooperated with a number of top universities and research institutions in China, including Tsinghua University, Shanghai Jiao Tong University, Shanghai University and the National Innovation Center par Excellence, of which some have reached the strategic cooperation.

Integrated Network

In terms of the construction of scientific research talents, the Group attaches great importance to the construction of the strategic support system for human resources, and is committed to establishing the organizational system featuring orderly management and efficient collaboration, and an open and cooperative scientific and technological innovation ecology, so as to strengthen the reserve of scientific and technological talents, enhance technical exchanges and cooperation, carry out the introduction and cultivation of leading talents in hardcore science and technology, and elevate the core competitiveness.

According to the development needs and goals of the "Three-year Action Plan of Shanghai Electric for Tackling Key Problems in Science and Technology", we have formulated a high-end talent introduction plan to determine the types and number of talents to be introduced and the methods of introduction, while we have reinforced the cooperation between enterprises, universities and research institutes, and created good conditions for the earlier discovery of scientific and technological innovation talents and the introduction of outstanding talents through the integration of production and education.

In 2023, under the strategic guidance of "integrated network" for the cultivation and flow of scientific and technological talents of the Group, we endeavored to explore the establishment of a multi-level training system for scientific and technological experts, new industry leaders, scientific and technological project leaders, and young scientific and technological talents by centering on the Group Party Committee's No. 1 Topic of the "Research on Shanghai Electrical Scientific and Technological Innovation and the Development of Scientific and Technological Talents under the New Situation", planned and organized lectures by scientific and technological experts, exchange of new industry leaders, training of scientific and technological project leaders and others, so as to present the technological frontier and research results in their respective fields to the Group, boost the exchanges on "underlying technologies" and enable technological innovation to generate the spillover effect.

R&D Investment

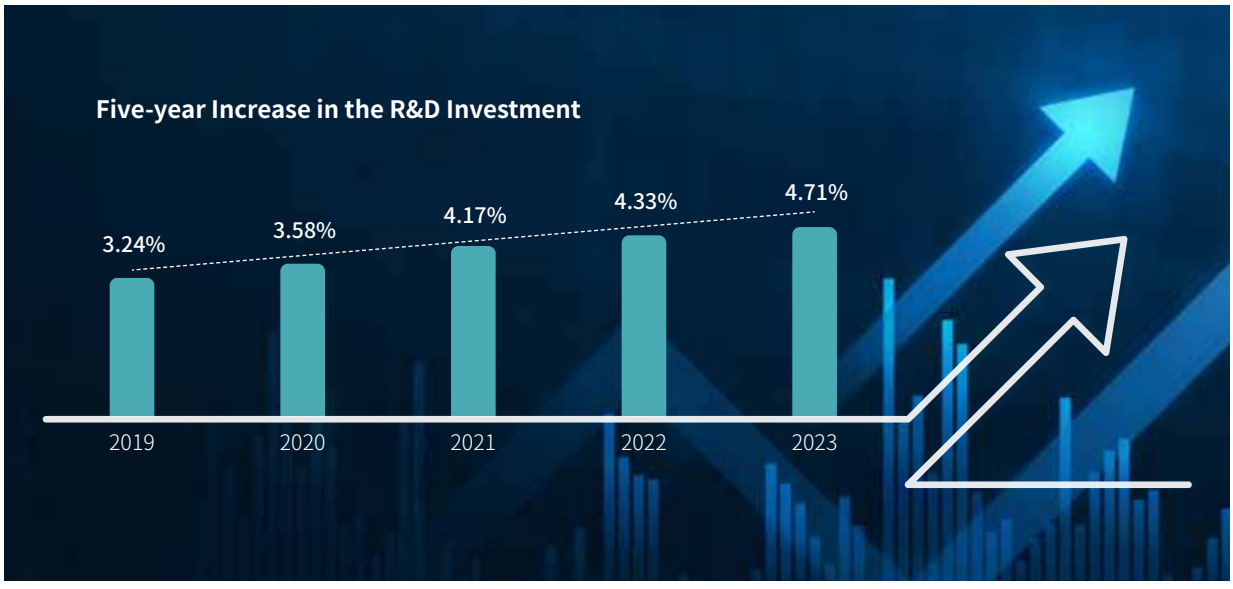
In order to further promote scientific and technological innovation, we have developed the policy of "R&D Investment and Profits as Assessment Metrics of Shanghai Electric", aiming to encourage the Group's enterprises to increase R&D investment in strategic key areas of the Group, upgrade the major technological innovation in existing industrial fields, and fully stimulate the enterprises' vitality and motivation of scientific and technological innovation.

Under the overall guidance of a series of planning measures of the Group, Shanghai Electric has continued to increase its investment in scientific research, while keeping an eye on the proportion of investment in emerging industries, and striving for transformation and upgrading.

R&D Investment in 2023

The Group carried out a total of **796** scientific research projects and spent RMB **5.381** billion on the R&D, representing the R&D investment rate of **4.71**%, and the highest in the past five years.

The proportion of the R&D investment in emerging industries hit **33.5**%.



Scientific Research Achievements

In 2023, a batch of projects in emerging industries and existing industrial fields achieved some significant breakthroughs.

Wind power field

The new generation of Poseidon platform 16+MW all-sea platform units were released;

Photovoltaic field

The efficient N-type double glass module was successfully manufactured;

Energy storage field

The independently-developed and designed 500kW/3000kWh prefabricated cabin-type energy storage module Changshou No. 1, was successfully developed; The world's first set of 300MW compressed air energy storage series large-capacity motor, independently-developed by the Company, was successfully manufactured; The centralized energy storage converter EPCS 2000-D products passed the third party form test and received the CQC test report;

Hydrogen energy field

The self-developed 2000Nm^3/h alkaline electrolyzer and 100Nm^3/h differential pressure PEM electrolyzer were successfully manufactured;

Nuclear energy field

Huaneng Shidaowan HTGcooled Nuclear Power Plant was officially put into commercial operation. Shanghai Electric, as one of the important participating units, provided the reactor pressure vessel, metal reactor internals, control rod drive mechanism, absorption ball shutdown system, steam turbines, main helium fans, helium compressors and other main equipment. The world's first full high temperature superconducting Tokamak device HH-70 host system was shipped and the world's first EXL-50U compact fusion device vacuum chamber was delivered as a whole, in which Shanghai Electric is an important participating unit.

Coal power field

After the parameter upgrading and transformation operation of CNNE Taishan Power Plant Unit 2, which was contracted by EPC of Shanghai Electric, the coal consumption of the unit for power supply declined from 314.52g/KWH to 288.58g/KWH, marking the complete success of the research and demonstration project of China's first 600 MW subcritical wet cooling unit parameter upgrading and technological transformation;

Gas power field

In collaboration with Datang Haikou Power Plant, we completed a series of work such as burner upgrading, monitoring and control system optimization, and on-site installation and commissioning of hydrogen mixing pry, and we successfully achieved the independent upgrading and demonstration verification of large F heavy-duty in-operation gas turbine hydrogen mixing technology;

Environmental protection field

We developed the county-wide domestic waste full-component resources utilization technology, and completed the 500t/d Huaiji County rural domestic waste recycling demonstration project;

Basic parts field

The self-developed metro A-type axle box bearing and traction motor insulation bearing have successfully completed the train line passenger operations; we completed the production of the first domestic 920mm cylinder diameter crankshaft in the whole industry chain, breaking the foreign monopoly in one stroke;

Elevator field

LNK smart elevator digital solution was officially released. LNK was a digital solution for elevators, independently developed by Shanghai Mitsubishi Elevator. It's also a cloud computing technology platform with high security, high real-time and high reliability, which has passed the Level-3 information security test.

In 2023, the five scientific research achievements of Shanghai Electric won the Shanghai Science and Technology Progress Award, of which the "Key Technology and Application of Typical Industrial Process Operation Optimization", of which Shanghai Electric Power Generation Environment Protection Engineering Company is a participating unit, and the "Processing Technology and Equipment for Aerospace High-performance Critical Parts Shape and Property Collaborative Control", of which Shanghai Machine Tool Works is a participating unit, won the first prize of Science and Technology Progress Award. In addition, the "Key Technology and Application of Complex Functional Surface Intelligent Sensing Milling Robot Equipment" of Shanghai Electric Power Equipment Company, the "Key Technology and Equipment Industrialization for the Rail Transit Automatic Train Control System Interconnection" of Shanghai Electric Thales, and the "Key Technology and Application of Smart Power Quality Management Device and Flexible Grid-connected Control" jointly declared by Shanghai Electric Power Transmission & Distribution Group and Shanghai Electric Power-Electronics Company, won the second prize of the Science and Technology Progress Award, which fully demonstrates the outstanding strength of Shanghai Electric in technological innovation and R&D.

Case Shanghai Electric presented multiple scientific and technological innovation achievements at the 23rd China International Industry Fair

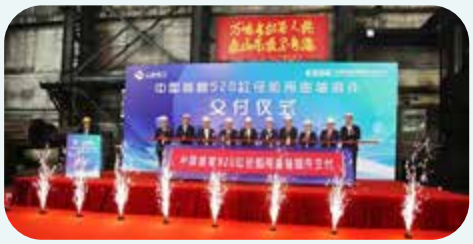
In September 2023, the 23rd China International Industry Fair opened, and Shanghai Electric made an amazing appearance with multiple scientific and technological achievements. At this Fair, with the theme of "Enjoy Zero Carbon Life and Look to the Future with Intelligence", Shanghai Electric centered on the three major business fields of "intelligent energy", "intelligent manufacturing" and "digitalization and intelligence integration", and created five major theme exhibition areas and two immersive viewing exhibition areas. Shanghai Electric presented to visitors the equipment manufacturing digital achievements made by Shanghai Electric in in-depth practice of "digitalization and intelligence integration", the integrated solutions of "wind power and photovoltaic power storage and distribution", the innovative products of "new and specialized " enterprises and other cutting-edge technologies in various business fields, leading the visitors to explore the "zero carbon" development trend from a new perspective, and experience the beauty of industry.

"New and Specialized " exhibition area at the Shanghai Electrical Industry Fair

Shanghai Electric always puts the cultivation of "new and specialized" enterprises as the main direction, and currently has 38 "new and specialized" enterprises and 5 "small giant" enterprises. At the exhibition site, Shanghai Electric specially opened up the "new and specialized" exhibition area, showing the large F-class heavy gas turbine, high temperature gas cooled reactor, UHV transformer, intelligent universal air circuit breaker and other products, which allowed the visitors to feel the world-class innovation and technical strength at close range.

Case China's first set of large-scale 920 cylinder diameter marine crankshaft forgings were successfully delivered

In May 2023, China's first set of large-scale 920 cylinder diameter marine crankshaft forgings developed and manufactured by Shanghai Electric SHMP Casting & Forging were successfully delivered. For a long time, the 700mm and above cylinder diameter large-sized marine diesel engine crankshaft forgings in China all relied on overseas imports. Whether to achieve the localization of this type of super large marine diesel engine has become one of the key factors to turn China from "a shipbuilding country" to "a shipbuilding power".



China's first set of 920 cylinder diameter marine crankshaft forgings were successfully delivered.

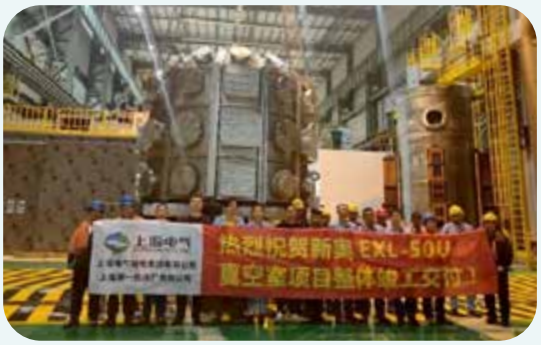
SHMP Casting & Forging of Shanghai Electric has centered on the national strategy, concentrated superior resources, and fully carried out the R&D and manufacturing task of 920mm cylinder diameter large crankshaft forgings, and finally developed a series of key technologies for large-sized marine diesel engine crankshaft forgings, such as high-clean smelting, precision forging bending forming, high-strength tissue performance control and large-section flame fast cutting, successfully achieving the efficient and domestic manufacturing of large marine diesel engine crankshaft forgings with the cylinder diameter of more than 700mm, and laying a solid foundation for building a safe, independent and controllable industrial chain and supply chain for ship power and for enhancing international competitiveness.

Case **The two "world's firsts" of Shanghai Electric in nuclear power units**

In October 2023, the world's first full high-temperature superconducting Tokamak HH-70 host system, and the world's first EXL-50U compact fusion device vacuum chamber, of which the R&D and manufacturing Shanghai Electric Nuclear Power participated in, were delivered, marking that Shanghai Electric has continuously achieved the "first set" breakthrough in the nuclear power field.

Controlled nuclear fusion is called "artificial sun", characterized with the advantages of sufficient fuel supply, low energy consumption, low carbon emissions and high safety performance, which is the ultimate energy solution. With continuous technological progress and scientific and technological innovation, Shanghai Electric has made remarkable achievements in the field of fusion power generation, and will continue to increase the efforts for scientific and technological innovation in the future, deepen and enlarge the nuclear power field, and contribute to energy transformation.

The world's first full high-temperature superconducting Tokamak HH-70 host system



The world's first EXL-50U compact fusion device ENN Vacuum Chamber was delivered as a whole

As for scientific and technological achievements, we have probed into the assessment index system of scientific and technological achievements, and the combination of internal knowledge, cases and external experience and practices provides a more professional methodology for the construction of the assessment index system, and contributes to a set of post-project evaluation tools that comply with the requirements of Shanghai Electric and can be applied in practice. We have made the three lists, "List of Scientific and Technological Achievements", "List of Input Factors Required for Research Project Approval (development)" and "List of Main Factors Affecting the Output Process of Scientific Research Projects". In addition, we have collected and sorted out the 6 frequently-used algorithm models for multi-index comprehensive evaluation, and summarized the 8 main indicators for post-project evaluation, so as to scientifically assess scientific research achievements and enhance the scientific research quality.

Intellectual Property Management

Shanghai Electric has comprehensively reinforced intellectual property management, closely combined intellectual property with scientific research and innovation, and established Shanghai Electric intellectual property ecosystem. In strict accordance with the Patent Law of the People's Republic of China, the Copyright Law of the People's Republic of China, and the Guide to the Intellectual Property Management in Industrial Enterprises, and other relevant laws and regulations, we have formulated and implemented the Intellectual Property Management Measures, the Guide to Intellectual Property Management and other system documents, and actively promoted industrial groups to develop detailed rules and regulations, ensure that each innovation achievement can enjoy full protection and utilization.

In order to reach the standardization and systematization of intellectual property business, Shanghai Electric has set up an intellectual property service platform and established a professional database, which provides professional intellectual property search and analysis, management consulting, litigation support, training, trading and other services in the course of scientific and technological innovation, covering the entire cycle of scientific and technological innovation projects. In addition, we have also specially developed and released the White Paper of Shanghai Electric on Intellectual Property Service Solutions, which systematically introduces the intellectual property service solutions in the entire process of scientific research projects, providing comprehensive support for the intellectual property work of the Group, so as to better boosting and safeguarding scientific and technological innovation. At the same time, we have set up the full-time positions for intellectual property personnel, built a team of intellectual property personnel, and enhanced the professional management, ensuring the orderly development of intellectual property work.

In 2023, Shanghai Electric continued to optimize the intellectual property management, promoted intellectual property rights protection assistance and intellectual property protection, and ensured that innovative achievements could be fully protected. We actively boosted the establishment of rights protection assistance workstation of Shanghai Electric, made in-depth investigation, and learned from advanced management experience. By holding intellectual property salons and seminars with surveyed enterprises, we have formed the work results such as Survey Situation of Typical Enterprises Inside and Outside the Group and Guidelines of Shanghai Electric on Rights Protection Assistance Work, so as to accurately grasp the development trend of intellectual property rights and intensify intellectual property rights protection assistance work. In terms of the further protection of the Group's intellectual assets, during the reporting period, we paid a visit to the Group's subsidiaries and formed the Summary Report of Shanghai Electric Group on Intellectual Assets Topic, thus guiding the standardization and normalization of intellectual property management.

We attach importance to intellectual property training and create an intellectual property culture. During the reporting period, we provided training for key personnel on technology introduction, research and development, and cultivation of high-value patents, so as to enhance their expertise in IP protection and utilization. At the same time, we continued to hold "Intellectual Property Week" activities, and through publicity and education, popularized intellectual property knowledge, raised employees' intellectual property awareness, and create a good intellectual property atmosphere.

Intellectual Property Training

2023

Number of Patents Authorized

835

Number of Invention Patents

388

Number of Valid Patents

6,935

Number of Invention Patents

2,931

Intelligent Development

As an important part of the Group's development, integrating digitalization and intelligence runs through the whole process of Shanghai Electric's blueprint for digital transformation and carbon peak and neutrality goals. Through the in-depth integration and application of digital and intelligent technology, Shanghai Electric is stepping up the innovation and transformation of its business model in response to the development trend of the global digitalization and low carbonization. We have made joint efforts in energy equipment, industrial equipment and integrated services, used cutting-edge hardcore technology for innovative products, provided users with integrated solutions, and boosted intelligent development.

Energy Equipment

As one of the largest energy equipment manufacturers in China, Shanghai Electric prioritizes the national strategies of "carbon peaking and neutrality" and comprehensive transformation to the green and low-carbon development through three implementation paths of "energy alternative, energy efficiency increase, and resource utilization". Meanwhile, Shanghai Electric built an intelligent and collaborative smart energy system using intelligence and digitalization to help accelerate the optimization and upgrading of industrial structure.

On the one hand, relying on the advantages of integrated energy system solutions, Shanghai Electric actively built and promoted the construction of integrated smart energy demonstration projects, created "smart solutions" at the three different levels: consumer side, power generation side and power grid side, so as to ease problems in the operation and consumption of new energy, and established a new power system focusing on new energy. On the other hand, Shanghai Electric actively integrated industrial Internet, big data and artificial intelligence technology to provide users with big data analysis services, equipment operation and maintenance services and full-life-cycle management services, and achieve centralized control and intelligent operation and maintenance of energy storage power stations, significantly enhancing the intelligence level and service quality of the energy system.

In 2023, we made great efforts to promote the construction of smart energy through technological innovation in terms of coal power, nuclear power, gas turbines, wind power, photovoltaic power and others.

Coal power

- The number of orders made for ultra-supercritical reheating coal power units and the number of units put in operation both maintained the first place in the world, and we continued to set records for the lowest coal consumption in the world (the minimum coal consumption of power generation was 248.86 grams, and the highest power generation efficiency of the units reached 49.4%).

Nuclear power

- It has become the only equipment manufacturer in China with the capability to supply a full set of main equipment for PWR nuclear island and large-scale nuclear power forgings.
- It has become the only equipment manufacturer in China with the orders for a full set of core machinery equipment of high temperature reactor nuclear island;
- It has become the most complete equipment manufacturer of magnetic confinement nuclear fusion host system in China;
- Huaneng Shidaowan project, the world's first spherical bed modular high-temperature gas cooled reactor project, has been put into commercial operation, providing a full set of nuclear island equipment.

Gas turbine

- It's the domestic reburner manufacturer having E class, small F class and F class manufacturing performance at the same time, and has a complete industrial chain from gas turbine research and development, manufacturing and sales to services;
- It has hydrogen-doped combustion capacity, laying a solid foundation for the future utilization of hydrogen energy.

Wind power

- It launched multiple large megawatt offshore wind turbines, including the new generation of Poseidon Platform 16+MW all-sea platform units;
- The world's first floating wind- photovoltaic-fishing integration project "Guoneng Sharing" platform has been completed, including 4MW offshore floating fan and tower developed by Shanghai Electric Wind Power.

Photovoltaic products

- It has successfully entered the heterojunction photovoltaic cell industry;
- The first batch of equipment for Phase I project of 1.2 GW high efficiency photovoltaic cell and module project was installed.

Case Shantou smart energy demonstration project

Shantou Smart Energy Demonstration Project is the largest smart energy project in Guangdong Province, and it is also the first industrial park-level "Energy Internet plus" demonstration project integrating "wind power, photovoltaic power, power storage, charging and intelligence". The project integrates smart new energy, smart energy storage, smart distribution network, digital factory, smart park and smart transportation system, providing one-stop industrial Internet solutions from perception layer, network layer and platform layer to application layer, empowering energy management in modern industrial zones. It's one of the first batch of green smart energy projects and the 5G industrial Internet smart wind power application benchmark demonstration project in China. The 11MW wind turbine used for the project can generate 40.4 million KWH of electricity annually, which can meet the one-year electricity demand of about 20,000 households, equivalent to reducing carbon dioxide emissions by 34,000 tons. In addition, with the help of the smart energy management platform, while ensuring the reliability of power supply and high-quality power quality, it can achieve energy self-organization, self-optimization, self-generated and self-use, and surplus electricity on-grid sales. It is understood that the annual power generation of EW11.0-208 unit plus the 3.1 million KWH the annual photovoltaic power generation of the park, is expected to achieve 35.4 million KWH of direct connection to the grid, after satisfying the power demand in the park. According to the current benchmark price 0.453 yuan/KWH for the coal-fired power generation in Guangdong Province, only the power directly linking to the grid can create the direct economic benefits of about RMB 16 million/year.

Shantou Smart Energy Demonstration Project

Case Green hydrogen production-storage-use integrated demonstration project

Shanghai Electric's green hydrogen production-storage-use integrated demonstration project has completed the engineering verification. The project is the country's first demonstration project of "renewable energy power generation +PEM electrolytic water hydrogen production system + hydrogen storage + fuel cell power generation" applied to industrial parks, and is also the domestic largest multifunctional testing and verification platform for PEM electrolytic water hydrogen production system, aiming to create a comprehensive smart energy demonstration of "energy network and hydrogen storage" in Minhang Industrial Park, open up the bottleneck from research and development to engineering application, and achieve the development of megawatt modular efficient PEM water electrolysis hydrogen production equipment and system.

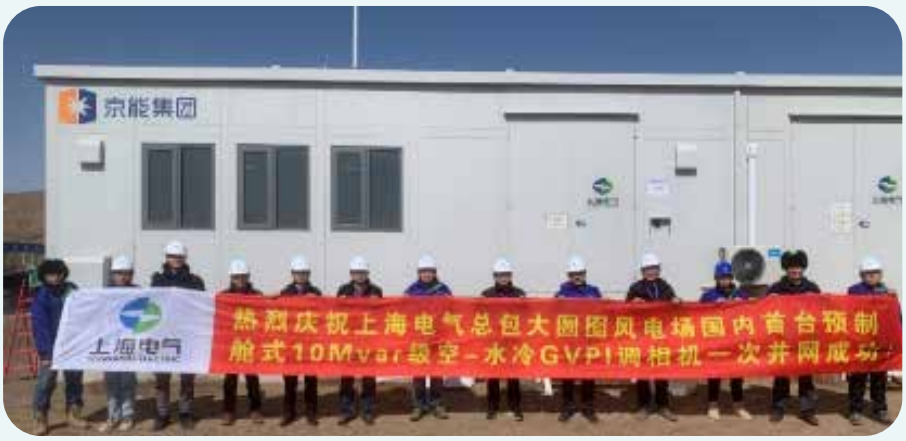
The project is made up of hydrogen production workshop, electrical room, secondary room, auxiliary workshop, centralized control room, exhibition hall and others. It adopts wind power and photovoltaic new energy generation coupling with the grid power, equipped with high conversion efficiency of IGBT power supply, 2 ~ 300Nm^3/h PEM electrolytic tank and 1.5MW system test platform, and equipped with hydrogen storage tank and 30kW hydrogen fuel cell system at the rear end, and takes one-click start-stop and unattended and remote mobile monitoring, contributing to the hydrogen production system efficiency exceeding 75%. The successful verification of the demonstration project has played a big supporting and demonstration role for the all-round promotion of the green hydrogen industry chain.

Green hydrogen production-storage-use integrated demonstration project of Shanghai Electric

Case The development and application of the distributed phase modulator used for wind, and photovoltaic and other new energy

The distributed phase modulator is a device used to adjust the power factor of the power grid and enhance the voltage quality of the power system. When new energy such as wind and solar energy is connected to the power grid, it can help balance the power grid, ensure the stability of the power supply, and enhance the consumption capacity of renewable energy.

Shanghai Generator Plant has embraced the series and modular design concept, and carried out the research and development of new distributed phase modulator units in line with the scientific and reasonable generator product development process (PDP process), and continued to update the iterative products. In March 2023, the distributed 10Mvar class air-water cooled phase modulator was successfully connected to the grid at Jingneng Zhinvquan, and in April 2023, the two units were officially put into commercial operation. This project is the first prefabricated cabin-type distributed phase modulator, and is also the first closed air-water cooled distributed phase modulator in China. After the modulator was put into operation, the new energy generation climbed by 36.56% on a year-on-year basis, and the limited power supply dropped by 284.60% on a year-on-year basis, the power supply-limiting rate fell from 37.95% to 10.43%, and the load rate increased from 30% to 84%, making the new energy stations basically no longer affected by the grid's power supply limitation, bringing significant environmental and social benefits.



The distributed 10Mvar class air-water cooling phase modulator was successfully connected to the grid

Industrial Equipment

Relying on the rich experience and technical advantages in automation equipment and services, Shanghai Electric has made full use of advanced information technologies such as the Internet, the Internet of Things, big data and cloud computing to provide industry-leading intelligent manufacturing system solutions, automation products and equipment, production management software systems and intelligent factory solutions, to create a whole intelligent manufacturing industry chain from "basic products, intelligent equipment, software and integration to services".

In 2023, based on the essence of manufacturing, we took into full consideration the existing enterprise reality, developed the Three-year Action Plan of Shanghai Electric for Intelligent Manufacturing for 2023-2025, and determined the five main tasks of "intelligent manufacturing guides demonstration action, intelligent manufacturing speeds up development action, intelligent manufacturing empowers improvement action, intelligent manufacturing secures safety production action, and intelligent manufacturing promotes talent cultivation action". It's aimed to consolidate and improve benchmarking demonstration enterprises, to play a leading role as "a locomotive", to accelerate the intelligent manufacturing pace of small and medium-sized enterprises, to boost the intelligent and digital transformation of large, medium and small-sized enterprises within the Group, and to lay a solid foundation for intelligent manufacturing through the digital manufacturing integration and shared development.

Case **Shanghai Mitsubishi Elevator won the title of the national intelligent manufacturing demonstration factory**

In December 2023, Shanghai Mitsubishi Elevator was honored on the list of the 2023 intelligent manufacturing demonstration factories released by the five ministries such as the Ministry of Industry and Information Technology, becoming the first elevator intelligent factory in Shanghai.

Through the use of numerical control equipment, industrial robots and equipment control systems, Shanghai Mitsubishi Elevator has taken the lead in building intelligent assembly lines for traction machines, intelligent production lines for door panels and intelligent production lines for escalator trusses, so as to achieve efficient collaborative work and ensure the production quality and efficiency of important elevator components. At the same time, it has arranged intelligent inspection equipment for the main production lines, to carry out online inspection, analysis, rating and prediction of product quality, and conduct online monitoring through the self-developed SCADA system. In addition, Shanghai Mitsubishi has also used the self-developed remote service system (REMES) and the big data platform to analyze the operating status of elevators in the whole life cycle, thus achieving remote operation and maintenance of the elevators.

Shanghai Mitsubishi Elevator's Smart Factory construction has promoted the full-process integration and optimization of enterprise design, technology, manufacturing, sales and services, realized the in-depth integration of intelligent products, intelligent manufacturing and intelligent services, and enhanced the quality level and safety level of elevator products in the whole life cycle.

Shanghai Mitsubishi Elevator's Intelligent Factory

Integration Services

Actively responding to the strategic development requirements of Shanghai to comprehensively promote the digital transformation and build an international digital capital with global influence, Shanghai Electric gives full play to its industry experience and technological advantages and empowers the city constructions in all aspects. As an "enabler", Shanghai Electric provides transformation and upgrading services for traditional urban infrastructure, such as intelligent transportation infrastructure, smart energy infrastructure, and provides more optimized and efficient intelligent infrastructure solutions by integrating multiple businesses such as industrial Internet, rail transit, sewage treatment, intelligent elevators and etc.

Case **Shanghai Electric Supply Chain Collaboration Platform was selected in the list of digital and intelligent supply chain cases**

As a typical practice of supply chain construction, the "digital and intelligent supply chain collaboration platform for large equipment manufacturing industry" developed by Shanghai Electric Digital Technology has been successfully selected into the "List of 2023 Digital and Intelligent Supply Chain Cases" of the Industrial Internet Conference. The platform practices the digital and intelligent upgrading and effect improvement of the supply chain business links empowered by using new technologies, new models and new methods in China. It is an integrated application solution based on the digital and intelligent supply chain collaboration platform, focusing on high-end equipment enterprise users. Through packaging and modular models and microservice components, Shanghai Electric has effectively summarized the experience in the high-end equipment industry for many years, relied on the open function of the platform to share it with more enterprises, and provided key supply chain service support for advanced manufacturing technology, which has played a role in enhancing the quality and efficiency of discrete manufacturing enterprises.

Case **With digital "black technology", the virtual and invisible track was used to create a low-carbon and environment-friendly public transport for Lingang**

During the 14th Five-Year Plan period, especially since the concept of five major new cities in Shanghai was finalized, Shanghai Lingang New Area has launched a special plan for commercial development. In order to resolve the commuting needs of residents in the new area, Shanghai Electric Intelligent Transportation Technology Co., LTD., a subsidiary of Shanghai Electric Automation Group, developed an intelligent digital rail transit system (iDRT) to provide experience for and contribute to the promotion of lower-carbon and safer mass transport in domestic and overseas cities.

Among them, the T1 line vehicle is the country's first medium volume vehicle to use the digital track rubber wheel tram system, which not only has a full sense of vehicle design, but also has the blessing of "black technology" and innovative model, which is a "new star" in the public transport system of Lingang New area.

Compared with trams, the iDRT system used for T1 line is characterized with less infrastructure, wider selection of vehicles, less damage to the original municipal facilities, and lower costs. Compared with BRT, the iDRT system is marked with multiple advantages such as flexible train formation, less road resources occupied by virtual track under the same conditions, safer and more reliable operations, and vehicle intelligence, road informatization, operation intelligence and cost optimization. The commercial application of the iDRT system can further boost the research and preparation of Shanghai digital tramcar standards, promote the adoption of iDRT system solutions on unmanned demonstration lines, and bolster the collaborative development of intelligent maintenance and other rail transport-related businesses.

Green Products

Building a "zero carbon" future is the shared goal of all mankind. Shanghai Electric has actively embraced the green trend, accelerated the R&D and innovation of environmental protection technology, actively launched green and low-carbon products and made more efforts for the promotion and application of relevant achievements. During the reporting period, Shanghai Electric Poseidon Platform 16+MW all-sea platform unit was selected in the List of Shanghai Green and Low-carbon Technology Products for 2023 released by Shanghai Municipal Commission of Economy and Information Technology.

Case **"Poseidon Platform 16+MW All-sea platform unit" was selected as one of the Shanghai top 10 green and low-carbon innovative technology products for 2023**

In June 2023, Electric Wind Power Group launched a new generation of Poseidon Platform 16+MW all-sea platform unit, which was the largest single-unit capacity and largest turbine diameter offshore wind power unit in the world at that time. Backed up by such advantages as large capacity, large wind wheel, high yield, high power generation, high reliability, high carbon saving, and scalability, the Poseidon Platform 16+MW all-sea platform unit was selected as one of the Shanghai top 10 green and low-carbon innovative technology products for 2023.

In terms of low carbon and innovation, the single unit can generate more than 66 million KWH of clean electricity each year, equivalent to reducing coal consumption by 22,000 tons and decreasing carbon dioxide emissions by 54,000 tons.

A new generation of Poseidon platform 16+MW all-sea platform units

Case "Super Green Power Bank" -- Shanghai Electric's compressed air energy storage system

In the new power system, energy storage is a crucial part, and provides a necessary guarantee for the new energy consumption and the grid security. In this regard, large-capacity and high-parameter compressed air energy storage can effectively cope with the disadvantages of wind, solar and other new energy power generation that are greatly affected by environment, and tackle problems such as volatility, intermittence and randomness, which is called a "super green power bank".

In August 2023, the world's first set of 300 MW compressed air energy storage series of large capacity motor independently developed by Shanghai Electric was successfully launched, and the series of motor was used for Hubei Yingcheng 300 MW compressed air energy storage power station demonstration project, which is the world's first (set) 300 MW compressed air energy storage demonstration project. Following the completion of the project, it will be featured with the world's largest single-unit power, the world's largest energy storage scale, and the world's highest conversion efficiency in the field of non-secondary combustion compressed air energy storage. Shanghai Electric has a compressed air energy storage system 10-350 MW system integration equipment scheme, which can satisfy air energy storage projects in multiple application scenarios. Through the coordinated optimization of equipment parameters, we can further enhance the efficiency of the energy storage system, make the more efficient and stable use of new energy, and bolster energy transformation and green development.

The world's first set of 300 MW compressed air energy storage series large capacity motor was successfully launched

Case The moulded case circuit breaker RMM3 series product of Shanghai Renming Electric Apparatus Works won the "Product Carbon Footprint Certificate".

In July 2023, the moulded case circuit breaker RMM3 series product of Shanghai Renming Electric Apparatus Works won the "Product Carbon Footprint Certificate", marking that the enterprise has been recognized by the competent authority on the path to achieving the "carbon peaking and carbon neutrality" goals and green development, and highlighting the green competitiveness of the enterprise.

RMM3 series of moulded circuit breaker is one of the major series products of Shanghai Renming Electric Apparatus Works. Through digital and intelligent empowering, it can manage the carbon emissions in the whole life cycle of the product, and track, analyze, evaluate and supervise the carbon footprint, and make visual and quantitative analysis of the carbon emissions in the whole process, enabling the carbon emission reduction to run through the entire process of manufacturing and production. At the same time, under the premise of green and environmental protection, it has constantly optimized and upgraded the product performance. The products cover eight types of moulded current levels, adapt to four kinds of working voltages, with the rated breaking capacity of up to 100kA, and can also provide users with leading and innovative green products and low-carbon energy-saving power distribution solutions through the scientific arrangement of multiple installation methods, multiple accessories combinations and multiple operating methods.

The moulded case circuit breaker RMM3 series won the "Product Carbon Footprint Certificate"

Case **"Hualong No. 1" Fangchenggang Unit 3 was connected to the grid**

In January 2023, the first "Hualong No. 1" nuclear power unit in the west of China, namely CNG Guangxi Fangchenggang Nuclear Power Plant Unit 3, was successfully connected to the grid for the first time. The project is scheduled to build 6 million kilowatt-level nuclear power units, which are expected to provide 48 billion kilowatt-hours of clean electricity per year after they are completed, equivalent to reducing the standard coal consumption by 14.39 million tons and cutting the carbon dioxide emissions by about 39.74 million tons per year, compared with coal-fired power stations of the same scale.

"Hualong No. 1" Fangchenggang Unit 3 was connected to the grid

Data Governance

With the advancement of the Group advances digital transformation, the data governance has become increasingly important. On the one hand, data governance can help better understand and use data, so as to raise the accuracy and efficiency of decision-making; On the other hand, the establishment of an effective data security management system, including encryption, backup, recovery and other policies, can help reduce the risks arising from data leakage and data loss, and protect the core competitiveness of enterprises and customer privacy.

The Digital and Information Technology Department of the Group coordinated the data governance system construction of the Group. In 2023, after the Management Measures for Data Security Risk Assessment and the Interim Regulations on Accounting Treatment of Enterprise Data Resources were released by the state, and the Action Plan for Promoting the Innovation and Development of Data Factor Industry Based on the Emerging Industry of Digital Economy (2023-2025) was issued by Shanghai, the Group formulated the Rules for Data Interface Management and Rules for Lifecycle Data Processing and other systems to standardize the management of the data governance system and achieve the safe sharing of platform data.

In terms of data interface governance, we continued to optimize the data services for enterprises. Data interface governance can not only avoid repeated data input, cut development costs and raise work efficiency, but can also promote data reuse and flow across enterprises and business fields, and explore data metering and billing.

In terms of data infrastructure platform construction, we actively promoted the industrial Internet platform to become a hub for data asset bearing and configuration, made full use of application scenario advantages and industrial data advantages, and optimized the allocation efficiency of manufacturing resources, thereby boosting the interconnected development of industrial chain, value chain, and innovation chain.

- In 2023, we centered on building the industrial Internet platform of "SEunicloud", which establishes the data basis by means of industrial equipment data collection, communication protocol conversion and edge computing and processing, and based on the general PaaS framework achieves big data processing, industrial data analysis, industrial microservices and other innovative functions.

- The "Shanghe" intelligent supply chain platform promoted by us, makes use of the supplier trading data accumulated in the supply chain, ERP and other group platforms, to cooperate with banks in piloting the "order financing" business.

- Our contract management platform collects relevant enterprise company data, judicial information, business information, non-public financial report information, public opinion information and other data. Based on the Group's risk identification model, we can promptly identify and remind restricted enterprises, warned enterprises and fake state-owned enterprises, give full play to the value of data, and promote safety contract management.

Case **"SEunicloud" was selected as a national cross-industry and cross-field industrial Internet platform**

"SEunicloud" industrial Internet platform, is an industrial Internet platform with unified data, unified platform and unified standards, established based on Shanghai Electric's years of experience in the digital transformation of equipment manufacturing industry, which opens up the whole scene closed-loop of industrial APP development, issuance and application, and provides users with safe and reliable digital services and industry solutions featuring rapid construction and efficient interconnection.

After a series of optimization iterations, the "SEunicloud" industrial Internet platform has derived multiple industry sub-platforms such as wind power, photovoltaic and energy storage, and upgraded common products and tools to create cloud configuration tools, lightweight industrial Internet platform and other products. In addition, in order to continue to improve the easy use of the platform, we have further launched the "SEunicloud" mobile terminal, upgraded the intelligent cloud box and created "digital link" products. At the end of 2023, the platform had more than 460,000 units of connected equipment, and served more than 400 enterprises in the 13 industries such as power, energy, equipment manufacturing, and light industrial machinery, in the 9 fields such as production & manufacturing, operation & maintenance services, and energy conservation & emission reduction, and was successfully selected as a national cross-industry and cross-field industrial Internet platform.

In terms of data convergence and interoperability, we continued to promote data transactions and flow, and the value release under the premise of abiding by laws and data security requirements, and achieved the interconnection and sharing of some data. For example, we worked with some banks to pilot the sharing of supplier data, so as to provide financial services for SMEs suppliers and help them with healthy development.

Exercising Innovative Mind to Pursue Excellence

Fully carry forward the spirit of craftsmanship, continue to enhance the quality management system, improve the maturity and advancement of quality management, and deliver high-standard products to highlight our manufacturing level.

Quality Management

Taking quality as the foundation of development and striving for excellence, Shanghai Electric strictly abides by the laws and regulations such as the Product Quality Law of the People's Republic of China and the Regulations of the People's Republic of China on the Administration of Industrial Product Production Licenses. We have formulated a complete set of quality work standards in years of practice, including the general principles for quality management, quality work guidance, and Provisional Measures for Material Quality.

Over the years, Shanghai Electric has continued to promote the quality system certification work. As of the end of the reporting period, all of the Group's manufacturing enterprises had completed the ISO 9001:2015 quality management system certification, with a solid quality management level.

Shanghai Electric's General Principles for Quality Management

General principles for quality

- Customer-oriented quality work guidance
- Corporate quality management work
- Corporate quality test work
- Corporate measurement work
- Corporate standardization work
- Quality management and entry management standard for corporate suppliers

Shanghai Electric has a complete equipment supply chain system and a team of experienced manufacturing supervisors to monitor the full process from equipment ex-factory to acceptance to ensure product quality. At the same time, we strictly focus on the product quality evaluation, assess on and set targets for product grade rate, quality loss rate, material quality issue and key quality problems tackling project, etc., so as to ensure product quality, create products with excellent performance, and fully satisfy the market's expectations and needs.

During the reporting period, there were no recalls for products being sold or delivered due to product safety reasons.

Quality Training and Publicity

During the reporting period, Shanghai Electric continued to promote quality training and cultural publicity, enhanced the overall skill and quality level of employees through employee skills competition, quality month activity and others, and cultivated employees' quality management capability, ensuring the quality awareness is really implemented at various levels of the Company.

Case **Li Bin Cup, thousands of sails compete against each other, making the waves run high**

"Li Bin Cup" staff skills competition has become a major brand of Shanghai Electric to help enhance employees' skills. In recent years, the competition has actively explored the practice of enterprise personalized competition items and the sub-field competition mode, attracting more employees to participate in the competition. It had developed from the initial 12 competition items and 18 competition job types and to 32 competition items and 39 competition job types in 2023. During this year's competition, the digital technology contest, innovation and creativity contest, and industrial APP contest were also carried out, contributing to diversified and multi-dimensional forms of the competition. The scope of the competition has expanded to the three teams of management, science and technology, and skills, forming a "five-in-one" specific operation measures for training, exercising, competition, evaluation and incentive. It aims to cultivate the employees' professional values of creating value with ability and taking pride in superb skills, and help enterprises to achieve high-quality development. Over the past five years, more than 6,200 employees have participated in various types of skills competitions, and a large number of outstanding skills talents have come to the fore.

Industrial Robot Programming and Maintenance Team Competition

Fitter Special Skills Competition

Shanghai Mitsubishi Elevator Central China Region Elevator Service Skills Competition

Putting Customer First and Deepening Cooperation

Putting customers first and shouldering responsibilities for customers, Shanghai Electric keeps a close eye on market dynamics, actively adjusts the strategy, strengthens the market coordination, and constantly enhances the service quality, so as to satisfy the increasingly diversified needs of customers and to become a long-term trusted partner of customers.

Customer Services

Shanghai Electric has constantly improved customer service work and endeavored to provide high-quality and efficient customer services. We have established a complete customer file management system, and constantly improved the customer feedback mechanism, rapid response mechanism and complaint handling mechanism so as to achieve a closed loop of customer services. In addition, in order to better serve major customers, we have developed the system of directors responsible for serving major customers, and carried out exchange visits with major customers to keep smooth communication.

With a view of enhancing the customer service efficiency, we have carried out customer management by taking information technology means, such as putting major customers into the customer information management system. During the reporting period, Shanghai Electric Power Station Service Company updated the original platform brand "E-station Tong" to "Eneng Ke", marking that Shanghai Electric Energy Service Platform entered a new stage of development. This has not only contributed to better brand identification and intellectual property protection for the original platform resources, but has also boosted the transformation and upgrading of the enabling industrial platforms, providing a solid support for more efficient energy services and management.

While ensuring the long-term, stable and safe operation of products, we have always kept an eye on customer needs and feedback, actively respond to customer complaints, and promptly cope with quality disputes. At the same time, the Group has required each subordinate unit to designate a special person responsible for complaint records, and to organize the investigation, analysis and handling of complaints, and to properly tackle them within a limited time and give a satisfactory reply to the complainants.

In terms of customer privacy protection, Shanghai Electric has required all employees to highlight data security regarding customer privacy. We have developed a special customer information confidentiality system, which specifies the handling methods and confidentiality measures of customer information. In addition, we have also enabled the IT operation and maintenance audit system to record and audit the operating behaviors of internal special accounts such as system administrators and support accounts such as external consultants, so as to prevent the disclosure of customer information.

In order to promptly understand customers' satisfaction and latest needs of our products and services, Shanghai Electric entrusts a third-party evaluation center to conduct customer satisfaction surveys every year, covering the Group's subordinate manufacturing, engineering and new industry enterprises, so as to obtain valid customer feedback objectively, improve product quality and service level, and better satisfy customer needs.

In 2023, there was no customer complaint against any of main industrial group enterprises of Shanghai Electric.

Case

Shanghai Electric Nuclear Power took various measures to ensure the smooth delivery of Unit 1 equipment of San'ao Nuclear Power Project

In November 2023, the secondary hydrostatic test for the first steam generator of Zhejiang San'ao Nuclear Power Project Unit 1, in which Shanghai Electric Nuclear Power is a participating unit, achieved a complete success, with all testing standards passed once. In order to meet the one-time passing requirements of the hydraulic test for the first equipment of the unit, Shanghai Electric Nuclear Power actively sorted out the preparations in the early stage of the hydraulic test process, highlighted quality factors in the production schedule, took into full consideration possible human risks, emphasized safety management in production efficiency, and implemented it in strict accordance with the regulations. The success of this hydraulic test is the first step to achieve the successful completion and delivery of San'ao Project Unit 1, and it is also another mark of Shanghai Electric to ensure the realization of year-end breakthroughs and quality improvement.

"Accelerated" Construction of San'ao Nuclear Power Project

Case

Zhongyuan Operation and Maintenance Company sent a letter of thanks to Shanghai Electric Power Station Service Company

At the end of 2023, Zhongyuan Operation and Maintenance Company expressed sincere greetings and heartfelt thanks to Shanghai Electric Power Station Service Company. Zhongyuan Operation and Maintenance Company said that in 2023, the two sides sincerely cooperated with each other and made significant results in multiple projects such as Karachi nuclear power K301 overhaul, Karachi nuclear power K202 overhaul, Chashma nuclear power C116 generator insulation diversion pipe replacement project, and C4 oil motor transformation project. Especially in terms of services for personnel going to Pakistan, Shanghai Electric Power Station Service Company has overcome numerous obstacles to ensure the smooth implementation of the project. It's hoped that the two sides will continue to closely cooperate with each other on the new journey, seek common development, and jointly write a new chapter for China's nuclear energy going global.


中原运维海外工程有限公司

感谢信

Letter of Thanks

Case **The Pancevo project was highly praised by the owners**

In April 2023, the representative of the owners of the Pansevo Gas Turbine Combined Cycle project in Serbia issued a certificate of the units' generated energy of 500 million KWH to the project department, praised the performance and reliability of the units and equipment of Shanghai Electric, and spoke highly of the professionalism and responsibility of the on-site execution and operation & maintenance teams.

The Panchevo Gas Turbine Combined Cycle project in Serbia is the first EPC general contract project of Shanghai Electric in the European high-end market. At the early stage of implementation, Shanghai Electric adopted the method of joint designs made by domestic and overseas experts, and quickly obtained the construction permit, the all-field fire approval permit, and the commercial operation permit of the power plant, creating multiple local records of approval and evidence collection in similar scale engineering projects. Shanghai Electric won full recognition from all parties with its strength, and has laid a solid foundation for its further development in the European high-end market.

The owner representative of the Pansevo project issued a certificate of the units' generated energy of 500 million KWH to the project department

Value Increment

Adhering to the spirit of innovation and pioneering, and keeping up with the development trend of the times, Shanghai Electric continues to seek breakthroughs in green and low-carbon sectors, gives full play to its technological advantages, and strives to provide customers with the best solutions, so as to create greater value for customers and support customers' long-term efforts in energy technology innovation and sustainable development.

Case **Shanghai Electric Turbine Plant held a steam turbine service technology seminar**

In August 2023, Shanghai Electric Turbine Plant held the 2023 annual steam turbine service technology seminar with the theme of "Flexible, Reliable, Intelligent and Efficient", which was attended by more than 100 leaders and experts from 50 customer units across the country. At the seminar, Shanghai Electric Turbine Plant exchanged with customers and shared rich experience in steam turbine overhaul, maintenance and operation, and introduced the Factory's latest service technology solutions to the experts. The successful holding of this seminar has not only strengthened the communication and cooperation between Shanghai Electric Turbine Plant and customers, but has also injected new vitality into the sustainable development and technological progress of the steam turbine industry.

Case **Shanghai Electric Power Station successively obtained orders for solar thermal equipment in Tibet and Xinjiang**

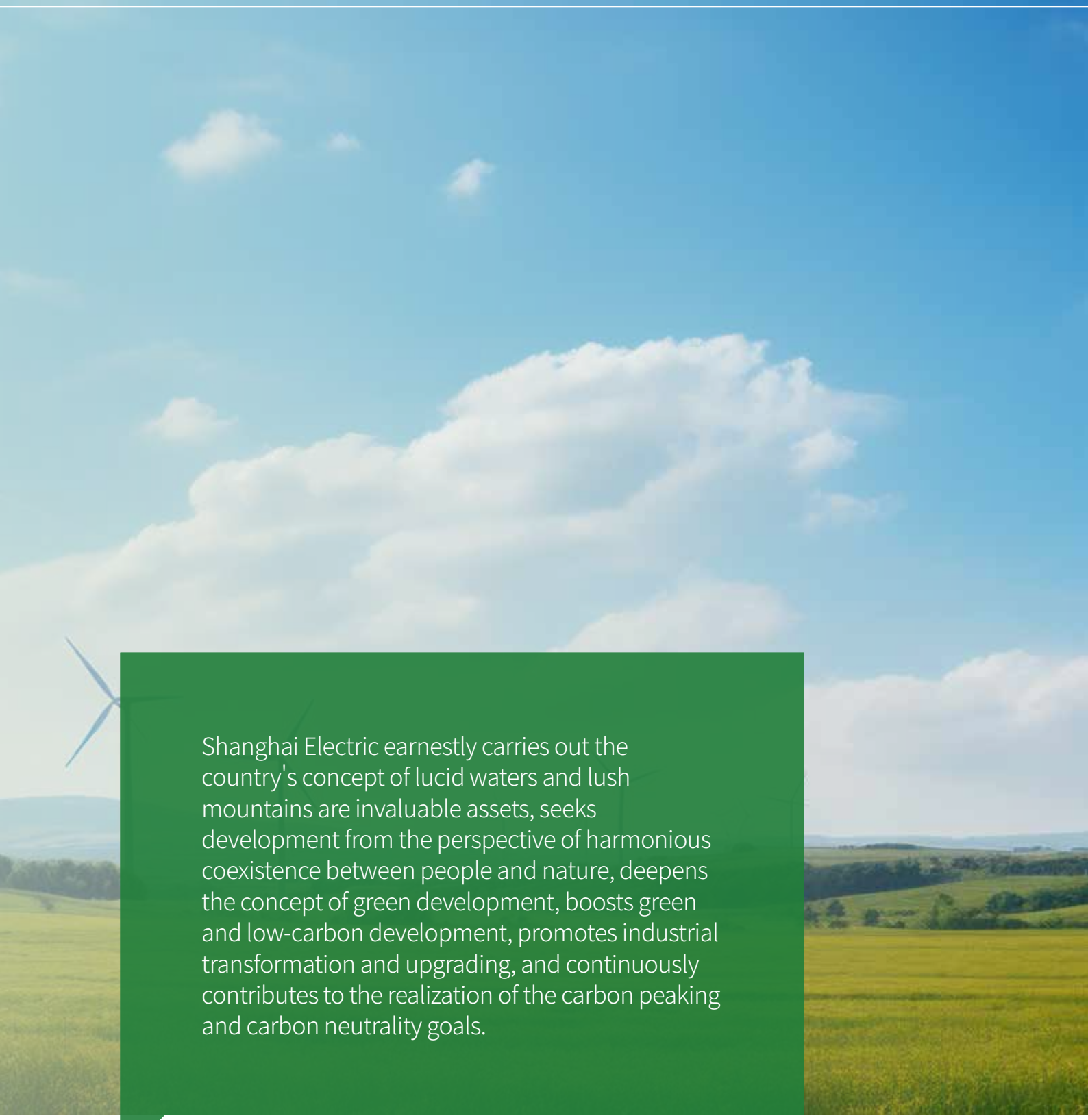
In August 2023, Shanghai Electric Power Station successively won the bid for the 50 MW solar thermal power and heating turbine generator set of CGN New Energy Tibet Ali 150 MW Snowy Plateau "Zero carbon" photovoltaic energy storage thermal power demonstration project, and the 150 MW solar thermal power plant turbine equipment project of CECH Hami" solar (thermal) energy storage" multi-energy complimentary integrated green power demonstration project. Among them, the Ali project is the first business breakthrough of Shanghai Electric in industry turbine business in the snowy plateau region of Tibet, which will effectively resolve the transformation of coal-fired cogeneration in Ali region upon completion and operation, and help boost the stable development and ecological development of Ali. The Hami project is the terrain-based wind and solar power storage integrated energy demonstration project, which is highly in line with the national sustainable development principle and new energy policy. The construction of the project will play a positive role in promoting the local social and economic development, and will have great practical significance in boosting the development of China's solar thermal power generation industry.

Information Security

Shanghai Electric has abided by the Cybersecurity Law of the People's Republic of China, the Administrative Measures for the Classified Protection of Information Security and other laws and regulations, and has established a comprehensive protection system and mechanism for information security. Shanghai Electric has assigned the Group's Network Security and Informatization Leading Group as the responsible organization for the Group's information security, to standardize the internal information security protection in a comprehensive manner in accordance with internal systems and standards, such as the Information Security Management and Control, Password Management, System Security Protection.

In 2023, Shanghai Electric adopted a series of important measures to ensure information security in every aspect. We continued to improve and optimize the information security systems and standards by revising the five systems such as Information Security Management and Control, and Network Construction Standards. In addition, we have strengthened the fulfillment of the main responsibilities and supervision responsibilities for cyber security, and conducted the timely rectification of discovered risks through internal detection and early warning. We have also organized subordinate units to carry out general inspection and spot checks, and identified and rectified high and medium-level of multiple risks. In terms of emergency response drills, we have taken an active part in the "Rock" emergency drill activities organized by Shanghai Municipal Communication Administration, and were commended for our excellent completion of the defensive tasks.

In order to enhance the network security awareness of all employees, we continued to strengthen the publicity, education and training on network security. Through meetings, promotional videos, security screensavers and other forms, we continuously provided network security awareness and skills training sessions for technical personnel and ordinary employees. During the reporting period, the Group carried out a total of 4 training sessions for professionals, covering more than 500 person-times in over 160 enterprises. The "2023 Network Security Awareness Training Course" was released online and more than 26,000 employees from over 200 enterprises were organized to attend the training, and nearly 8,000 employees successfully completed all the training tasks. In addition, we also organized two anti-phishing email drills to help employees raise their ability of analyzing and identifying phishing emails.



Shanghai Electric earnestly carries out the country's concept of lucid waters and lush mountains are invaluable assets, seeks development from the perspective of harmonious coexistence between people and nature, deepens the concept of green development, boosts green and low-carbon development, promotes industrial transformation and upgrading, and continuously contributes to the realization of the carbon peaking and carbon neutrality goals.

Pursuing Steady and Long-term Growth and Advocating Green Development

03

- Protecting the Environment and Improving Management
- Double Control of Energy Consumption for Low-carbon Development
- Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause

Protecting the Environment and Improving Management

In response to the nation's environmental protection policies, we reinforce the Group-level control, improve the environmental management system, consolidate environmental protection projects, achieve targeted safety and environmental protection management, and enhance our resistance to environmental risks.

Safety and Environmental Management Model

Based on the system construction, Shanghai Electric has deeply analyzed the actual operation of EHS management system in industrial groups and productive enterprises, summarized the typical experience accumulated in the implementation of SEC-LOVE model and EHS management system in detail, and identified and reflected on the weaknesses, aiming to further optimize and enhance the management system and foster a safe and green production culture.

SEC-LOVE Model

S	E	C	L	O	V	E
Sharing core values	Group-level management and control	Comprehensive standardization	Leadership improvement	Overall goals and responsibilities	Vertical supervision and inspection	Expectable vision

At the same time, according to the system requirements, the subordinate enterprises of the Group carried out environmental management system certification on time. By the end of 2023, a total of 98 affiliated enterprises had passed ISO 14001 environmental management system certification.

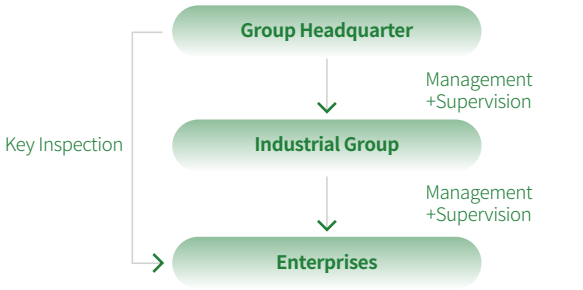
In terms of EHS management system evaluation, we have formulated the Shanghai Electric EHS Management System Evaluation Indexes. For industrial groups and production enterprises, we have proposed the EHS management evaluation index system that is in line with the production and operation characteristics of various levels, and attaches equal importance to process indicators and result indicators, so as to form a system operation evaluation and review mechanism with smooth connection between upper and lower levels. In addition, we have continuously relied on SEC-LOVE optimization results to further promote the integration and combination of SEC-LOVE operation elements with corporate safety and environmental management system and operation indicators.

As of the end of the reporting period, a total of 25 enterprises of Shanghai Electric had passed the green factory certification, and their green manufacturing level had been widely recognized by outsiders.

Safety and Environmental Risk Control

Shanghai Electric insists on well-balanced combination of powers between central management and divisions, forming a three-level supervision network structure of the Group headquarters, industrial groups and enterprises, to continuously promote the dual prevention mechanism of safety and environmental risk identification and hidden danger investigation and management. At the same time, we continue to invest in environmental protection technology, equipment, processes, training and other fields, so as to prevent environmental pollution risks to the greatest extent. In 2023, Shanghai Electric's total investment in environmental protection reached RMB 70 million.

Emergency response drill for environmental emergencies



In 2023, Shanghai Electric focused on the control over safety and environmental risks, maintained the risk threshold of traditional industries, and grasped new forms, new priorities and new issues in industrial development, constantly reinforced the capacity building of preventing safety and environmental risks, and strengthened the landing of risk measures. In addition, we continued to carry out the management and supervision of key enterprises and key safety and environmental risks positions, helped enterprises scientifically and effectively identify and control safety and environmental risks, and deepened the organization and implementation of special safety and environmental supervision and training for enterprises within the park. During the reporting period, we actively carried out the bidding declaration and implementation of Shanghai Electrical Engineering Project Safety and Environmental Risk Management Standardization Guidance Template, and continuously conducted the operating inspection and evaluation of the project safety and environmental risk management and control system, to further enhance the safety and environmental risk control level of engineering projects. In addition, we also carried out special training on the Environmental Risk Control Measures and Guidance Manual to guide enterprises to identify, evaluate and control environmental risks scientifically, objectively and dynamically.

In addition, the Group continued to promote the construction of enterprises' joint efforts in environmental emergency prevention and control in the park, and urged and guided enterprises in the park to conduct environmental emergency response exercises. During the reporting period, enterprises and parks have carried out environmental emergency drills for 123 times. We encouraged enterprises to step up the application of green processes such as research and application of heavy metal surface treatment agents, oil-based paints and cleaning agents alternative technology solutions, so as to mitigate environmental pollution risks from the source.

Case **Emergency response drill for environmental emergencies**

In June 2023, in response to the National Production Safety Month, Shanghai Electric Turbine Plant carried out an emergency response drill on environmental emergencies for relevant units in the "one square kilometer" of the park. The emergency drill on environmental emergencies within the park verified the emergency linkage procedures, collaborative response capability and actual response capability of Shanghai Electric Turbine Plant and the relevant units in the park, and enhanced the emergency response capability of the weak links identified in the drill, ensuring the safety of enterprises in "one square kilometer" of the park.

Emergency response drill for environmental emergencies

In addition to safety and environmental risk training, we continued to do a good job in environmental training, raised employees' environmental awareness and professional skills from top to bottom, and created a good environmental protection culture. In 2023, we carried out environmental protection training for the main leaders and responsible leaders of industrial groups, the main leaders and responsible leaders of Party and administration of enterprises, the main leaders of functional departments, the heads of environmental departments, and environmental management personnel, covering EHS-related laws and regulations, the Group's EHS system and management & operation requirements, and Shanghai Electric's environmental risk control requirements. With a view to making further efforts to cultivate EHS talents, the Group has specially set up the EHS manager promotion course, which aims to enhance the systematic knowledge consolidation and quality improvement opportunities for the trainees, establish a professional and efficient EHS team, and secure the sustainable development of Shanghai Electric.

In 2023, Shanghai Electric made the total investment of RMB2.189 million in environmental protection training, and conducted a total of 605 sessions of environmental protection training, which lasted 15,481.5 hours and covered 53,735 person-times.

Safety and Environmental Management Objectives

Shanghai Electric prepares the Work Safety and Environmental Protection Responsibility Letter every year and formulates the annual safety and environmental management objectives. In this regard, the Production Safety and Environmental Protection Policy Objectives and Indicators Management and Production Safety and Environmental Protection Performance Evaluation and Assessment and other systems are used as the basis for target management and assessment. The office of Shanghai Electric Safety and Environmental Affairs Committee is responsible for evaluating the annual safety and environmental work performance of contracted enterprises (departments), and the evaluation results are included in the annual performance assessment for the principal responsible persons of enterprises.

Annual Safety and Environmental Management Objectives

In order to boost the achievement of the annual safety and environmental management objectives, we continued to optimize the supervision and inspection model with incidents and problems as the guidance. We took the internal and external joint inspection and supervision model, and established an internal work team, an external expert team and a group inspection team, to strengthen the "Third Eye" supervision of the site, management and problems by attaching equal importance to industry experts and external experts in the supervision and inspection. At the same time, we further reinforced the "review" action, re-examined the rectification measures conducted by some enterprises with poor EHS management, re-evaluated the assessment results given, and coped with all of identified non-conformance items with the attitude of zero tolerance and complete end of hidden dangers.

In addition, we vigorously strengthened the EHS supervision for new enterprises entering the park and the enterprises outside Shanghai, and established and improved the EHS management system of "one file for one enterprise" for enterprises outside Shanghai. At the supervision level, we ensured that such enterprises could enjoy the same inspection standards, improvement mechanisms and upgrading requirements as the enterprises inside Shanghai. At the management level, we ensured that all requirements were well communicated to relevant units, actions taken are consistent, and measures are really implemented. At the model level, we built the "one-to-one" improvement assistance between benchmarking enterprises and basic enterprises, and simultaneously carried out the "double straight lines" of online remote supervision and offline on-site supervision, forming the "three-level linkage" risk management pattern: the Group headquarters, industrial groups and enterprises.

Double Control of Energy Consumption for Low-carbon Development

We deepen energy conservation and emission reduction, enhance the efficiency of resources utilization, raise the green manufacturing level, and keep to the path to the high-quality and sustainable development.

Energy Saving and Consumption Reduction

In the context of the nation's "carbon peaking and carbon neutrality" strategic goals, Shanghai Electric actively responds to and deepens the implementation of the Group's energy management. In addition, we strictly abide by the Energy Conservation Law of the People's Republic of China, the Measures for the Administration of Industrial Energy Conservation and other industry energy conservation laws, regulations and standards, and continuously explore the energy conservation potential, conduct energy conservation diagnosis and energy audit for key energy users according to the requirements of Shanghai Municipal Commission of Economy and Information Technology, urge enterprises to improve the energy conservation management framework, and promote the self-restraint mechanism of energy conservation according to law.

We have established a three-level working system such as the Group's headquarters -industrial group-enterprises, to steadily promote energy conservation and efficiency enhancement. The Group is responsible for the overall coordination of energy management. We set up enterprise energy management centers for various industrial groups and key enterprises, to supervise and manage energy consumption and energy intensity of enterprises. At the same time, various industrial groups have continuously boosted the establishment, implementation and certification of energy management systems. As of the end of the reporting period, the three subsidiaries of Shanghai Electric had passed ISO 50001 energy management system certification.

The subordinate enterprises of Shanghai Electric obtained ISO 50001 energy management system certification certificates

Shanghai Boiler Works

Shanghai Electric Turbine Plant

Shanghai Electric Nuclear Power Equipment Corporation

In 2023, Shanghai Electric took a series of measures to strengthen energy management and further promote energy conservation and consumption reduction.

Goal setting

- We issue the "double control" assessment task for energy consumption of industrial groups, including total energy consumption and energy consumption intensity, and decompose the energy-saving assessment indicators of major industrial sectors and key energy-using subordinate enterprises, and encourage the subordinate enterprises to actively promote energy management.

System support

- Industrial groups and enterprises under the Group form a hierarchical energy management network, organize enterprises to develop energy management manuals, conduct energy conservation and emission reduction work, and boost the implementation of annual energy saving and emission reduction plans.

Meeting discussions

- Energy management meetings are held regularly, to communicate policy requirements, give alert on major energy consumption deviations, and make overall arrangements to promote energy efficiency enhancement.
- Energy carbon management seminars are held to provide an information sharing and exchange platform for energy managers, and to promote the Group's energy and dual carbon management.

Appraisal mechanism

- We strengthen the "double control" target assessment of energy consumption, actively collect the total energy consumption and energy intensity data of key energy-using enterprises under the Group, and supervise the energy utilization status of such key energy users.

Training and publicity

- We organize and conduct enterprise energy management personnel training, energy-saving publicity week activities, energy-saving publicity activities, etc., to enhance the awareness of energy conservation and emission reduction.

Case **Shanghai Electric held the first energy and carbon management seminar**

In order to further achieve the "carbon peaking and carbon neutrality" goals, improve the Group's carbon management system and enhance the carbon management capability, Shanghai Electric launched a two-day energy and carbon management seminar in December 2023.

The Economic Operation Department of the Group led the organization of the seminar, and more than 60 attendees from the energy consumption responsibility departments and manufacturing departments of the Group, industrial groups and key enterprises, were present at the seminar. At the seminar, some experts in the field of carbon management were invited to share topic information on carbon market, product carbon footprint, carbon emissions and carbon accounting, and group discussions were conducted on the three topics: corporate carbon accounting, product carbon footprint, and energy-saving and carbon-cutting measures.

Through in-depth discussions and exchanges, the attendees deepened their understanding of energy and carbon emissions issues, which helps to better promote the coordinated energy management of various industrial enterprises, and to jointly boost the implementation of dual-carbon management-related work.

Shanghai Electric held the first energy and carbon management seminar

At the same time, the industrial groups under Shanghai Electric actively carried out energy technical transformation projects, including the elimination of old mechanical and electrical equipment, the renovation of old furnaces, the optimization of production processes, the renewal of air conditioning systems, etc., to further enhance energy efficiency and boost energy conservation and emission reduction. We were also committed to optimizing the energy mix and promoting the use of green electricity. In 2023, we increased 17MW of rooftop PV, making the total PV capacity reach 11.32 million kWh. As of the end of 2023, a total of 73MW of rooftop PV had been installed. Through the above measures, Shanghai Electric save 3,234 tons of standard coal in 2023, equivalent to reducing 8,409 tons of carbon dioxide emissions.

In light of the requirements of the state and Shanghai Municipality, Shanghai Electric actively conducted carbon management. We organized the application for the industrial communication carbon management pilot project of Shanghai Municipal Commission of Economy and Information Technology, and the 6 enterprises under the Group were selected for the carbon management pilot list. For the enterprises subject to the Shanghai carbon emission quota management, we prepared carbon emission reports every year in strict accordance with the requirements of the Shanghai Municipal Ecological Environment Bureau, to ensure that the carbon emission settlement is in line the annual quota and we are ready to accept third-party carbon emission inspection. In 2023, we organized the application for the industrial communication carbon management pilot project of Shanghai Municipal Commission of Economy and Information Technology and the 5 enterprises under the Group were selected for the second batch of Shanghai carbon management pilot list for 2023. The 3 subordinate enterprises of Shanghai Electric were awarded "Shanghai Zero carbon Benchmark Enterprises".

No.	Enterprises Selected for Carbon Management Pilot	Pilot Project Name	Application Field
1	Shanghai Electric Digital Technology Co., LTD	The "SEunicloud"-based energy and carbon dual control digital platform	The digital carbon management platform
2	Shanghai Electric Smart Energy Technology Co., LTD.	Intelligent carbon brain system	The digital carbon management platform
3	Shanghai Mitsubishi Elevator	Elevator product carbon footprint certification based on the whole life cycle assessment	Product carbon footprint
4	Shanghai Huapu Cable Co., LTD.	PP cable and crosslinked polyethylene cable product carbon footprint	Product carbon footprint
5	Shanghai Renming Electric Apparatus Works	RMM3 series moulded case circuit breaker product carbon footprint evaluation based on the life cycle assessment	Product carbon footprint

The Group also strengthened digital management and established a digital platform for energy and carbon dual control to further enhance the corporate carbon management level. During the reporting period, the two enterprises under the Group were put on the selection list of Shanghai green and low-carbon service organizations.

Case **Shanghai Electric Digital Technology built a digital platform for energy and carbon dual control**

In 2023, the "SEunicloud"-based energy and carbon dual control digital platform established by Shanghai Electric Digital Technology was successfully selected for the "Shanghai First batch of Industrial Communication Carbon Management Pilot List" of Shanghai Municipal Commission of Economy and Information Technology. The platform falls into the four major business areas: "basic", "energy control", "carbon control" and "external", and its main functions cover comprehensive energy allocation planning, comprehensive energy operation simulation, energy production management, energy consumption management, comprehensive energy dispatching, digital twin, power purchase and sale management, and virtual power plant.

In terms of technological innovation, the platform integrates containerization and virtual machine virtualization technology, and the scene reduction technology of extracting energy load characteristics to build the domain-driven unified language engineering drawing design. In terms of functional innovation, the platform has the digital delivery function of integrated energy planning simulation, the cascade utilization multi-energy planning simulation function, and the configurable carbon emission organizational boundary merging function.

As of the end of the reporting period, the green and low-carbon service provided by the energy and carbon dual control platform was successfully landed in several projects such as the State Grid "Zero Carbon Warehouse" in North Hebei, Yancheng Smart Energy Big Data Regional Platform and Shanghai Electric Wind Power Shantou "Zero Carbon Park". Through the use of digital technology, the platform strives to help achieve low carbon and zero carbon goals.

Case **Shanghai Electric Turbine Plant "Energy-saving Pioneer" Demonstration Project**

In order to carry out green and low-carbon development, Shanghai Electric initiated the "Energy-saving Pioneer Plan" in the industry, and took the lead in conducting the "energy-saving pioneer" demonstration project in Shanghai Electric Turbine Plant.

The project is a distributed photovoltaic project, which falls into the two parts: rooftop photovoltaic power generation system and carport power generation system, with a total installed capacity of 1,554.7kWp. The project takes the grid connection mode of "self-generation for self-use and surplus power connection to the Grid", which not only decreases the purchased power of the enterprise and cut the electricity consumption costs, but also reduces the greenhouse gas emissions of the enterprise with photovoltaic energy as a "green" power. In addition, the project has also installed the "Shanghai Electric Energy and Carbon Dual Control Digital Platform", which serves the energy efficiency analysis and management, carbon emission accounting management, and real-time monitoring of the new energy microgrid system of the Plant in every aspect.

The project achieves the combination of digital technology and new energy development, and is expected to save more than RMB 4 million of electricity use costs and reduce carbon dioxide emissions by more than 6,000 tons per year after it's completed and put into operation.

Shanghai Electric Turbine Plant Rooftop PV

The energy consumption and greenhouse gas emissions of Shanghai Electric in 2023 are shown in the following table:

Energy Consumption and Density[1]	2022	2023	Unit
Direct energy consumption	60,498.67	48,911.91	tons of standard coal
Natural gas	4,396.43	3,550.01	'0000 m^3
Diesel	238.52	995.95	tons
Gasoline	1,573,531.23	230,170.36	liters
Indirect energy consumption	37,975.60	66,985.13	tons of standard coal
Purchased electricity	30,899.59	54,503.76	'0000 kWh
Comprehensive energy consumption	98,474.27	115,897.04	tons of standard coal
Energy consumption intensity	0.0084	0.0101	tons of standard coal/RMB'0000 of operating revenue
Greenhouse Gas Emission and Density[2,3]	**2022**	**2023**	**Unit**
Scope 1 greenhouse gas emissions	99,639.35	80,450.61	tons of carbon dioxide
Scope 2 greenhouse gas emissions	129,778.28	249,622.53	tons of carbon dioxide
Total greenhouse gas emissions	229,417.63	330,073.14	tons of carbon dioxide
Greenhouse gas emission density	195.04	287.53	tons of carbon dioxide/ RMB'00000000 of operating revenue

Note:

1. In 2023, the energy consumption data also changed accordingly because of the change in the disclosure scope of the Group's environmental data.

2. In 2023, the default values of electricity emission factors for the Group whose main production location is Shanghai was calculated with reference to the "Notice of Shanghai Ecological Environment Bureau on Adjusting the Values of Emission Factors Related to the City's Greenhouse Gas Emission Accounting Guide". The default values of electricity emission factors for the Group whose main production location is not Shanghai was calculated with reference to the national grid emission factors released by the Ministry of Ecology and Environment.

3. In 2023, the greenhouse gas emission data also changed accordingly because of the change in the disclosure scope of the Group's environmental data.

Water Conservation

Shanghai Electric attaches great importance to the management, protection and conservation of water resources. The Group is responsible for the overall planning and management of water resources, and arranges special personnel to take charge of water conservation management in main industrial sectors and key enterprises. In terms of water-saving measures, we have established a corresponding water-saving statistical report system for the major enterprises of the Group, and constantly strengthened water consumption statistics, analysis and assessment. At the same time, we have developed the application form for pure water use, and implemented the quantitative use of pure water to eliminate waste, to enhance water use efficiency. We have also encouraged the recycling of water and promoted the recycling of water resources. The recycling of water consumption reached 2.16 million tons in 2023. In addition, we have actively promoted and applied new water-saving technologies and processes, and publicized water-saving knowledge through multiple channels to continuously improve the water-saving effect.

In 2023, the subordinate enterprises of Shanghai Electric carried out water-saving work, developed water-saving measures from the water supply side and the water use side, and achieved remarkable results. In terms of water supply, we took measures such as conducting the water supply pipeline renovation projects and making intelligent monitoring of the factory-wide water pipe network to reduce water resource loss and enhance water use efficiency. In terms of water use, we carried out water balance tests, made monthly water consumption statistics, transformed direct cooling water into recycled cooling water, changed mechanical water meters into smart water meters and connected them to energy management platforms, and took other measures, to promptly analyze and rectify unreasonable water use aspects and enhance the fine management on water resources.

The water resources consumption of Shanghai Electric in 2023 is shown in the following table:

Water Consumption and Density	2022	2023	Unit
Water use	6,111,246.79	3,701,273.11	tons
Water consumption per unit of production value	0.5196	0.3224	tons/RMB '0000 of operating revenue

Green Office

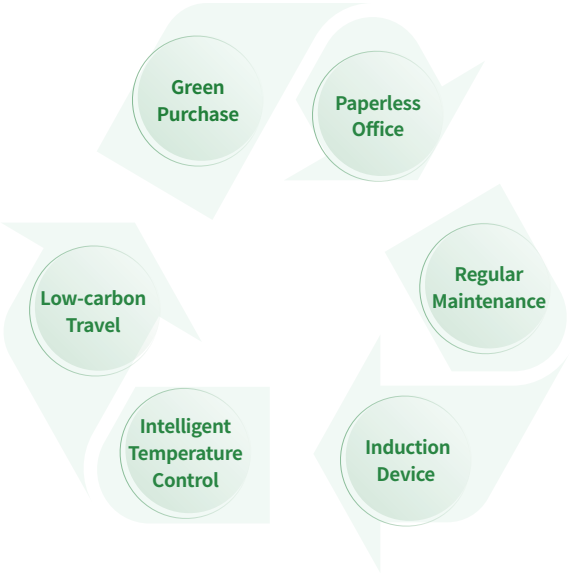
Shanghai Electric actively responds to the national call for sustainable development, and vigorously advocates and practices the concept of green office. We have taken efficient and pragmatic management measures and conveyed relevant concepts to help the employees form the consciousness of energy conservation and environmental protection in work and life, and build an environment-friendly enterprise.

At the same time, in order to enhance the overall environmental protection awareness of the employees, we have organized relevant publicity and implementation activities from time to time, thereby bringing the concept of green office to the everyday work of all employees.

Shanghai Electric encourages employees to:

- Drive less, and take public transport and bikes as much as possible;
- Give priority to purchasing and using green office products to reduce sources of pollution emissions and energy consumption;
- Adopt automatic induction lighting system within the public areas of the Company;
- Reasonably transform and update and regularly maintain the office equipment, so as to extend the use life of the equipment;
- Adopt double-layer windows and energy-saving curtains, control the temperature of water supply and of the central air conditioner, maintain a lower indoor temperature in winter or a higher indoor temperature in summer as appropriate to reduce energy consumption within the Company's public areas;
- Promote the use of paperless office, and create an automated management system for the entire life cycle of meetings, including meeting notice, reception plans, receipt feedback, sign-in, meeting minutes, reviews, etc.

Shanghai Electric's Green Office Concept



Case **Shanghai Electric Digital Technology built [Fulian] integrated management platform**

Through digital and intelligent means, the [Fulian] integrated management platform conducts the organic link between daily operation work and digital application, to help enterprises enhance operational management and empower enterprises to achieve high-quality and sustainable development.

[Fulian] Intelligent Office Space

In terms of reducing operation energy consumption, the platform realizes self-service space operation management by formulating intelligent space management strategies, such as automatic adjustment of curtain lift, automatic sensing of space personnel and automatic control of air conditioner and fresh air systems, to vigorously optimize space operation energy-saving strategies and enhance resource use efficiency. In terms of enhancing the operational capability, the platform connects visitor access, work collaboration and other modules to form scenario-based application, contributing to a remarkable increase in the meeting reception quality. In addition, through the one-step operation, one-stop management and integrated operating maintenance of space equipment, autonomous alarming and rapid response positioning, it has significantly enhanced the operating efficiency and operation & maintenance management efficiency, thus providing a big support for enterprises to achieve the "carbon peaking and carbon neutrality" goals.

The office area of Shanghai Electric Digital Technology has taken the form of [Fulian] digital and intelligent office space, adopted the active energy-saving strategy to help achieve green and low carbon development, and won the WELL global highest-level certification of platinum certification.

Recyclable Wood Packaging of Shanghai Mitsubishi Elevator

Management of Packaging Materials

Shanghai Electric continues to strengthen the management of packaging materials by constantly exploring the possibilities of improving material performance, reducing consumption and recycling materials. In 2023, Shanghai Mitsubishi Elevator replaced the elevator packaging wooden boxes with recyclable wood materials from the perspective of environmental protection and transportation capacity, to help achieve low-carbon operations. At the same time, we have established close cooperation with our packaging material suppliers, and had regular feedback and communication with them, so as to ensure the selection and use of packaging materials with high quality and less environmental impact.

The main packaging materials consumed by Shanghai Electric in 2023 are shown in the following table, in which the consumption density of packaging materials is 134.85 tons/RMB'00000000 of operating revenue.

Consumption of Packaging Materials[4]	2022	2023	Unit
Timber	118,880.04	116,670.26	tons
Iron support	1,483.13	4,674.95	tons
Iron leather suitcase	34.38	31.92	tons
Card-board box	8,631.68	3,830.82	tons
Plastic	821.96	696.93	tons
Other[5]	6,491.85	28,898.37	tons

Note:

4. In 2023, the packaging materials consumption data also changed accordingly because of the change in the disclosure scope of the Group's environmental data.

5. Other packaging materials include, without limitation, paper-case film, stretch film, cable tray.

Protection of Biodiversity

With the convening of the 28th United Nations Climate Change Conference (COP28) and the promotion of the construction of a beautiful China, the biodiversity protection has become increasingly important. China has attached great importance to biodiversity protection, and has formulated national strategies such as the 14th Five-Year Plan for National Economic and Social Development and the Outline of the Vision Goals for 2035 and China's Strategy and Action Plan for Biodiversity Conservation, calling for improving biodiversity governance in an all-round way and strengthening biodiversity protection.

As a global enterprise with business operations in many parts of the world, Shanghai Electric continues to promote ecological balance and biodiversity protection in places where it operates or has projects, conducts biodiversity publicity activities, and keeps working towards the harmonious coexistence between man and nature.

Case **Shanghai Electric Dubai Solar Thermal Project was committed to biodiversity protection**

Shanghai Electric Dubai Solar Thermal Project is located in Dubai's Al Marmoom Wildlife Reserve, where the main species are the Arabian oryx, Arabian gazelle and Arabian sand gazelle. In order to protect the local biodiversity and mitigate the impact on the ecological environment, the project team has taken the following measures:

Before the construction of the project: We established a special system of protecting biodiversity, identified environmentally sensitive receptors around the project, and evaluated the critical habitats of sensitive species. At the same time, we transferred nearly 200 Gaff trees as well as Arabian oryx, Arabian gazelles and Arabian sand gazelles within the project site to suitable habitats outside the project boundaries, and recorded the sex and number of each species before the transfer, so as to ensure that there was no number loss of species during the transfer process. We regularly monitored and tracked the transferred species every quarter after the transfer, and measured the successful transfer rate of the transferred species.

Under construction: The project could limit the scope of construction and operation through site fences and paths. We enhanced all employees' awareness of the ecological importance of the project site and surrounding habitats. We maintained the Arabian antelope and gazelle breeding stations around the project, and built an appropriate number of new breeding stations to ensure the living space and migration paths of such rare animals. In order to protect the local ecological environment, the project only used the local native vegetation for landscape design.

Biodiversity Protection

Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause

Adhering to precise and scientific pollution control measures, ensuring compliance with emission standards, and enhancing overall environmental governance efficiency.

Shanghai Electric strictly complies with China's laws and regulations on pollutant emissions, such as Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution, Law of the People's Republic of China on the Prevention and Control of Water Pollution, and Law of the People's Republic of China on the Prevention and Control of Solid Waste Pollution. Based on this, the Group has formulated relevant management systems such as the Environmental Monitoring and Management, the Implementation Rules for Clean Production and Clean Production Audit, and the Implementation Rules for Solid Waste Management, aiming to standardize pollutant management and ensure compliance and standard discharge of pollutants.

In 2023, we continued to deepen the enterprise's pollution management in some key areas, comprehensive controlling the pollution prevention and treatment process. We also upgraded facilities and optimized processes to reduce pollutant emissions and promote clean production. To clarify pollution management tasks and objectives, we developed the 2023 Enterprise Key Environmental Governance Project Task List. We enforced the implementation of key governance projects through annual environmental and safety responsibility agreements and EHS special rectification action plans. Additionally, we implemented monthly tracking and annual assessment mechanisms to continuously monitor the implementation of relevant enterprise key projects.

Wastewater Management

- Wastewater is discharged after being treated to meet discharge standards.
- Sewage treatment pools and wastewater treatment facilities, along with the updating of online monitoring systems for wastewater discharge, are constructed to ensure stable and compliant discharge of wastewater.
- Projects for intercepting and treating water pollution are built to centralize the treatment of sewage.
- Alternative solutions for heavy metal surface treatment agents and projects for reducing emulsified wastewater are advanced to decrease wastewater discharge.
- "Three prevention" measures for solid waste landfill sites are taken to prevent leakage of oil-containing wastewater.

Exhaust Gas Management

- Exhaust gas is discharged at high altitude after being collected and treated.
- Online monitoring equipment and other measures are installed to ensure compliant emissions.
- Through technological transformation, some enterprises and workshops are transformed into organized emissions.
- Projects such as improving and upgrading environmental protection equipment and promoting alternative technologies for oil-based paints and cleaning agents are undertaken to reduce VOC emissions from the source.
- Comprehensive control potential of industrial furnaces and kilns in enterprises has been explored to reduce gas emissions.

Waste Management

- Entrust qualified environmental protection companies to handle hazardous wastes. Reusable general industrial wastes shall be reused by enterprises, and the rest shall be entrusted to third-party institutions for disposal.
- Reduce solid waste through upgrades and improvements to treatment facilities and increasing fuel combustion efficiency.
- Actively promote the replacement of hazardous waste products, such as the use of special cleaning liquid instead of gasoline, acetone and other cleaning machine surface, to minimize the generation of hazardous waste.

Other Pollutants Management

- Install dust suppression sprayers to prevent dust scattering.
- Install shock-absorbing and noise-reducing facilities to mitigate noise pollution.

By the end of 2023, Shanghai Electric has completed a total of 25 key governance projects, achieving significant emission reductions. In terms of gas pollutant emissions, it is estimated that there will be reductions of 29.18 tons of Volatile Organic Compounds (VOCs), 0.55 tons of Sulfur Dioxide (SO_2), 4.35 tons of Nitrogen Oxides, and 30.51 tons of particulate matter. Regarding wastewater pollutant emissions, it is expected to reduce Chemical Oxygen Demand (COD) by 3.77 tons and Ammonia Nitrogen by 0.043 tons. In terms of solid waste emissions, it is anticipated to reduce general industrial solid waste by 1,343.33 tons and hazardous waste by 76 tons.

In 2023, Shanghai Electric significantly reinforced the process control for the legal and compliant disposal of hazardous waste. This initiative facilitated the adoption of the group's shared services platform for hazardous waste disposal by 58 enterprises within Shanghai. As a result, the management level of hazardous waste disposal in these enterprises was elevated.

Case **Shanghai Mitsubishi Elevator implemented material recycling and reuse practices**

Shanghai Mitsubishi Elevator recycled the materials from rail modification and cutting, repurposing them as T-shaped connecting plates for reuse. This approach achieves a reuse rate of 50% to 60%, significantly reducing the generation and emission of solid waste while making a substantial contribution to resource conservation.

Shanghai Mitsubishi Elevator recycled and utilized materials from rail modification and cutting

Shanghai Electric's emission of pollutants and waste discharge in 2023 are shown in the following table:

Pollutant/Waste	2022[6]	2023	Unit
Wastewater discharge	2,201,571.67	1,707,169.41	tons
Wastewater recycling usage	/	1,014,345.70	tons
Chemical oxygen demand	/	52.91	tons
Ammonia nitrogen	/	7.71	tons
Exhaust emissions[7]	561,141.42	887,268.42	'0000 m3
Nitrogen oxide	31.20	50.61	tons
Sulfur oxides	0.66	0.71	tons
Particulate matter	10.29	26.36	tons
VOCs	47.82	55.75	tons
Hazardous waste emissions[8]	2,963.14	3,377.10	tons
Harmless waste discharge	51,736.34	68,863.53	tons
Density of hazardous waste	2.5	2.9	tons/RMB'00000000 revenue
Harmless waste density	43.98	59.99	tons/RMB'00000000 revenue
Hazardous waste disposal volume	/	3,377.10	tons
Harmless waste disposal volume	/	68,863.53	tons

Note:

6. The Group has sorted and optimized the statistical methods for wastewater/air emissions data, thus adjusting the relevant data for wastewater/air emissions for the year 2022.

7. In 2023, due to changes in the scope of environmental data disclosure, replacement of environmental protection facilities, and business changes, there was a increase in emissions of exhaust gases.

8. In 2023, due to factors such as the addition of oil-contaminated water treatment and delays in production maintenance, there was a increase in the discharge of hazardous waste.

Facing both opportunities and challenges, Shanghai Electric remained committed to the principle of "unity, cooperation, and mutual benefit." We collaborate with the government, universities, research institutions, and other partners to strengthen strategic alliances. Through multi-level, cross-disciplinary, and diversified exchanges, we aimed to build a comprehensive industrial ecosystem and expanded our network of mutually beneficial partnerships, fostering collective growth. Additionally, Shanghai Electric uphold high standards in supplier management, establishing a digitalized platform for the supply chain to lead sustainable development efforts.

Making Joint Effort to Deepen Pragmatic Cooperation

04

- Joining Forces and Moving Forward Together to Foster Harmony and Symbiosis
- Supply Management for Better Development

Joining Forces and Moving Forward Together to Foster Harmony and Symbiosis

To seize developmental opportunities, we integrate and share innovative technological resources, seeking mutual benefits and win-win outcomes through collaboration. With an inclusive mindset and broad strategic vision, we collectively embrace a thriving future.

Government-Enterprise Cooperation

Shanghai Electric is steadfast in deepening its strategy of open cooperation. Leveraging its strengths in research and manufacturing, the Group offers tailored solutions and services for diverse scenarios. We maintain consistent and effective communication with governments at all levels, establishing strategic partnerships characterized by deep openness. Through this approach, we aim to create a new model of cooperation focused on resource sharing, complementary advantages, and coordinated development.

Case

Shanghai Renmin Electrical Apparatus Works, in collaboration with eight other units, has jointly established the "Jing'an District Smart Building Data Interconnection Standardization Alliance"

In November 2023, Shanghai Renmin Electrical Apparatus Works, together with eight other units, established the "Jing'an District Smart Building Data Interconnection Standardization Alliance". This alliance aims to facilitate the transformation of "intelligent buildings" into "smart buildings" by leveraging digital methods across four dimensions: green environmental protection, automation integration, property management, and integration into the "smart city". By adhering to principles of complementary advantages, mutual benefit, and collaborative development, the alliance seeks to integrate talents from various industries and specialties. Grounded in systematic science, the alliance strengthens cooperation in the digitalization of smart buildings, enhances standardization capabilities, and drives innovation in industries related to smart building digitization.

Jing'an District Smart Building Data Interconnection Standardization Alliance

Case Shanghai Electric Smart City successfully secured the bid for the Yangpu Riverside Smart Management Platform

In April 2023, Shanghai Electric Smart City Information Technology Co., Ltd. ("Shanghai Electric Smart City") secured the bid for the Yangpu District Smart Management Platform project in Shanghai, capitalizing on its expertise in urban digitization. This successful bid not only deepened cooperation between the district and enterprises but also accelerated the construction of Yangpu as a model area for the People's City.

The Smart City successfully secured the bid for the Yangpu Riverside Smart Management Platform

The Smart Management Platform, designed with the goal of safeguarding and improving people's livelihoods, encompasses two main projects: infrastructure construction and application development. Leveraging the Riverside Urban Operations Management Center, it establishes a comprehensive scene management system, providing essential data support and enabling external capabilities for the platform. Focusing on riverside construction planning, public space management, and collaborative building governance, the platform integrates and oversees monitoring of the riverside area and emergency resources. Moreover, it expands its business scenarios to meet practical needs, vigorously promoting the development of emergency response forces for collective prevention and control to minimize the impact of emergencies. Ultimately, the platform aims to fortify social security and stability, advance the modernization, intelligence, and precision of urban governance, and lay a robust foundation for Yangpu District's pursuit of the People's City concept and its aspiration to become a model area for such development.

Case Providing an energy-driven rail solution for local green energy transformation

During the reporting period, Shanghai Electric's New Energy Company signed a strategic cooperation agreement with the People's Government of Taonan City on an integrated project for coupling wind power with biomass to produce green methanol. This project aims to convert wind energy resources into electricity, which will then be used for electrolyzing water to produce hydrogen and for coupling with biomass gasification to produce green methanol. Upon completion, the project is expected to reduce environmental pollution caused by straw incineration to some extent. It will serve as a local "green energy + green chemical industry" project, enabling the use of new energy for self-generation, light grid connection, and on-site consumption.

As the largest single-capacity green methanol project in Jilin Province and the first biomass gasification project for green methanol production in the northeastern region of China, this project will support the implementation of Jilin Province's strategy for high-quality development and contribute to the construction of the "onshore wind and solar power Three Gorges" in the western part of Jilin Province.

The Green Methanol Project

Cooperation between Schools and Enterprises

Shanghai Electric actively implements national strategies for science, education, and talent development. Through enhanced collaboration between academia and industry, we drive the integration of production, research, and education. Our focus areas include advanced manufacturing, clean energy, and green technology, aiming to cultivate talent and foster innovation in these strategic sectors.

Case

The joint project between Shanghai Electric Nuclear Power and Tsinghua University has been awarded the "2023 Shanghai Excellent Project Award for Industry-University-Research Cooperation"

In February 2024, the "2023 Shanghai Excellent Project Award for Industry-University-Research Cooperation" was officially announced. Among numerous projects, the "600MW High-Temperature Gas-Cooled Reactor Main Equipment Research and Industrialization" project jointly proposed by Shanghai Electric Nuclear Power and Tsinghua University stood out and was awarded the Special Prize for Outstanding Project in Industry-University-Research Cooperation in 2023.

Shanghai Electric Nuclear Power and Tsinghua University have a long-standing partnership in the development of high-temperature gas-cooled reactors. Starting in June 2018, they collaborated on research into manufacturing technologies and equipment suitable for mass production of the main components for 600MW high-temperature gas-cooled reactor nuclear islands. This collaboration deepened the integration of design and manufacturing, facilitating the smooth construction of the 600MW high-temperature gas-cooled reactor project. From 2019 to 2023, their partnership continued to grow. Leveraging their experience in manufacturing 200MW high-temperature gas-cooled reactors, they provided key experimental verification equipment, such as helical coil heat exchangers, for the Institute of Nuclear and New Energy Technology at Tsinghua University. This accelerated progress in theoretical research and equipment optimization for high-temperature gas-cooled reactors.

Through years of collaborative efforts with Tsinghua University, Shanghai Electric Nuclear Power has become more steadfast in its belief in fostering industry synergy through open innovation. By integrating design and manufacturing, they are jointly advancing the safe and efficient development of China's nuclear power industry.

The joint project between Shanghai Electric Nuclear Power and Tsinghua University was awarded the "2023 Shanghai Excellent Project Award for Industry-University-Research Cooperation"

Case

Shanghai Electric and Shanghai Jiao Tong University jointly cultivated talents in gas turbine engineering at both master's and doctoral levels

In December 2023, the Shanghai Jiao Tong University - Shanghai Electric Group Engineering Master's and Doctoral Training Reform Specialized Meeting on Aerospace Engines and Gas Turbines was held at the Shanghai Electric Turbine Plant. With a long history of collaboration, the specialized training reform program for engineering master's and doctoral students in the aerospace engine and gas turbine fields serves as an excellent platform for deepening cooperation in talent development and scientific research between the university and the enterprise. Focused on meeting talent demands and leveraging the Company's resource advantages, this joint reform initiative aims to continuously supply outstanding talents for national, industry, and enterprise needs.

Shanghai Electric and Shanghai Jiao Tong University jointly cultivated talents in gas turbine engineering at both master's and doctoral levels

Case

Shanghai Electric and East China University of Science and Technology signed a strategic cooperation agreement

During the reporting period, Shanghai Electric and East China University of Science and Technology formally signed a strategic cooperation framework agreement. This marked the second collaboration between the two parties since they signed a talent cultivation cooperation agreement in October 2022.

Leveraging Shanghai Electric's industrial, market, and technological advantages, combined with East China University of Science and Technology's expertise in theoretical and technical research and talent development, the collaboration focuses on key industries such as efficient and clean energy, green chemicals, comprehensive hydrogen utilization, and low-carbon environmental protection. Together, they aim to lead technological innovation, promote the transformation of scientific and technological achievements, and facilitate industrialization. Furthermore, the two parties will establish innovative cooperation platforms based on specific projects, exploring the cultivation of leading technical talents in energy, chemical engineering, and new materials fields. This will drive the deep integration of industry, academia, and research, accelerate the development of new growth drivers for enterprises, and provide strong support for enhancing the international competitiveness and influence of the companies involved.

The signing ceremony for the strategic cooperation agreement between Shanghai Electric and East China University of Science and Technology

Joint Innovation of Technology

Shanghai Electric actively explores the deep development of advanced industry technologies in areas such as new energy and the upgrading of traditional energy. With an open-minded approach to cooperation, it fosters resource sharing and technological exchange while continuously improving its competitiveness. This establishes Shanghai Electric as a pioneering source and driving force for advancing scientific and technological development.

Case **Shanghai Electric's top management delegation visits Siemens Energy in Germany to explore new avenues for green and low-carbon collaboration.**

In July 2023, Shanghai Electric paid a visit to Siemens Energy AG in Germany for an exchange and deep dive into Siemens Energy's industry development, research capabilities, and efficient production management practices. Discussions revolved around enhancing industrial collaboration, fostering joint innovation, and driving the transformation of energy towards low-carbon, high-quality aspects. Both parties committed to furthering technical cooperation, facilitating talent exchange, and exploring new avenues for collaboration. We aim to innovate cooperation models and jointly pursue a future-oriented approach to development, technological innovation, product offerings, and solution implementations to shape the future of energy towards a sustainable, decarbonized future.

Representatives from Shanghai Electric visited Siemens Energy's transformer factory in Germany

Case **Shanghai Electric joined the Heterojunction Technology Industrialization Collaborative Innovation Platform as a member**

In 2023, the nation's first collaborative innovation platform for Heterojunction Technology Industrialization was established, with Shanghai Electric's Hengxi Photovoltaic becoming one of its founding members. Shanghai Electric's Hengxi Photovoltaic will collaborate with companies across the photovoltaic industry chain, as well as universities and research institutes, to drive collaborative innovation in various aspects of the industry, including battery and module production, manufacturing equipment, upstream raw materials, and perovskite tandem solar cells. This collaboration aims to accelerate the healthy and orderly development of Heterojunction technology and its industrial applications by fostering synergy in research and development, manufacturing, application, standardization, and finance.

Shanghai Electric joined the Heterojunction Technology Industrialization Collaborative Innovation Platform as a member

Cooperation with Industry Partners

Shanghai Electric, as a leading enterprise in the industry, fully leverages its advanced position by actively participating in industry-wide scientific and technological cooperation, exploring new collaboration models, sharing experiences, and discussing development trends. Through the aggregation of multiple perspectives and strengths, Shanghai Electric consistently drives industry development and technological advancement.

Case **Shanghai Electric and Mitsubishi Electric seek multi-domain deep-level cooperation**

In May 2023, Shanghai Electric and Mitsubishi Electric held discussions. Faced with current geopolitical tensions, climate change, reshaping of industry and supply chains, and volatile energy commodity prices, both sides aim to uphold principles of mutual consultation, construction, and sharing. They seek to strengthen their cooperative foundation, focusing on the theme of "green and low-carbon", and actively expand into more business areas. Through continuous technological innovation in new energy, smart manufacturing, and other fields, they aim to enhance products and advance new industries. Their goal is to establish international collaborative innovation and industrial cooperation, contributing to green and sustainable development and a better life for humanity.

Shanghai Electric and Mitsubishi Electric Corporation held discussions

Case Shanghai Electric and China COSCO SHIPPING Corporation Limited collaborated to create a world-class shipping hub

In August 2023, Shanghai Electric and China COSCO Shipping Corporation Limited held discussions to expand cooperation in the new energy industry. They exchanged in-depth views and agreed to deepen collaboration, seizing opportunities in green, low-carbon, and clean fuel initiatives. Leveraging Shanghai's globally leading international shipping center location advantage, they plan to accelerate the implementation of more green, low-carbon application projects. With Shanghai Electric's technological strength and China COSCO Shipping Corporation Limited's market application advantages as the foundation, they aim to explore new areas of shipping cooperation. Their joint efforts aim to contribute significantly to Shanghai's ambition of building a world-class shipping hub during the "14th Five-Year Plan" period.

Shanghai Electric and China COSCO Shipping Corporation Limited held discussions

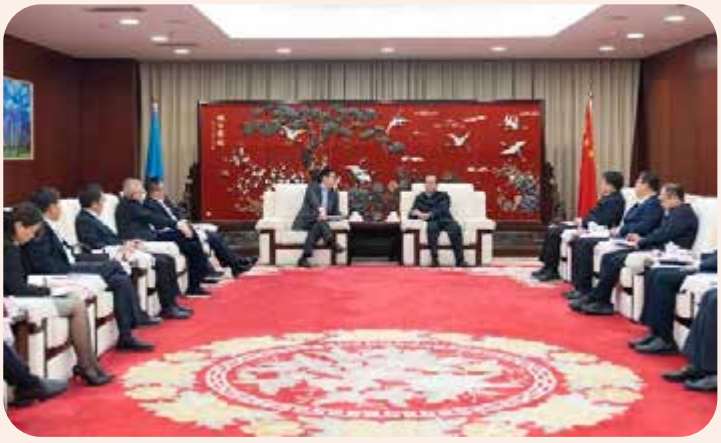
Case Shanghai Electric and Eastern Hub Group collaborated on the "Air-Rail Integration" Super Project

Shanghai Electric and Eastern Hub Group initiated discussions

In August 2023, Shanghai Oriental Hub Investment and Construction Development Group Co., Ltd. (referred to as "Eastern Hub Group") paid a visit to Shanghai Electric to engage in discussions regarding deepening cooperation and advancing the major project construction of the "Eastern Hub". Both parties are actively promoting the "Eastern Hub" project, which stands as a significant endeavor aimed at fully implementing the integrated development strategy of the Yangtze River Delta and advancing the construction of the Lin-gang New Area in the Shanghai Free Trade Zone. This project aims to add an annual average throughput capacity of 50 million air passengers, encompassing 14 sets of 30-line hub yards and a layout plan comprising "5 city lines + 2 urban lines + multiple local lines". It holds significant importance for Shanghai's accelerated construction towards becoming a globally influential socialist modern international metropolis.

Case Shanghai Electric continued to deepen strategic cooperation with China Huadian Corporation Ltd.

In December 2023, representatives from China Huadian Group Co., Ltd. (referred to as "China Huadian") paid a visit to Shanghai Electric, where both parties exchanged views on deepening their strategic partnership. Shanghai Electric expressed its desire to continue broadening and strengthening their strategic collaboration with China Huadian, while fully integrating into the construction of China Huadian's Shago Desert Large-scale Clean Energy Base, providing comprehensive support and services. Through the establishment of a cooperation platform, the two entities can further enhance research and development efforts and drive innovation in areas such as wind, solar, and hydrogen storage, thereby injecting new vitality into their high-quality development initiatives.



Shanghai Electric and China Huadian exchanged views on further deepening their strategic cooperation

Case Shanghai Electric and SPIC continued to deepen their strategic cooperation

In December 2023, State Power Investment Corporation Limited referred to as "SPIC" met with representatives from Shanghai Electric to discuss further deepening cooperation in the low-carbon energy sector. With a cooperation history spanning over 70 years, SPIC and Shanghai Electric have developed a strong partnership, making SPIC an essential strategic ally for Shanghai Electric. Leveraging its expertise in high-end equipment manufacturing and rich application scenarios, Shanghai Electric aims to expand cooperation in the field of new energy, building upon existing projects' high-quality performance. Both parties look forward to enhancing communication mechanisms, strengthening open collaboration in technological innovation, and achieving more fruitful cooperation based on mutual benefit and win-win outcomes, thereby contributing to the vigorous development of China's power industry.

Shanghai Electric and SPIC exchanged views on enhancing cooperation in the low-carbon energy sector

Case Shanghai Electric and Johnson Controls jointly unveiled a laboratory

In November 2023, at the 6th China International Import Expo, Shanghai Electric and Johnson Controls witnessed the signing of the "Carbon & Digital" Joint Laboratory Strategic Cooperation Agreement and unveiled the laboratory. This establishment will deepen their cooperation in urban green, low-carbon, and sustainable development, serving the national "dual carbon" goals and opening a new chapter in cooperation.

The joint laboratory aimed to create a new platform for major project collaboration, core technology innovation, and mutual sharing of achievements. Leveraging complementary strengths, both parties will synergize in areas such as energy sources, grid load coordination, and digital integration, fostering more collaborative projects in urban, neighborhood, and building scenarios. Together, they will develop comprehensive solutions and intelligent service platforms integrating multiple energy sources like "electricity, cooling, heating, and gas" to establish benchmarks for green, low-carbon transformation. Additionally, they will actively support the national green and low-carbon transition by accelerating the construction of zero-carbon factories and parks, optimizing green and clean energy supply guarantees, and building a green and low-carbon supply chain system. This collaboration aims to accelerate the exploration of energy-saving, carbon reduction, and efficiency improvement in the energy field.

The "Carbon & Digital" Joint Laboratory was unveiled

Overseas Expansion

Shanghai Electric is aligning with the national strategy of high-level opening-up by accelerating the execution of its "Go Global" strategy. It actively engages in international cooperation and competes in global markets. With a focus on optimizing its global industrial footprint, Shanghai Electric is coordinating the development of overseas projects in energy storage, transformation, and distribution. Additionally, it is expanding its presence in the new energy sector, particularly in photovoltaics and wind power, to contribute to the sustainable development of the global economy and society.

The Thar Coal Power Integration Project, undertaken by Shanghai Electric in Pakistan, stands as a flagship initiative in the energy sector under the national "Belt and Road" initiative and serves as a prominent energy asset in the China-Pakistan Economic Corridor. This project consists of two 660MW high-parameter ultra-supercritical clean energy units and an associated open-pit coal mine with an annual capacity of 7.8 million tons. After eight years of concerted efforts, the project commenced commercial operations successfully on February 5, 2023. Concurrently, Shanghai Electric is actively advancing its international community development efforts by collaborating with local governments and civil institutions in Pakistan to engage in corporate social responsibility and public welfare activities. These initiatives encompass tree planting, road construction, job creation for local residents, promotion of Chinese culture, and fostering Sino-Pakistani friendship, thereby enhancing Shanghai Electric's reputation as a responsible Chinese enterprise.

Under the leadership of the Belt and Road Initiative, Shanghai Electric, while undertaking overseas engineering projects, has successfully facilitated the international market expansion of a significant number of domestic advanced and green equipment. The following projects are notable examples: the Senj Wind Farm Project in Croatia, the 500kV Ultra High Voltage Transmission Project in Sarawak, Malaysia, the Karachi K-2/K-3 Nuclear Power Project in Pakistan, the Huasitde Project in Iraq, a series of turbine retrofit projects in Bangladesh, and the Parau Photovoltaic Power Plant Project in Romania.

Case **Shanghai Electric handed over the Malaysia's Longshan Photovoltaic Power Station project**

In May 2023, the Malaysia Longshan project, undertaken by Shanghai Electric Power Transmission and Distribution Engineering Equipment Co., Ltd., was handed over. The project comprises a 350 kW solar power station, a 500 kW/1 MWh energy storage battery, three 150 kW diesel generators, and an integrated control building. The photovoltaic and energy storage serve as the main power source for the microgrid system, ensuring uninterrupted power supply, while the diesel engines act as backup power, seamlessly switching to ensure uninterrupted power supply. Leveraging its expertise and strength in the field of new energy, Shanghai Electric contributes to the development of Sarawak State.

Shanghai Electric handed over the Malaysia's Longshan Photovoltaic Power Station project

Case **Shanghai Electric has successfully completed its first photovoltaic project in the UK**

Shanghai Electric's Bransston 50-megawatt photovoltaic project in the United Kingdom marks the first completed and operational photovoltaic Engineering, Procurement, and Construction (EPC) project in the country. Located in Lincolnshire, central England, it stands as one of the largest photovoltaic projects in the region. In 2023, after undergoing a two-year warranty period, the project received its final handover certificate and contract warranty letter. This achievement signifies a significant milestone for Shanghai Electric in expanding its presence in the UK photovoltaic electricity market, and it serves as valuable experience for future new energy EPC projects in the European market.

Shanghai Electric's 50-megawatt Bransston photovoltaic project in the United Kingdom

Case **Shanghai Electric's Smart Grid Lighted Up "Victory City" in Uzbekistan**

The Zafarabad 220 kV Substation Project is Uzbekistan's first digital substation and one of the key projects in Uzbekistan's investment plan from 2020 to 2023. It is also a significant achievement of the China-Uzbekistan "Belt and Road" cooperation.

This substation realized functions such as full-site information digitalization, communication platform networking, and standardization of information sharing, which will be essential in improving power supply in the eastern region of Uzbekistan. As the general contractor, Shanghai Electric, in collaboration with the local power design institute, provided the technical solution for the digital substation and applied Chinese technology and equipment to provide comprehensive power supply for the local area, addressing the issue of electricity scarcity for nearby residents.

The Zafarabad 220 kV Substation Project

Supply Management for Better Development

Guided by the principle of "collaboration and symbiosis, cooperation and mutual benefit", we adhere to responsible procurement, continuously refine supplier management, establish a digitalized supply chain platform, and are committed to building a sustainable supply chain while enhancing its resilience.

In accordance with national laws and regulations including the Contract Law of the People's Republic of China, the Law of the People's Republic of China on Tenders and Bids, the Law of the People's Republic of China on Product Quality, and the Pricing Law of the People's Republic of China, Shanghai Electric continues to optimize its existing management system and regulations including Shanghai Electric's Purchase Management, Shanghai Electric's Centralized Purchase Management, the International Procurement and Supplier Management Plan and Purchase Pricing Management to optimize its supply chain management system.

Supplier Management

The Group conducts rigorous qualification reviews of suppliers, requiring adherence to the Group's Supplier Code of Conduct and strengthening supplier admission and process supervision. Leveraging system and product certifications, we utilize an automatic registration system integrated with risk radar and third-party risk systems to promptly obtain risk information, continuously enhancing supplier risk management. By integrating supplier portals and coordinating supplier information, we strengthen supplier management and supervision. Suppliers with negative records, such as dishonesty, legal disputes, or environmental penalties, are strictly prohibited from cooperation.

We undertook optimization of the daily supervision and performance evaluation mechanism for suppliers within the Group, augmenting measures to address breaches. Supplier performance was closely monitored and tracked, with relevant indicators seamlessly integrated into our assessment system. Through a structured process feedback mechanism, notifications, warnings, or suspensions were issued, while cooperation with non-compliant suppliers was terminated, emphasizing stricter penalties for contract breaches. Quality evaluations of supplier materials, projects, or services were conducted through annual inspections, spot checks, and expiry reviews, determining their eligibility for future supply. Additionally, selected suppliers underwent joint re-evaluations with factories, culminating in the elimination of unqualified suppliers, further refining our supplier management practices.

Supplier Relationship Management (SRM) Platform

In line with digital transformation, the Group continues to optimize the Supplier Relationship Management (SRM) platform. This includes promoting advanced management concepts and standardized procurement processes, upgrading procurement and supplier management mechanisms, and facilitating the integration and sharing of resources, technology, and information. These efforts aim to achieve cost reduction and efficiency improvement in the procurement process.

Shanghai Electric's SRM platform includes modules for supplier lifecycle management, sourcing and tendering, order coordination, and an electronic marketplace. It connects upstream and downstream of the supply chain and enhances the supplier management system. This facilitates precise matching of supply and demand, improves management efficiency, and enables digital empowerment.

In 2023, Shanghai Electric further upgraded the SRM platform by enhancing platform functionality, expanding the coverage of group procurement management and increasing online procurement volume. These further promoted procurement compliance and transparency.

Sustainable Supply Chain

Shanghai Electric adheres to building a sustainable supply chain, integrating green development principles throughout all aspects of supply chain management. The Group has set out clear requirements for corporate ESG performance in its Supplier Code of Conduct. Shanghai Electric encouraged all suppliers to enter into the Agreement on Workplace Safety and Environmental Protection, and conducted a comprehensive safety and environmental review of its suppliers. In everyday management, we regularly conduct comprehensive review and examination of suppliers' qualifications, safety and environmental performance in the past three years, the degree of workplace safety standardization, safety and environmental laws and rules violations and incidents, and other related matters involving regulations on workplace safety. The Group prioritizes selecting suppliers who adhere to sustainable development principles, advancing the construction of a green supply chain procurement system. Shanghai Mitsubishi Elevator, the Group's subsidiary, has added carbon emission related requirements to supplier approval and performance review processes, encouraging the suppliers to provide products in lower-carbon ways.

Shanghai Electric actively guides suppliers to strengthen their legal operations, adhere to business ethics, and fulfill social responsibilities. It requires suppliers to comply with anti-commercial bribery policies and conducts necessary due diligence on them. To improve Party conduct and uphold integrity and prevent disciplinary violations for improper benefits in procurement, Shanghai Electric requires all suppliers to sign the Integrity Agreement together with the Procurement Contract, and specifies various responsibilities and strong disciplinary measures in the Integrity Agreement to regulate the suppliers' behaviors and reduce compliance risks in procurement.

In addition, the Group has incorporated anti-corruption management of the supply chain into the SRM platform to capture and track information about corruption, breach of trust and significant business risks of all suppliers, and announces suppliers on the negative list via the supplier life-cycle management platform in real time. According to information from the SRM platform, none of Shanghai Electric's suppliers were involved in corruption in 2023.

Requirements on supplier ESG performance including but are not limited to

- To never tolerate the act of corruption and bribery in any form;
- To never engage in corruption and bribery in any form;
- To respect the basic interest of employees and offer equal opportunities and treatment;
- To prohibit the forced labor and child labor;
- To adopt measures to control the safety risks;
- To provide the trainings in relation to health and safety;
- To act in strict compliance with statutory environmental standards and international standards;
- To continue to improve the measures on environmental protection.

Communication and Improvement

The Group's subsidiary companies establish effective communication mechanisms with suppliers based on their different types and needs. They aim to strengthen information, technology, and resource exchange, striving to build long-term partnerships with suppliers. This effort promotes collaborative progress and harmonious win-win situations.

Shanghai Electric's Supplier Communication Channels

Supplier Conference

- At the supplier conference, we conduct face-to-face discussion on performance strengths and weaknesses, while also disseminating information on technology development plans and procurement management requirements.

Common Issues Discussion Meeting

- Perodically, we convene supplier discussion meetings to address common issues such as expanding into emerging markets or service markets.

Coaching and Training

- We assist suppliers in enhacing their quality management capabilities through specialized quality coaching, training, and other initiatives.

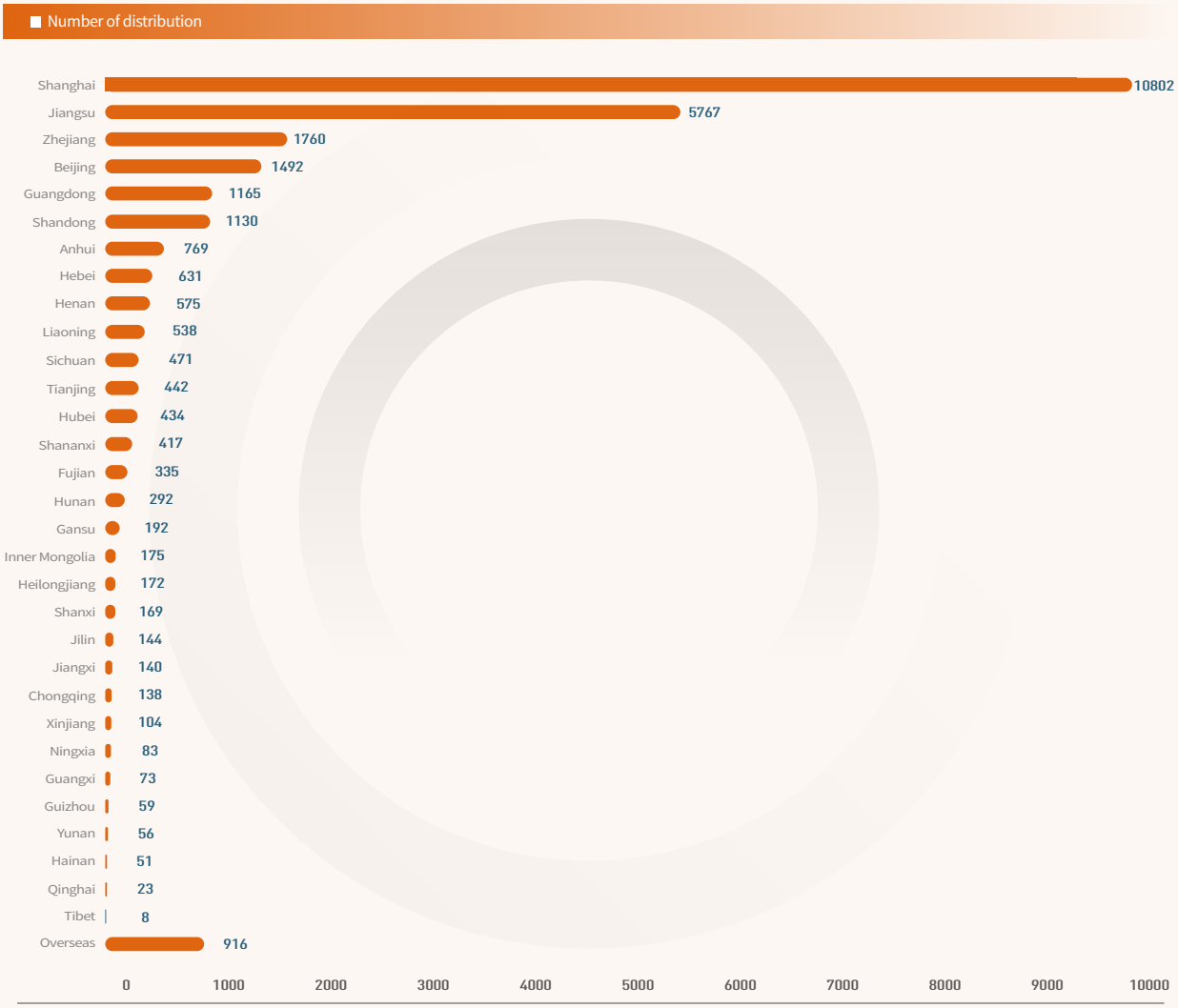
Centralized Procurement Business Exchange

- We conduct centralized procurement business exchanges by visiting supplier gathering areas.

Customer Needs Feedback

- We conduct regular quality visits to suppliers and also relay customer demand information to them, assisting suppliers in improving product quality and refining their directionof improvement.

The Distribution of Core Business Suppliers of Shanghai Electric[9]



Note:

9. Supplier scope: Suppliers covered by the Smart Supply Chain Platform.

Shanghai Electric regards talent as its primary resource and bases its future development strategy on this principle. It comprehensively safeguards employee rights and interests and has launched multiple talent development programs while establishing a talent reservoir. Simultaneously, the Group fosters a safe working environment and a diverse, equal, and inclusive cultural atmosphere. It prioritizes the development and cultivation of employees while fully ensuring their physical and mental well-being.

Attracting, Cultivating, Utilizing and Retaining Talents to Illuminate A Bright Future

05

- People Orientation, Inclusiveness and Sharing
- Talent Cultivation for Mutual Achievement
- Care for Health and Safety Protection

People Orientation, Inclusiveness and Sharing

We prioritize talent as our foremost asset, safeguarding employees' legal rights and fostering a diverse, equitable, and inclusive workplace environment. Additionally, we enhance employees' well-being by enriching their lives and providing care, thereby boosting their happiness and satisfaction.

Employment Management

Shanghai Electric has developed a set of employment policies and regulations, such as the Employee Recruitment Management, Employee Recruitment Implementation Rules, and Employee Handbook, to standardize and unify the recruitment process and employment matters. The Group deeply understands that firmly adhering to principles of fairness and justice, embracing an inclusive and enlightened management philosophy, safeguarding employees' legitimate rights and interests, and creating a diverse and enriching employment environment are crucial factors in attracting talents from various backgrounds, fields, and experiences.

Shanghai Electric consistently adheres to a high-quality, diversified, and internationalized approach to talent recruitment, focusing on key strategic development areas of the Group. With a high starting point, we strategically position ourselves to support industrial development with high-quality recruitment. In 2023, the Group conducted a special review of campus recruitment efforts. The leadership team led campus recruitment presentations and organized overseas recruitment events, combining online and offline approaches. Through activities such as interactive visits, school-enterprise discussions, collaborative research between academia and industry, and recruitment presentations, we comprehensively deepen partnerships with educational institutions, expand recruitment channels and reach. Furthermore, in 2023, our recruitment focuses on more diverse specialties. In addition to traditional fields such as thermal energy, machinery, and electrical engineering, we are expanding into new areas such as electrochemistry, new materials, and power electronics to meet the needs of emerging industries and new development paths.

Case **"Pursuing Dreams, Illuminating the Future" New Employee Induction Ceremony**

In August 2023, the 2023 Shanghai Electric New Employee Induction Ceremony, themed "Pursuing Dreams, Illuminating the Future," was held at Shanghai Electromechanical Institute. New employees delved into the "strategic analysis", "cultural cohesion", and "growth empowerment" , gaining an in-depth understanding of Shanghai Electric's strategic blueprint and cultural essence to integrate more quickly into the Shanghai Electric family.

Shanghai Electric New Employee Induction Ceremony

In addition to campus recruitment, the Group also organizes summer internships and elite summer training camps, inviting students to Shanghai Electric for exchanges and proactively identifying outstanding talents from key universities. Simultaneously, the Group actively promotes the reform of doctoral and master's degree education in engineering, exploring the integration of academic education and talent recruitment to tailor the development of future engineers with the electrical DNA.

In terms of recruitment models, the Group closely follows the trends of Generation Z, expanding its employer brand influence and visibility through diverse promotional channels such as WeChat official accounts, video platforms, and Bilibili.

Employee statistical table of Shanghai Electric in 2023

According to statistics, the employees of Shanghai Electric in 2023 cover all age groups, with different professional backgrounds and experiences and covering many cities in China and overseas.

CATEGORY	CONTENT	2022	2023
Total	Total number of people	41,739	42,190
Gender	Male	32,181	32,688
	Female	9,558	9,502
Age segment	<20 years old	0	0
	20-29 years old	11,119	11,341
	30-39 years old	12,812	12,950
	40-49 years old	10,730	10,775
	50 years old and above	7,078	7,124
Area	Inside the province/city (Shanghai)	22,269	21,474
	Outside the province/city (Chinese mainland areas outside of Shanghai)	16,480	17,744
	Overseas (areas out of China)	2,990	2,972
Type	Full-time employees	41,739	42,190
	Part-time employees	0	0
Function	Management	3,882	3,859
	Production	18,692	19,054
	Sales	2,978	3,010
	Technical research	13,275	13,419
	Financial audit	1,171	1,134
	Administration & Logistics	1,741	1,714
Education background	Doctor's degree	208	215
	Master's degree	4,201	4,241
	Bachelor's degree	17,918	18,161
	College degree and below	19,412	19,573

Remuneration and Benefits

Shanghai Electric has formulated the Remuneration Management system, which ensures internal fairness and external competitiveness. This system maximizes the protective and incentive functions of remuneration, enhances the return on investment in human resources, and fosters the sustained, healthy, and stable development of the Group. The employee remuneration structure comprises basic salary, performance-based pay, allowances, and benefits, covering 16 items such as basic wages, annual performance bonuses, and statutory allowances.

In 2023, the Group continues to refine assessment, remuneration, and incentive systems, emphasizing core indicators like economic performance, market competitiveness, and profitability. For instance, exploring pre-agreed salary schemes for state-owned enterprise technology talents and enhancing incentives for core research personnel aligns remuneration more closely with talent value.

Democratic Management

Shanghai Electric deeply embraces the concept of democratic management, respecting and safeguarding the rights of employees over the long term. The Group firmly guarantees employees' rights to information, participation and supervision, actively promote communication and exchange between employees and us. Shanghai Electrical and Mechanical Trade Union serves as an effective mechanism to build harmonious labor relations between Shanghai Electric and employees. Since the establishment of Shanghai Electrical and Mechanical Trade Union, we have prepared and issued important documents such as Implementation Measures of Shanghai Electric Group's Employee Representative Meeting, Measures for Soliciting and Handling Proposals of the Employee Representative Conference of Shanghai Electric, Detailed Rules for the Implementation of Collective Bargaining Work in Shanghai Electric, and signed collective contracts, special collective contracts for protection of women workers' rights and interests and special collective contracts for wages with enterprises as representatives. As of December 31, 2023, all incumbent employees of Shanghai Electric are members of labor unions.

Case **The Third Session of the Third Employee Representative Conference of Shanghai Electric was convened**

The Third Session of the Third Employee Representative Conference of Shanghai Electric

In March 2023, Shanghai Electric held the Third Session of the Third Employee Representative Conference, where representatives from various fields brought forth the voices and responsibilities of the employees to collectively discuss the development of Shanghai Electric. The conference emphasized the need to focus on people's livelihoods and meet the aspirations of employees for a better life. It urged addressing the most concerning, direct, and practical interests of the employees and diligently fulfilling the basic responsibilities of safeguarding their legitimate rights and interests and wholeheartedly serving them. The conference also called for deepening the practice of "addressing real issues for the people", improving the quality of employees' lives, and earnestly resolving solve their "urgent expectations and difficulties".

Shanghai Electric is committed to fostering an open and transparent work environment, and establishing a robust system for democratic communication and exchange. In addition, the Group is also dedicated to listening to their voice in a timely manner, understanding their ideas in an all-round way, and promoting the effective communication between the Group and employees through a sound communication system, so as to help employees solve problems in their work and life.

Shanghai Electric has been holding various activities to strengthen the communication and interaction between the Group and its employees. We have established the platforms for employees to express their interest demands and the smooth channels for letters and visits, aiming to provide the employees with a path to solve problems and give feedback. We apply different policies for different categories of demands from the employees to effectively promote a solution to the demands. At the same time, we give full play to the role of various personnel to help employees resolve their worries and difficulties.

Employee Care

Shanghai Electric is dedicated to cultivating a caring corporate culture that combines depth and breadth. Through providing special comfort, improving talent service guarantee policies, and implementing practical measures concerning employees' livelihood, Shanghai Electric enhanced the employee welfare system, and constantly enhance their sense of identity and sense of belonging to the Group and enhance their cohesion.

Case **Warm solicitude conveyed the care and love**

In December 2023, Wu Lei, secretary of the Party Committee and Chairman of Shanghai Electric, conducted a research visit to the Beijing regional headquarters and visited and extended solicitude to the cadres and employees of the regional headquarters and the enterprises in Beijing. He inquired about the work and life of the personnel stationed in Beijing, expressed appreciation and gratitude for their efforts in the development of the Group. He also hoped that they would take care of themselves, manage their teams well, continuously strengthen their capabilities, and consistently improve their business skills, contributing to the high-quality development of the Group.

Solicitude for cadres and employees in Beijing

In February 2023, Zhu Zhaokai, the Deputy Secretary of the Party Committee of Shanghai Electric, paid a visit to solicitous greetings to Liu Haishan, a national model worker. Liu Haishan is praised by the workers as an "old expert" and has led a wave of technological innovation with the workers. He uses small equipment in the factory to manufacture large components, inspiring generations of young people to pursue a path of skilled craftsmanship in service of the country.

Solicitude for Liu Haishan, a National Model Worker

Meanwhile, Shanghai Electrical and Mechanical Trade Union actively promoted various employee services. By providing heat subsidies, creating workshop rest areas, and caring for overseas and non-Shanghai workers, they continued to offer warmth to those in need, allowing them to truly enjoy preferential benefits. In 2023, the achievements of the practical projects for serving employees mainly include:

- Labor protection and heatstroke prevention and cooling in summer;
- Creating workshop rest areas: Issuing the Relevant Regulations on the Use of Union Funds to Support the Construction of Workshop Staff Rest Areas, constructing or renovating workshop rest areas for frontline staff;
- Caring for overseas and non-Shanghai workers: We have newly established one overseas workers' home, with 13 operated and maintained. Additionally, we newly established 58 non-Shanghai workers' homes, with another 94 operated and maintained. During Children's Day, solicitude were extended to 226 children of overseas workers. During the Spring Festival, cultural performance tickets and New Year's movie tickets were provided to 169 family members of overseas workers in Shanghai, along with festive greetings conveyed through recorded videos, delivering holiday greetings to their loved ones.

Case **Workshop rest areas embody care and warmth**

In 2023, the construction of workshop staff rest areas for employees was listed as an annual project serving employees. At all levels of the enterprise, in-depth research was conducted to understand the needs and propose personalized solutions. By creating a favorable rest environment, a total of 215 new or renovated rest areas were completed within the year, serving over 15,000 frontline workers in manufacturing enterprises. These efforts have transformed Shanghai Electric's workshop rest areas into true havens for frontline workers, providing not only a place for relaxation but also a learning space and a sanctuary for the soul.

Workshop Staff Rest Areas

Helping Employees in Difficulty

Shanghai Electric cares for the lives of every employee, providing assistance to those in need, and is committed to creating a compassionate environment. In 2023, the Group continued to carry out special solicitude and assistance, distributing vegetable baskets , a benefit project from Shanghai Municipal Federation of Trade Unions, to 196 employees in need. They also conducted "Children's Day" solicitude for children of low-income families. At the same time, the Group raised funds to assist employees in need. During the "One-day Donation" event organized by the Group, 64 companies raised a total of RMB 5.39 million to help those in need. Throughout the year, Shanghai Electric assisted a total of 5,244 employees in need, with a total investment of over RMB 7.22 million.

Helping Young Employees

Shanghai Electric puts great effort into talent attraction, cultivation, utilization, and retention. It actively meets to the housing needs of young employees by constructing talent apartments and leasing residential properties.

Case **1638 Talent Apartments of Shanghai Electric**

The "1638 Talent Apartments of Shanghai Electric" aims to address the challenges of housing affordability and availability for young employees, embodying Shanghai Electric's commitment to the people-oriented urban development concept.

The project consists of two phases and provides a total of over 500 apartment units. Furnished with essential amenities such as tables, chairs, air conditioning, and complete bathroom facilities, the apartments offer a comfortable living environment. With move-in-ready accommodations, eligible employees can settle in and thrive at Shanghai Electric. As of the end of the reporting period, 158 employees have moved into the first phase of the "1638 Talent Apartments of Shanghai Electric", realizing the goal of living and working in comfort.

1638 Talent Apartments of Shanghai Electric

1638 Talent Apartments of Shanghai Electric

Helping Female Employees

The Group continues to prioritize the female employees, providing more opportunities for women to excel in their careers and fully showcase their talents and abilities.

Case Caring for female employees, conscientiously safeguarding their rights and interests

In 2023, the Shanghai Electric and Mechanical Trade Union promptly devised an implementation plan in response to the requirements outlined in the Notice on Conducting the Women Workers' Legal Awareness Month Campaign in 2023. Through a series of initiatives, it aimed to bolster the legal consciousness of female employees, enhance their comprehension of laws, and empower them to effectively apply legal principles. This proactive approach aimed to foster a supportive environment for the well-being of female workers.

The trade unions at all levels are actively involved in helping female employees understand their legal rights, creating a ripple effect of awareness:

The Shanghai Electric and Mechanical Trade Union's property branch has organized a series of activities, including lectures on the legal protection of female employees' rights, "Wisdom in Place" women's classes, and stress-relief DIY activities. The aim of these activities is to help female employees understand how to adjust their emotions with a positive mindset and face future challenges.

The trade union of the Central Research Institute has held specialized lectures covering various aspects of Protection of Women's Rights and Interests, such as reproductive rights, marital and family rights, labor rights, and personal and personality rights. Through case studies, they discussed various issues that women may face in their work and workplace, guiding everyone to pay attention to and address these issues.

Shanghai Electric Real Estate Union has launched a series of activities focusing on women's rights and interests

The Central Research Institute Trade Union organized a special lecture on Protection of Women's Rights and Interests

Case The unveiling ceremony of the New Power Professional Women's Innovation Talent Alliance

In August 2023, the meeting of the New Power Professional Women's Innovation Talent Alliance (New Power Alliance in short) in Lingang section of Shanghai Pilot Free Trade Zone (Lingang section in short) was held at the Lingang Base of Shanghai Electric. Wan Minli, a member of the Shanghai General Federation of Trade Unions Women's Committee, Deputy Chairman of the Shanghai Mechanical and Electrical Trade Union and Director of the Women's Work Committee, and Jiang Jing, Director of the Party and Mass Work Department and Chairperson of the Women's Work Committee of the Administrative Committee of Lingang New Area of the Lingang section, jointly presented the requirements and expectations for the development of the alliance. They emphasized that the New Power Alliance should focus on empowering professional women in the Lingang section, actively explore effective approaches such as integrating resources, complementing strengths, and gathering talents and wisdom. By fully leveraging its role as a bridge and bond, it should further drive technological innovation, facilitate better transformation of outcomes, and provide precise services for the growth, innovation, entrepreneurship, and care services of numerous female innovative talents in the new area. In addition, the trade union should further enhance its awareness of service and management, fully play the demonstrative and leading role of the alliance, encourage employees to draw wisdom and strength, achieve innovation in positions, independent innovation, team innovation, and continuous innovation, unite and lead female employees to carry forward the spirit of women and contribute to the high-quality development of the Pudong Leading Area and the Lingang section, showcasing the beauty of women.

New Power Professional Women's Innovation Talent Alliance

Case Celebrating the 113th Anniversary of International Women's Day

The theme event commemorating the 113th anniversary of International Women's Day

In March 2023, the Shanghai Electrical and Mechanical Trade Union commemorated the 113th anniversary of International Women's Day with the theme "Gathering Her Strength, Blossoming at Work" at the Wanping Theater. Around 180 participants, including female labor models, advanced representatives from various industrial groups and enterprises, as well as representatives from party and government leadership, directors of the trade union's women's committees and representatives of female employees, attended the event.

Representing the party committee of Shanghai Electric, Deputy Secretary Zhu Zhaokai extended holiday greetings and best wishes to the female employees of Shanghai Electric. He also expressed sincere solicitude to comrades who have long been working on the frontlines of the trade union's women's committee and heartfelt gratitude to party and government leaders at all levels who have always supported the work of the trade union's female employees.

Caring for Disabled Employees

Shanghai Electric strictly adheres to the laws and regulations such as the Law of the People's Republic of China on the Protection of Disabled Persons, providing equal employment opportunities and development plans for disabled employees, and creating an inclusive, friendly, and supportive work environment.

Case **Yinghe Technology helped deaf employees**

Yinghe Technology endeavors to care for, support, and assist deaf employees, creating an equal, friendly, and inclusive work environment for them, continuously enhancing their sense of achievement and happiness.

During the recruitment process, deaf employees were held to the same standards as regular employees. Sign language interpreters were provided during interviews and onboarding to enhance the process's warmth. After successful recruitment interviews, deaf employees participated in relevant training alongside regular employees.

Regarding compensation and benefits, deaf employees received the standard company benefits in addition to a monthly living allowance.

For career development, Yinghe Technology offered equal and open channels for promotion to deaf employees. As of the end of 2023, 17 deaf employees have been promoted to managerial positions.

Yinghe Technology provided convenience in the daily lives and work of deaf employees as much as possible. Addressing the unique needs of deaf employees, the company has installed sound and light alarm systems both inside and outside the workshops. It has implemented easy-to-understand signboard management to simplify equipment operation and introduced "little yellow hat" management to assist them in their work. During their leisure time, Yinghe Technology distributed holiday gifts to deaf employees on festivals and holds monthly birthday celebrations, ensuring that deaf employees feel cared for and recognized by the company.

"Little yellow hat" deaf employees

Distributing holiday gifts to deaf employees

Life Care

Shanghai Electric values humanistic care and aims to make employees feel the warmth of the Shanghai Electric family through a variety of colorful employee activities. We aim to satisfy the aspirations of our employees for a better life, creating a comprehensive service system for them and establishing a precise platform for connecting social resources with employee needs. We actively organize various cultural and sports activities, encourage employees to participate enthusiastically, cultivate their hobbies and interests, and provide a platform for them to showcase their talents. We also hold various parent-child activities, allowing children to enjoy the fun of the activities while learning about their parents' work, immersing themselves in the Shanghai Electric culture, and growing and improving together.

Case **The 5th "Shanghai Electric Cup" Staff Badminton Competition**

In September 2023, the 5th "Shanghai Electric Cup" Staff Badminton Competition was held at the Oriental Sports Center in Shanghai. Nearly 400 badminton enthusiasts from 57 teams representing various enterprises enthusiastically participated, showcasing the sportsmanship and vitality of Shanghai Electric.

The 5th "Shanghai Electric Cup" Staff Badminton Competition

Case

Shanghai Electric Power Transmission and Distribution Group's 2023 Staff Orienteering Hiking and Dragon Boat Racing Event

In May 2023, the Shanghai Electric Power Transmission and Distribution Group organized the 2023 Staff Orienteering Hiking and Dragon Boat Racing Event themed "Rowing & Advancing" at the Fengxian Haigang Forest Park. Over 760 employees gathered at the venue, demonstrating the spirit of perseverance and competition through healthy sports activities.

Dragon Boat Racing

Orienteering Hike

Case

Set Sail for the Future! - The "Electrical Coordinates" Orienteering Race Began

In April 2023, Shanghai Electric hosted the "Electrical Coordinates" Orienteering Race with the theme "Set Sail for the Future". Over 350 participants from 88 teams representing 68 enterprises joined the event, embarking on a journey towards a brighter spring and future. Concurrently, the "Hand in Hand for the Future" Shanghai Electric Table Tennis Invitational Tournament was also held on the same day. Participants showcased their table tennis skills on the court while fostering camaraderie and promoting cooperation through "ping pong diplomacy" off the court.

Set Sail for the Future! - The "Electrical Coordinates" Orienteering Race

Case "Visiting Shanghai Electric" Employee Parent-Child Activity

In July 2023, the Shanghai Electrical and Mechanical Trade Union organized a parent-child activity themed "Miracles of Nuclear Power" at the Nuclear Power Group. They led the children to visit the manufacturing base of national heavy equipment, where they learned industrial knowledge firsthand, listened to stories from model workers, became acquainted with the "miraculous" nuclear power, demonstrated the "solid" strength, and embarked on an exploration of a wonderful journey.

During the nuclear power knowledge lecture, volunteers used animated simulations to illustrate nuclear fission, chain reactions, nuclear power generation, and the operation principles of nuclear power plants. This helped the children understand the safety, economy, and stability of nuclear energy as a clean energy source, as well as the development prospects and future trends of nuclear power.

Parent-Child Activity named the Power of Nucleus

Parent-Child Activity named "The Magic Power of Light"

"Visiting Shanghai Electric" Employee Parent-Child Activity also includes the theme "The Magic Power of Light", which helps children understand photovoltaic power generation, as well as the "Fun" Sports at Changyang Innovation Valley, guiding children to experience the pulse of Shanghai Electric's urban renewal efforts.

Case Shanghai Electric Summer Camp: Experiencing the Power of Wind Together

In July 2023, young volunteers from Shanghai Electric Wind Power visited the Shanghai Electric Summer Camp to educate children about wind power and promote the concept of green living. During the event, children actively participated in interactive quizzes, cooperated to assemble wind turbine models, and experienced the diligent efforts of the staff behind green energy.

Experiencing the Power of Wind Together

Talent Cultivation for Mutual Achievement

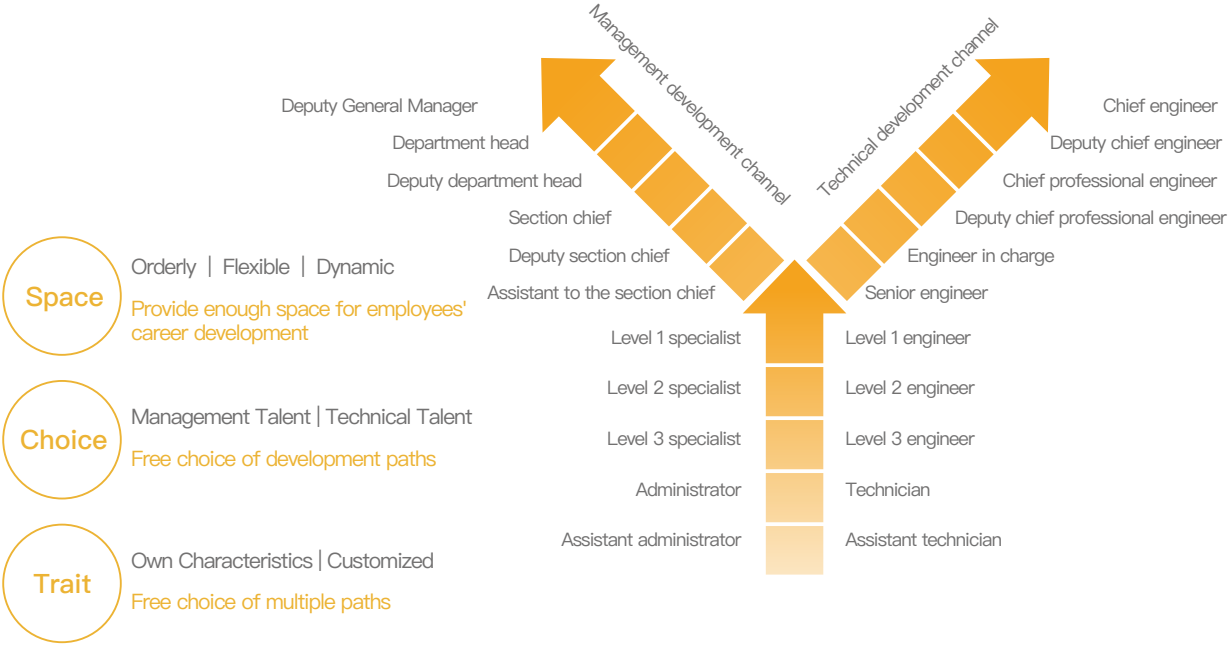
Increase investment in talent cultivation resources, foster and shape innovative talents, and create a favorable platform for talent development.

Talent Reserve

Talent is the cornerstone of Shanghai Electric's transformation and upgrading towards high-end, intelligent, and green development. Shanghai Electric focuses on strategic development, building career growth pathways for different employee groups. It actively engages in various talent development initiatives and strives to create a diverse, equitable, and inclusive environment. This provides a better platform for talent growth and success.

Career Development Y Channel

Shanghai Electric understands the high-quality talents is an important factor to build a high-quality team and promote the progress of the Company as well as the core competitiveness of the Company. In order to improve the enthusiasm of employees, give full play to their own talents and expand their possibilities, we have built a "Y-shaped" career development channel, aiming to encourage employees to choose a development channel suitable for them according to their own characteristics.



In 2023, Shanghai Electric formulated the Implementation Opinions on Strengthening the Construction of Skillful Talent Teams in the New Era, aiming to optimize the skilled talent system and accelerate the cultivation of a workforce capable of achieving remarkable accomplishments.

Intensify efforts to cultivate skilled talent pool

- Conduct assessments on the development of skilled talent pool, forecast supply and demand, and formulate training plans.
- Utilize various channels and forms such as mentorship, on-the-job training, skill competitions, and technical exchanges to cultivate skilled personnel.
- Strengthen the integration of industry and academia, as well as theory and practice, by leveraging high-quality resources from universities and enterprises, enhancing the strength of faculty, and improving the capacity and level of vocational skills education and training.
- Continue to organize "3+3+3" technical worker training programs and workshops for model workers and artisans.
- Encourage personnel in various auxiliary occupations to participate in cross-disciplinary composite skill training programs.

Improve the skill oriented usage system

- improve the ranking system of skilled posts and further optimize the incentive mechanism for skilled personnel.
- Set up various kinds of allowances such as skill allowance, team leader allowance, mentoring allowance, and internal training allowance to support and encourage highly skilled talents to play their roles in team management, skill transfer, and project development and evaluation of vocational work.

Establish a skill level system and a diversified evaluation mechanism

- Create a new hierarchy of skill levels, including the New Level 8 Technical Skills.
- For enterprise-specific occupational categories, determine the scope and skill levels of occupational categories based on job-skill matching and national occupational skill standards.
- Encourage enterprises with skill level assessment needs and eligibility conditions to strengthen the evaluation of occupational skill levels.
- Support workers' participation in various levels and types of occupational skill competitions. For competition winners, establish a long-term incentive mechanism linked to job applicability and compensation benefits.

Improve the incentive system for skilled talents

- Through a scientific and fair assessment system, we aim to recognize the value of skills and ensure fair rewards for those who work hard and excel in their expertise.
- Outstanding performers in various skill competitions will receive both material and spiritual rewards as recognition for their achievements.

Talent Map

Strengthening the construction of talent teams is of significant importance for enhancing the core competitiveness and technological innovation capabilities of Shanghai Electric, serving and supporting national strategies, and promoting high-quality development. Aligning with the strategic planning of the group, Shanghai Electric has devised a talent map and comprehensively promoted the construction of three talent teams. This involves establishing excellent engineer training systems, skilled worker training systems, and business management talent training systems, fostering a distinctive talent pool tailored to the needs of Shanghai Electric.

Outstanding engineer team

With the focus on the training program for outstanding engineers, we have formed a training mode combining professional depth with horizontal communication expansion, and always mastered and highlighted a group of "key minority" leading technical innovation talents to carry forward the engineer culture.

Model Worker and Craftsman Team

With the focus on the evaluation and employment of chief technician, special-grade technician selection, and "3+3+3" training mode, "Model Worker and Craftsman Training Program" in collaboration with Shanghai Polytechnic University, we focused on the leading talents and carried on the craftsman spirit to establish a team of highly skilled talents.

Management Talent Team

Guided by the broader goals of industrial transformation and development, we prioritize cultivating management talents through practical experiences on the frontline. By tailoring talent development initiatives to different levels and categories, we aim to expedite the nurturing of young leaders and empower the growth of our industries.

For different types of talents, we have established a multi-channel, multi-level training system to meet the diverse development needs of our employees. For instance, for outstanding engineers, we have devised a tiered and focused training program for scientific and technological talents, including initiatives like the Science and Technology Expert Lecture Hall and Project Leader Training Workshops. Regarding the teams of model workers and craftsmen, we have formulated the Implementation Opinions on Strengthening the Construction of Skillful Talent Teams in the New Era at Shanghai Electric, optimizing the training, utilization, evaluation, incentives, and protection systems for skilled talents. As for the management talent team, we adhered to a combination of training and practical experience, continuously improving the development mechanism for management talents. We accelerate cadre training through projects like the "Six-Cross Exchange" and the "Spark" Energy Synergy Special Plan.

Internal Talent Market of the Group

By further invigorating its internal talent resources and fully exploring the value and potential of its employees, Shanghai Electric established the internal talent market of the Group, which gives priority to internal recruitment for the job needs of various enterprises within the Group, so as to provide more job choices, career development opportunities for employees and promote the talents to create greater value in more suitable positions

The establishment of the internal talent market of Shanghai Electric has successfully broken the barriers between the Group and enterprises and promoted the flow of internal talents. In 2023, the staff turnover rate of the Group was 3.37%, lower than last year.

Employee turnover (percentage to total number of employees)

		2023	2022
GENDER	Male	2.73%	2.59%
	Female	0.76%	0.78%
AGE(YEARS OLD)	Below 30	1.21%	1.16%
	30-39	1.80%	1.76%
	40-49	0.37%	0.35%
	50a and above	0.11%	0.10%
AREA	Shanghai	3.17%	2.77%
	Outside Shanghai	0.32%	0.60%

Note: Annual employee turnover rate = Total number of departures during the year / (Total number of employees at the beginning of the year + Total number of new hires during the year)

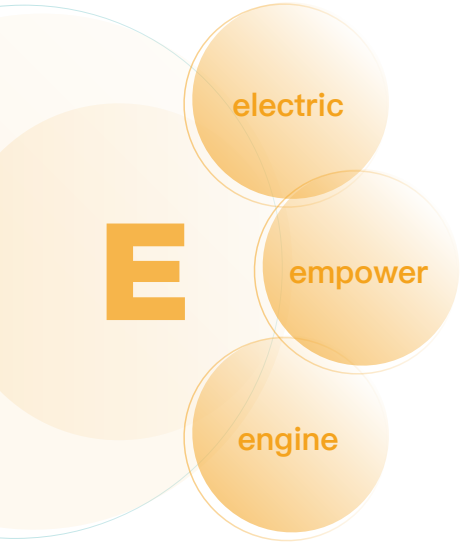
Talent Cultivation

We uphold the management-oriented and technology-oriented employment concept and provide enough space for the development of different types of talents. We set up the "Excellent E+" training system for young college students, the training courses for young and middle-aged management personnel, and exchange and training programs for young technical talents, so as to upgrade the comprehensive quality of Shanghai Electric staff in an all-round way.

Young College Student Cultivation

Shanghai Electric launched the "Excellent E+" training system. By taking synergy from top to bottom, extension at both ends, and open empowerment as a general idea, the system accelerated the cultivation of young talents needed by the development of the Group through systematic training in five stages: integration period, cognition period, accumulation period, promotion period and maturity period. We actively carried out the training programs for the urgently-needed talents in national key industries with various colleges and universities. We have successively signed cooperation agreements with Shanghai Jiaotong University, Huazhong University of Science and Technology, East China University of Science and Technology and other colleges and universities. At present, 32 people have been included in the training program.

"Excellence E+" Development Systems



Maturity period	Goal: Personality Development	Combining strategic needs and personal characteristics to provide a stage for development
Promotion period	Goal: In-depth Training	Provide a platform for practical training through graded and targeted training
Accumulation period	Goal: Post Accumulation	Post work practices
Recognition period	Goal: Rapid Integration	In the DNA of electricity
Integration period	Goal: Co-cultivation	Extending the Employer Brand to the Tertiary Training Stage

Training for Young and Middle-aged Managerial and Administrative Personnel

To advance the Group's talent strategy reserves, strengthen the capacity building of cadre teams, and cultivate a team of managerial and administrative talents who can led the industry to "win the battle", Shanghai Electric has introduced the middle and young management special training program. This initiative aimed to enhance the understanding of middle and young managers regarding the Group's strategic business objectives and the essence of high-quality development. Meanwhile it also intended to expand their management concepts, management knowledge and skills and improve their scientific decision-making ability and excellent execution ability, so as to build a reserve team of young and middle-aged managerial talents suitable for high-quality development.

Case **Specialized training program for young and middle-aged managerial and administrative personnel**

In July 2023, the first session of the specialized training program for young and middle-aged managerial and administrative personnel concluded successfully at the Education Center Party School. The training, conducted both online and offline, covered topics such as "SOE Party Building, Electric DNA, Management Skills, Technological Innovation, and Competency Assessment." By organizing, designing, and implementing at three levels—organization, individual, and business—the program aimed to accelerate the development of high-quality middle and young management talent in Shanghai Electric.

Specialized training program for young and middle-aged managerial and administrative personnel

Young Technical Talent Exchange and Training

Young technical talent is an essential component of Shanghai Electric's workforce and is currently in the prime of innovative creativity. Shanghai Electric is determined to break away from traditional thinking that emphasizes only academic qualifications, years of service, and professional titles. Instead, we engage in numerous exchanges with young technical talent to spark innovative ideas and creativity.

Case **Science and technology talent symposium**

In September 2023, the Shanghai Electric Young Technical Talent Symposium was held at the Group's headquarters. During the symposium, eight young technical representatives from various industries and fields within the Group shared their insights and suggestions on industry-leading technologies, innovative achievements, development trends, as well as talent cultivation, evaluation, incentives, and platform establishment, based on their own positions.

Youth technical backbone symposium

Science and technology talent symposium

In December 2023, Shanghai Electric held a symposium for scientific and technological talents, focusing on "Advancing High-level Science and Technology for Self-reliance". During the symposium, ten scientific and technological representatives from different industries such as engineering welding, mechanical automation, electrical machinery, and power electronics shared their insights on topics including promoting high-quality industrial development, technological self-reliance, interdisciplinary integration of disciplines, and talent cultivation, based on their respective work areas and personal development experiences.

In 2022, Shanghai Electric invested a total of RMB 106 million in training, covering the staff of various job levels, of which the senior management accounted for 100%, and the middle management and general staff took up more than 97%, with an average coverage rate of 98.66%.

GENDER	FEMALE			MALE		
Employee category	Senior management	Middle management	General staff	Senior management	Middle management	General staff
Percentage of training	100%	98.86%	97.32%	100%	98.51%	97.25%
Average number of training (hours)	112	72	66	110	69	64

Care for Health and Safety Protection

Adhere to the concept of safe development, ensure the safe working environment of employees, and protect the physical and mental health of employees.

Safety Mechanism

By adhering to the policy of "human life is most important, enjoying safety, green manufacturing and creating a better future" and strictly abiding by the Law of the People's Republic of China on Workplace Safety, the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases, and the Measures for the Administration of Emergency Plans for Workplace Accidents, Shanghai Electric has formulated Occupational Health, Safety and Environmental Protection Management Manual, and Emergency Plan for Production Safety Accidents, etc., to care for employees' health and safety. Meanwhile, in accordance with the ISO45001:2018 Occupational Health and Safety Management Systems and GB/T33000-2016 Guideline of China Occupational Safety and Health Management System, we strive to establish a sound health and safety management system to minimize workplace accidents. As of the end of the reporting period, a total of 89 companies in the Group have obtained the ISO 45001 Occupational Safety and Health Management System (OSHMS) certification and a total of 98 companies have obtained the certification for GB/T33000-2016 Guideline of China Occupational Safety and Health Management System.

In 2023, we continued to carry forward special rectification activities for production safety, and further improved the overall safety and environmental management efficiency of the Group.

Case **Strengthening risk control in key areas, vigorously carrying out EHS supervision and inspection and special inspection**

In 2023, in order to implement the work requirements of the Work Safety Commission of the State Council and other high authority on special inspections and rectification of major accident hazards, plants and warehouses, flood and typhoon prevention, etc., Shanghai Electric formulated plans and deployment requirements in a timely manner, and organized to carry out special actions in a centralized manner.

- For the storage and use of large-scale hoisting and hazardous chemicals, and the operating units such as radioactive sources, metal smelting and heat treatment, we conducted on-site verification of the control measures for inherent class-A risk points, established benchmarks, and performed special analysis, and solved problems;
- In order to strengthen the source management, systematic management, and precise management of safety work in plants and warehouses, we have inspected a total of 974 plants and 344 warehouses;
- According to the characteristics of flood seasons in 2023, we organized spot inspections and centralized inspections of key links to further improve the response linkage and emergency response mechanisms.

Case **Strengthen the special assessment and inspection in key areas**

In 2023, Shanghai Electric organized the internal and external experts to implement comprehensive supervision and inspection of EHS management for production enterprises in the city, key production enterprises outside the city and some enterprises with weak management capability. A total of 190 inspections were carried out to identify and raise problems and hidden dangers, which were urged to rectify orderly. In addition, for the key areas and key units of EHS management and operation, special assessments including safety standardized operation, environmental compliance management, Shanghai EHS compliance management, and comprehensive fire protection capabilities were organized and implemented.

We implemented the concept of production safety, launched scientific and technological innovation in production safety, and promoted safety development. During the reporting period, the Group's project of "Theoretical Research, Model Involvement and Case Verification of Enterprise Safety Management System Reconstruction" won the "Second Prize of the Third Safety Science and Technology Progress Award of China Work Safety Association (2022)"; the Group's project of "Research and practical application of safety risk hierarchical control and operation assessment methods for urban construction projects" won the "Second Prize of the Fourth Safety Science and Technology Progress Award of China Work Safety Association (2023)". Meanwhile, we vigorously promoted the guidance of safety culture and the application of safety scientific and technological achievements. With the application of each module of "Shanghai Electric EHS Management Information Platform" at various levels and lines, video surveillance related to Class A risk points of nuclear power, power stations, wind power enterprises would be gradually included in the unified supervision scope of the platform, to achieve more efficient, accurate, and compliant intelligent management and control mode for safety production.

We continued to strengthen the enterprise construction of safety culture, and carried out the "Appraisal of practical application experience and achievements of SEC-LOVE management mode" in a centralized manner. A total of 34 outstanding safety production management projects and 31 safety technology projects were recommended, appraised and selected, which further mobilized the Company's enthusiasm and innovation on the safety and environmental protection work. In addition, we led to promote three companies (Shanghai Electric Machinery Factory, Shanghai No. 1 Machine Tool Factory, and Shanghai Mitsubishi Elevator) to complete the re-evaluation of safety culture demonstration enterprises, and guided the industrial groups to play a role in mutual benchmarking and collaborative creation of safety culture.

During the reporting period, there was one death related to the safety production and no serious injuries in Shanghai Electric. The number of working days lost due to industrial accidents was 7,850. Regarding the death accidents, the companies involved immediately analyzed the causes of the accidents according to the requirements of "Four imperative elements", and dealt with the relevant responsible persons, modified the safety protection devices of relevant equipment and facilities, revised the enterprise's operating procedures, and carried out safety education and training for all employees, to improve safety production levels and prevent the occurrence of safety accidents.

Year	2021	2022	2023
Work-related death (person)	1	0	1

Health Management

In 2023, Shanghai Electric compiled and released Shanghai Electric Occupational Health Management White Paper, which opened up a new path for occupational health management. We constantly improve the occupational disease prevention and management and corresponding measures by means of management system and technical transformation, and further strengthen the effectiveness of the occupational disease source treatment, which effectively controls the occupational disease hazards in the workplace and protects the health rights and interests of its employees.

In order to improve the level of occupational health monitoring in enterprises, Shanghai Electric promoted and applied the appropriate labor protection technology, process, materials and equipment. Through special inspection, management, supervision and other means, Shanghai Electric verified the integrity of the enterprise's occupational health archives, the effectiveness of on-site occupational disease prevention facilities, the rationality of the allocation of occupational disease prevention articles, and the coverage rate of the physical examination of occupational disease inductive posts, and put forward the requirements and suggestions for improvement in terms of management, process and technology. In 2023, we revised the regulations related to labor protection articles, formulated selection standards to better guarantee the occupational safety; meanwhile, we implemented occupational health compliance assessments for some key enterprises outside Shanghai to actively identify problems and track and rectify them.

Training and Education

It is an important routine work for us to formulate the health and safety training plans and carry out relevant training regularly. Through employee exchanges, system learning, emergency drills and theme activities, in combination with online and offline channels, we have carried out publicity and education activities on safety and environment management in a comprehensive, multi-disciplinary and targeted manner, so that the concept of health and safety will be deeply rooted in employees' minds.

In 2023, we improved the effect of special training on safety production through a series of small class courses, experience learning activities, etc., and organized multiple special trainings, such as "Enterprise Leadership Safety and Environmental Responsibility System", "SEC-LOVE Safety and Environmental System Operation Training of Shanghai Electric", "Occupational Health Management Certificate Training", "Occupational Health Management Practical Training" and "Emergency and Fire Protection".

Case **Shanghai Electric organized Safety Officer Vocational Skills Level Training**

In December 2023, the opening ceremony of Safety Officer vocational skill level training organized by Shanghai Electric was held in Shanghai Electric Steam Turbine Factory. The relevant personnel from Shanghai Electric Group's Safety and Environmental Protection Department, Human Resources Department, Li Bin Technician College, and some affiliated companies, and the first batch student representatives attended the opening ceremony.

This training aimed to fully implement the national requirements on production safety. It was also an important action to politically implement the safety production responsibility system to enhance the employees' safety awareness and capabilities and carry out in-depth mass safety production work.

"Safety Officer" vocational skill level training

Case **"Ankang Cup" Shanghai Electric Workers Safety Production Knowledge and Skills Competition**

In order to conscientiously implement the decisions and arrangements of the central government and Shanghai municipal party committee and municipal government on the safety production, and promote the effective implementation of Shanghai Municipal Federation of Trade Unions' Opinions on Promoting Safety Production by Trade Unions at All Levels, the Shanghai Mechanical and Electrical Trade Union launched 2023 "Ankang Cup" Shanghai Electric Workers Safety Production Knowledge and Skills Competition in October 2023. This Competition was held online and a total of 87,000 employees signed up for the competition, and 3,578 employees were awarded.

2023 Annual "Ankang Cup" Employee Safety Production Knowledge and Skills Competition

Case

Safety theater with the theme of "Workplace Risk: I See, I Know, I Control" in Shanghai held in Shanghai Generator Factory

In 2023, the production safety month with the theme of "Workplace Risk: I See, I Know, I Control" was held in Shanghai Generator Factory. This event emphasized the safety responsibility awareness of all employees and urged enterprises to continue to do a good job of safe and standardized production in the form of safety theater.

Safety Theater in Shanghai Generator Factory

The Group has compiled special plans such as Emergency Plan for Production Safety Accidents, including the Special Emergency Plan for Fire Accidents, Special Emergency Plan for Hazardous Chemical Accidents, Special Emergency Plan for Special Equipment Accidents, Special Emergency Plan for Flood Prevention and Typhoon Prevention, to standardize the emergency management and emergency response procedures for various emergencies. Each subordinate unit has formulated comprehensive plans and special plans based on production safety accidents that may occur within their respective management scopes, and will conduct relevant training and emergency drills every year.

Case **Fire emergency drills and training**

In order to firmly establish the concept of safe development, Shanghai Electric Automation Group organized the fire emergency drills and training in December 2023.

More than 150 people, including members from Shanghai Electric Safety and Environmental Protection Department and the Emergency Liaison Team of Shanghai Electric Automation Group Headquarters, attended this event on site, and more than 300 people watched the fire drill and training online through live video. Through combination of prevention and control, the safety of life and property in the factory was protected, and the enterprise's safety line of defense was strengthened.

An fire drill

A fire fighting training

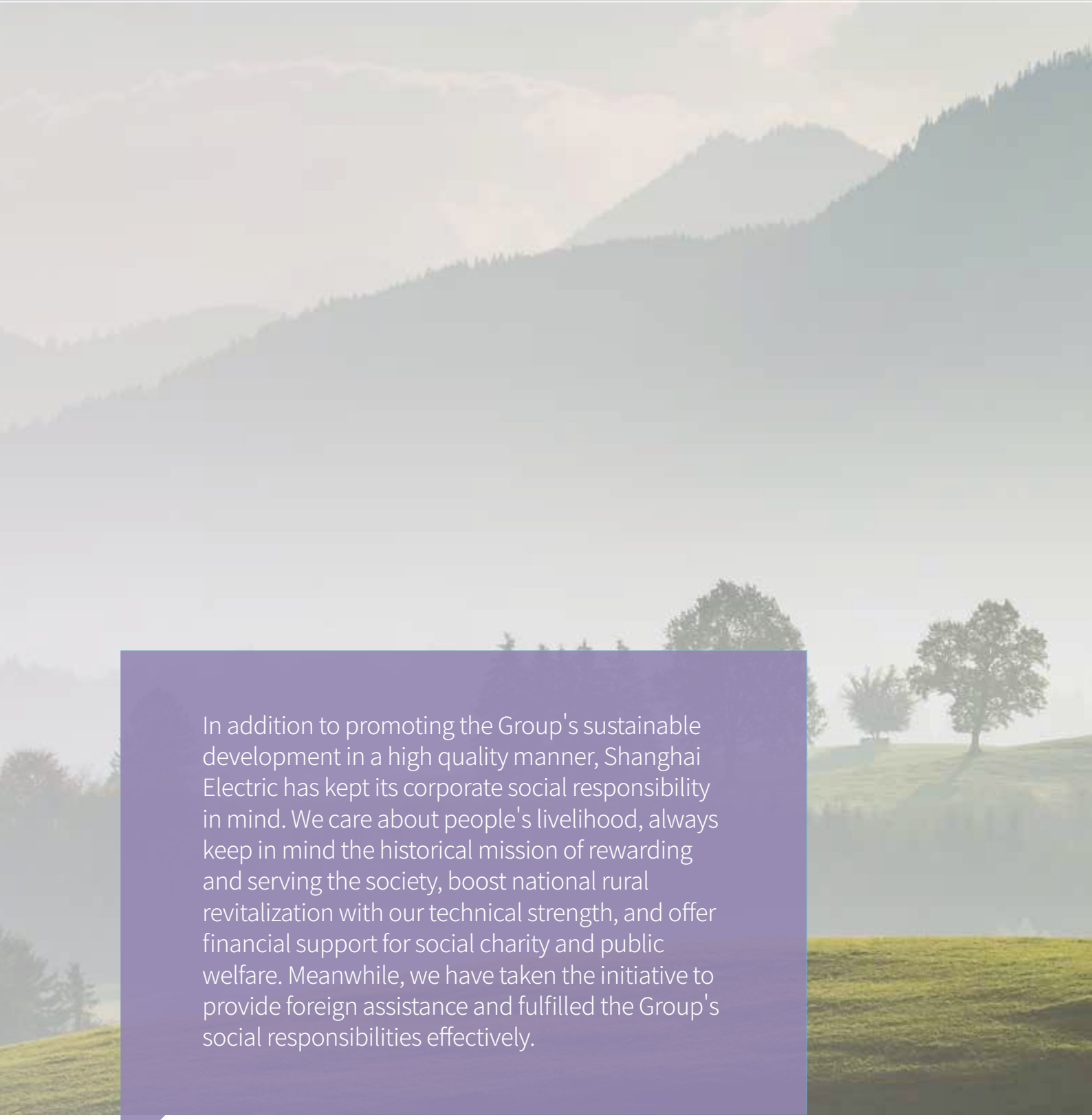
Case **Emergency drill activities of hazardous chemical accidents**

In June 2023, Shanghai Mitsubishi Elevator actively responded to the 22nd National Safety Production Month, insisted on "promoting practices through drills, and combining drills with practices", and held the emergency drill for hazardous chemicals accidents jointly with Jiangchuan Road Street Safety Supervision Office, Shanghai Minhang Economic and Technological Development Zone, and Minhang Rescue Station of Minhang Fire Rescue Detachment.

This emergency rescue drill simulated a sudden chemical leakage accident in a hazardous chemicals warehouse, and set up the situations such as hazardous chemical leakage, personnel poisoning, and accident expansion. Relevant departments activated the emergency response mechanism for hazardous chemical accidents and quickly organized and implemented on-site vigilance and medical assistance, accident handling, rapid communication after the accident escalation; with the assistance of fire rescue forces, the expansion of situation was successfully prevented, and by taking response measures such as subsequent compliance disposal of hazardous wastes, the emergency response capabilities of emergencies, inter-departmental collaboration capabilities and ability to communicate and cooperate with external rescue forces were effectively tested.

Emergency drill of hazardous chemical accidents

In 2023, Shanghai Electric's total investment in production safety was 178.9465 million yuan, and a total of 892 safety training sessions were carried out. A total of 164,095 people involved in the safety training, with a cumulative duration of 485,685 hours and a training coverage rate of 100%.



In addition to promoting the Group's sustainable development in a high quality manner, Shanghai Electric has kept its corporate social responsibility in mind. We care about people's livelihood, always keep in mind the historical mission of rewarding and serving the society, boost national rural revitalization with our technical strength, and offer financial support for social charity and public welfare. Meanwhile, we have taken the initiative to provide foreign assistance and fulfilled the Group's social responsibilities effectively.

Jointly Writing A Chapter of Building A Harmonious Society

06

- Contributing to Rural Revitalization
- Charitable Donations to Show Care to the Society
- Community Care to Warm Others

Contributing to Rural Revitalization

The Group has cared about rural development, and helped tap the economic development potential in rural areas through project construction and special supports, so as make contribution to rural revitalization.

The year 2023 is a year bridging the past and the future of the "14th Five-Year Plan" and also the beginning to implement the 20th National Congress of the Communist Party of China, comprehensively promote rural revitalization, and build a livable, industrial and beautiful countryside. As a leading enterprise in China's advanced equipment manufacturing industry and a representative of Shanghai's state-owned enterprises, Shanghai Electric actively assumed the major responsibilities in rural revitalization. Relying on our own business, we achieved diversified goals such as expanding employment opportunities, improving the living environment, and improving infrastructures through financial support, talent support, and project construction, etc., and promoted the paired areas to gradually explore a high-quality, distinctive path to wealth.

In 2023, Shanghai Electric has invested a total of RMB 3.0433 million in consumer assistance.

Case Shanghai Electric carried out paired assistance and participated in the rural revitalization

In July 2023, according to the Opinions of the Municipal Party Committee Organization Department and the Municipal Party Committee Agricultural Office on Continuously Deepening the Paired Assistance Work of Urban and Rural Party Organizations, the Group Party Committee selected Shanghai Electric Real Estate, Shanghai Jiyou, and Shanghai Electric Nuclear Power to pair with Bazi Village of Fengcheng Town, Puxiu Village of Zhuangxing Town and Huajiao Village of Qingcun Town. They focused on the cooperation in construction of talent apartments, beautiful rural demonstration villages, and mint aromatherapy experience museum, etc.

Shanghai Electric dispatched instructors to villages

At the same time, the Group Party Committee dispatched the first secretary to Caijiaqiao Village, Fengcheng Town, Fengxian District to carry out pairing of urban and rural party organizations, and signed the Agreement of the Fifth Round of Pairing Assistance of Urban and Rural Party Organizations. The village instructors adhered to the leadership of party building and worked closely with members of the village "two committees" to discuss problems, solve problems and share responsibilities, focusing on building strong village-level organizations, promoting the strengthening of the village and enriching the people, serving the people, and improving governance. At the same time, by actively participating in the local promotion activity of "Secretary Leading the Way to Good Products in Shanghai", we vigorously promoted the village's agricultural products on the municipal government platform and helped villagers to sell their crops.

Case Shanghai Electric carried out the "Double Hundred" village-enterprise pairing assistance action to promote cooperation between the east and the west

In 2023, Shanghai Electric Power Station, Shanghai Mitsubishi Elevator, and Electric Wind Power established one-to-one paired assistance with three poverty-stricken villages (Waihousuo Village of Housuo Town, Huangni Village of Dahe Town, Santai Village of Mohong Town, Fuyuan County, Qujing City, Yunnan Province). In 2023, the Group provided the assistance fund of RMB 750,000 and established daily communication with Fuyuan County on how to carry out in-depth cooperation between Shanghai and Yunnan and revitalize Fuyuan rural areas. Meanwhile, the three paired enterprises focused on solving the "urgent, difficult and anxious" problems for the poor based on the actual situations, implemented the construction of people's livelihood projects, helped to improve the rural infrastructure construction of the paired villages and living environment, including helping Huangjiachong Village of Waihousuo to build a shared vegetable garden and harden the main road in the village, implement the residential environment improvement project in Xiaoshankan Village, and build an oxidation pond for sewage treatment in Nuogang Village.

In addition, under the unified organization of Minhang District, Shanghai Electric Hydraulic and Pneumatic Co., Ltd. signed a paired assistance agreement with Menfeng Village, Xiangda Town, Longling County, Yunnan Province, and provided an assistance fund of RMB 50,000, which was used to build Yinding slope walkways, repair water mill, and support flower stand in Shitoupo, Lengshuigou.

Charitable Donations to Show Care to the Society

Strengthen the community construction and warm care.

Shanghai Electric actively assumes and fulfills its social responsibilities, spontaneously carries out community volunteer activities, participates in people's livelihood projects, and strives to create a warm, healthy and environmentally-friendly harmonious community, allowing residents to enjoy a better living environment.

Meanwhile, in order to give full play to the employees' enthusiasm for public welfare and establish a corporate image that actively fulfills social responsibilities, Shanghai Electric formulated the Articles of Association of Shanghai Electric Group Volunteers to create and maintain a harmonious relationship with the community, and conveyed positive energy through various activities.

Case "Blue Ribbon WE Charity Action" of Shanghai Generator Factory

Shanghai Generator Factory launched the "Blue Ribbon WE Charity Action" in 2020, encouraging employees to donate the unused second-hand clothes, cotton mattresses, children's books and toys, dolls, etc. to people in need in mountainous areas; employees can do some meaningful things in life to help people in need while working hard to achieve the corporate goals.

Shanghai Generator Factory spread the "Charity at Your Fingertips" sprit from "donating old clothes" to "working", and established its high-quality brand image. From 2020 to 2023, through the "Blue Ribbon WE Charity Action", more than 4,000 pieces of used clothes were donated. On Children's Day in 2023, a total of nearly 1,000 donated dolls were received through the unique activity.

Donation of clothing through "Blue Ribbon WE Charity Action"

Handling of materials to warehoused through the "Blue Ribbon WE Charity Action"

Case Starlight builds the dreams, warms the heart and sets the sail

In July 2023, the Electric Wind Power "Blue Ribbon" volunteer team organized a charity activity with the theme of "stars like torches and warm everyone". Through handicrafts, talent performances and game interactions, establish emotion and encourage teenagers with autism to go out of their own world as soon as possible and integrate into society. A total of 6 groups of "Blue Harbor" families of autistic teenagers and more than 30 electrical and wind power volunteers and their family members and children participated in this charity event.

The "Blue Ribbon" volunteer team of Electric Wind Power was established in March 2015 and it has been more than 8 years so far. It is a window for Electric Wind Power to connect with social services and care for special groups, and also an important manifestation of Electric Wind Power's social responsibility and enthusiasm for charity. The "Blue Ribbon" volunteer team of Electric Wind Power has established a long-term volunteer service relationship with the "Blue Harbor" Autism Youth Development Center. Through annual cooperation in organizing charity activities, the enthusiasm and love of wind power people are passed on to the "Children from the Star" in need of social care and love.

"Blue Ribbon" charity activity launched by Electric Wind Power

Case Elevator renovation gave old communities a new look

In April 2023, in order to effectively enhance people's livelihood and well-being and further improve people's quality of life, Shanghai Mitsubishi Elevator actively participated in the renovation project of old residential elevators in Minshengyuan Community, Wuliqiao Street, Huangpu District. In view of the fact that the elevators in this community have been in use for more than 20 years and the failure rate has increased significantly which has brought inconvenience to residents' daily lives, Shanghai Mitsubishi Elevator responded quickly and developed an elevator upgrading and renovation plan in a tailored manner for the community.

In this renovation project, Shanghai Mitsubishi Elevator provided a total of 23 advanced "LEHY-N" special elevators for renovation and 1 high-efficiency and energy-saving machine room-less elevator "ELENESSA" to Mingshengyuan Community, refreshing the quantity of elevator renovation in residential communities in Huangpu District. This event provided safer and more considerate guarantees for community residents' travel, and made positive contributions to building a harmonious community and promoting urban renewal.

Shanghai Mitsubishi Elevator participated in the renovation project of old residential elevators in Mingshengyuan Community

Community Care to Warm Others

With a global view, the Company has taken an active part in charity, public welfare and foreign assistance, which indicates its responsibility of great love.

In order to better practice Shanghai Electric's responsibility and mission as a state-owned enterprise, Shanghai Electric has always regarded charity as an important component of its social responsibility. We actively give play to our advantages in funds, technologies and talents, etc., and continued to provide fund, manpower and technical assistance to areas in need of help, with the intention of contributing to building a harmonious society and demonstrating the Company's social responsibility and public welfare spirit.

In 2023, Shanghai Electric and its affiliated companies have donated a total of RMB 5.088 million.

Respond to Public Crises

Case Shanghai Electric collected materials to aid disaster areas

On December 18, 2023, Ms 6.2 earthquake occurred in Jishishan County, Linxia Prefecture, Gansu Province, causing heavy casualties and property losses. After the news came, Shanghai Electric quickly contacted the Linxia Prefecture government departments, quickly collected relief materials and sent to the disaster-stricken areas in Linxia Prefecture, and fully supported the government in the earthquake relief. Meanwhile, Shanghai Electric paid attention to the dynamics and needs of the entire post-earthquake rescue process and purchased the urgently needed materials for earthquake relief, including cold-proof tents, military coats, quilts, cotton shoes, flashlights, mineral water, instant noodles, etc.

Shanghai Electric donated materials to disaster-stricken areas in Linxia Prefecture

Case Shanghai Electric Turbine Factory rushed to rescue Zhuozhou

Shanghai Electric Turbine Factory rushed to rescue Zhuozhou

Since July 2023, heavy rains caused floods in many places in China, among which Zhuozhou, Hebei Province was severely affected. Zhuozhou Water Pump Factory, a long-term partner of Shanghai Electric Steam Turbine Factory, was severely affected by the flood. Nearly 120 employees faced the difficulties such as shortage of daily necessities. Shanghai Electric Steam Turbine Factory purchased rice, flour, oil, quilts and other daily necessities and sent to Zhuozhou as quickly as possible, demonstrating the role of a state-owned enterprise. Zhuozhou Water Pump Factory expressed its sincere gratitude and presented a banner to Shanghai Electric Steam Turbine Factory for its assistance.

Foreign Assistance

Case

Shanghai Electric involved in the construction of "Belt and Road"

In September 2023, on the tenth anniversary of the joint construction of the "Belt and Road" initiative, Shanghai Electric released a promotional video for the Group's overseas business and a special video on its participation in the joint construction of the "Belt and Road"- Ten Years: Walking Together, and the book- Light Beyond the Mountains and Seas: Overseas Project Stories of Shanghai Electric People, to show the achievements of Shanghai Electric's overseas business markets and tell the employees' true stories of building the "Belt and Road", and show the changes these projects have brought to the development of the "Belt and Road" cooperation countries and the local people.

Shanghai Electric released Light Beyond the Mountains and Seas: Overseas Project Stories of Shanghai Electric People

Case

Shanghai Electric's Thar coal and electricity integration project won the "China-Pakistan Economic Corridor" outstanding contribution award

Shanghai Electric's Thar coal and electricity integration project won the "China-Pakistan Economic Corridor" outstanding contribution award

While constructing the Thar Coal and Power Integration Project in Pakistan, Shanghai Electric is committed to promoting local employment, improving people's lives and promoting economic development. During the project construction, Shanghai Electric not only hired a large number of Pakistani, but also organized professionals to prepare training courses and selected experienced personnel for "one-on-one" coaching, so that Pakistani employees could quickly master professional skills. In addition, the project team also actively participated in local community public welfare undertakings, improved the community living environment, repaired and built community roads, and donated air conditioners, computers, daily necessities, etc. to the community and disaster-stricken people. In order to solve the difficulties of medical treatment in the local areas, the team built a 10,000-square-meter hospital locally, and purchased a medical bus from China to donate to them, so as to provide medical services in remote villages, becoming a famous "mobile hospital". These actions injected Chinese power into the economic and social development of the Thar region.

In August 2023, at the "Contributors to Common Prosperity" commendation ceremony held in Islamabad, the capital of Pakistan, Pakistani Prime Minister Shahbaz Sharif personally awarded the "Outstanding Contribution Award" to 29 Chinese-funded enterprises and institutions including Shanghai Electric in recognition of Shanghai Electric's efforts and contributions in successfully promoting the Thar coal-electricity integration project.

Case Dubai photovoltaic project reduced ecological environmental impact effectively through various measures

The ecosystem in which Dubai's photovoltaic projects operated was extremely fragile. The Shanghai Electric Power Plant Project Department formulated an HSE management system to strictly require compliance with environmental protection management regulations in various on-site production activities, strengthened environmental management from the source, discovered and solved environmental problems in a timely manner, and ensured minimum impact on the site environment.

In order to avoid environmental pollution, each working surface of the construction site was equipped with trash cans, garbage cans, oil leakage trays, mobile toilets and other tools. Brick toilets and wastewater collection boxes were set up in the on-site offices and campsites, and were cleaned regularly to prevent domestic sewage from polluting the environment.

In order to transfer construction materials and garbage in a timely manner, the Project Department required each unit to set up a clean-up team to clean up the entire site periodically to avoid accumulations of materials and garbage.

In addition, the Project Department carried out multiple environmental trainings, environmental governance activities, "turning wastes into treasure" activities, and environmental protection painting competitions to deepen workers' understanding of environmental protection and protect the local ecological environment through diverse forms.

Environmental training

Environmental governance activities

"Turning waste into treasure" activity

Environmental Protection Painting Competition

Appendix I Environmental, Social and Governance Reporting Guide of HKEx Guide Index

Subject Areas, Aspects, General Disclosures and KPIs		Disclosed in
A. Environmental		
Aspect A1	**Emissions**	
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	3.2 Double Control of Energy Consumption for Low-carbon Development 3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
KPI A1.1	The types of emissions and respective emissions data.	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	3.2 Double Control of Energy Consumption for Low-carbon Development
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
KPI A1.4	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
KPI A1.5	Description of emissions target(s) set and steps taken to achieve them.	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
Aspect A2	**Use of Resources**	
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	3.2 Double Control of Energy Consumption for Low-carbon Development
KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	3.2 Double Control of Energy Consumption for Low-carbon Development
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	3.2 Double Control of Energy Consumption for Low-carbon Development
KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	3.2 Double Control of Energy Consumption for Low-carbon Development
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	3.2 Double Control of Energy Consumption for Low-carbon Development
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	3.2 Double Control of Energy Consumption for Low-carbon Development
Aspect A3	**The Environment and Natural Resources**	
General Disclosure	Policies on minimizing the issuer's significant impact on the environment and natural resources.	3.2 Double Control of Energy Consumption for Low-carbon Development

Subject Areas, Aspects, General Disclosures and KPIs		Disclosed in
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	3.1 Protecting the Environment and Improving Management 3.2 Double Control of Energy Consumption for Low-carbon Development 3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
Aspect A4	**Climate Change**	
General Disclosure	Policies on identification and mitigation of significant climate related issues which have impacted, and those which may impact, the issuer.	Topic 2: Making Joint Efforts for Promising Zero-carbon Future
KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Topic 2: Making Joint Efforts for Promising Zero-carbon Future
B. Social		
Aspect B1	**Employment**	
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	5.1 People Orientation, Inclusiveness and Sharing 5.2 Talent Cultivation for Mutual Achievement
KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	5.1 People Orientation, Inclusiveness and Sharing
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	5.2 Talent Cultivation for Mutual Achievement
Aspect B2	**Health and Safety**	
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	5.3 Care for Health and Safety Protection
KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	5.3 Care for Health and Safety Protection
KPI B2.2	Lost days due to work injury.	5.3 Care for Health and Safety Protection
KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	5.3 Care for Health and Safety Protection
Aspect B3	**Development and Training**	
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	5.2 Talent Cultivation for Mutual Achievement
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	5.2 Talent Cultivation for Mutual Achievement
KPI B3.2	The average training hours completed per employee by gender and employee category.	5.2 Talent Cultivation for Mutual Achievement
Aspect B4	**Labor Standards**	

Subject Areas, Aspects, General Disclosures and KPIs		Disclosed in
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labor.	5.1 People Orientation, Inclusiveness and Sharing
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	5.1 People Orientation, Inclusiveness and Sharing
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	5.1 People Orientation, Inclusiveness and Sharing
Aspect B5	**Supply Chain Management**	
General Disclosure	Policies on managing environmental and social risks of the supply chain	4.2 Supply Management for Better Development
KPI B5.1	Number of suppliers by geographical region.	4.2 Supply Management for Better Development
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	4.2 Supply Management for Better Development
KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored	4.2 Supply Management for Better Development
KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored	4.2 Supply Management for Better Development
Aspect B6	**Product Responsibility**	
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labeling and privacy matters relating to products and services provided and methods of redress.	2.2 Exercising Innovative Mind to Pursue Excellence 2.3 Putting Customer First and Deepening Cooperation
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	2.2 Exercising Innovative Mind to Pursue Excellence
KPI B6.2	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	2.3 Putting Customer First and Deepening Cooperation
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	2.1 Technological Innovation and Intelligent Development
KPI B6.4	Description of quality assurance process and recall procedures.	2.2 Exercising Innovative Mind to Pursue Excellence
KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	2.3 Putting Customer First and Deepening Cooperation
Aspect B7	**Anti-corruption**	
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	1.2 Responsible Governance and Strict Self-discipline
KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	1.2 Responsible Governance and Strict Self-discipline

Subject Areas, Aspects, General Disclosures and KPIs		Disclosed in
KPI B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	1.2 Responsible Governance and Strict Self-discipline
KPI B7.3	Description of anti-corruption training provided to directors and staff.	1.2 Responsible Governance and Strict Self-discipline
Aspect B8	**Community Investment**	
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	6.1 Contributing to Rural Revitalization 6.2 Charitable Donations to Show Care to the Society 6.3 Community Care to Warm Others
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport).	6.1 Contributing to Rural Revitalization 6.2 Charitable Donations to Show Care to the Society 6.3 Community Care to Warm Others
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	6.1 Contributing to Rural Revitalization 6.2 Charitable Donations to Show Care to the Society 6.3 Community Care to Warm Others

Appendix II Content Index of ESG Indicator System of Shanghai State-controlled Listed Companies

Indicator system		Disclosed in
E1 Environmental Management		
E1.1	Environmental management goals and systems	3.1 Protecting the Environment and Improving Management
E1.2	Pass environmental management system certification	3.1 Protecting the Environment and Improving Management
E1.3	Green product research and development and use of environmentally friendly technologies	2.1 Technological Innovation and Intelligent Development
E1.4	Total investment in environmental protection	3.1 Protecting the Environment and Improving Management
E1.5	Environmental protection training performance	3.1 Protecting the Environment and Improving Management
E2 Energy		
E2.1	Energy management goals and planning	3.2 Double Control of Energy Consumption for Low-carbon Development
E2.2	Energy conservation initiatives	3.2 Double Control of Energy Consumption for Low-carbon Development
E2.3	Renewable energy development and application	Topic 1: Serving National Strategy and Writing A New Chapter of Common Development
E2.4	Total energy consumption	3.2 Double Control of Energy Consumption for Low-carbon Development
E3 Resources		
E3.1	Resource management systems and planning	3.2 Double Control of Energy Consumption for Low-carbon Development
E3.2	Water resources goals and plans	3.2 Double Control of Energy Consumption for Low-carbon Development
E3.3	Water conservation initiatives	3.2 Double Control of Energy Consumption for Low-carbon Development
E3.4	Total annual water consumption	3.2 Double Control of Energy Consumption for Low-carbon Development
E3.5	Other resource usage management	3.2 Double Control of Energy Consumption for Low-carbon Development
E4 Pollutants		
E4.1	Wastewater management goals and plans	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
E4.2	Initiatives to reduce wastewater discharge	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
E4.3	Wastewater recycling usage	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
E4.4	Wastewater pollutant discharge	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause

Indicator system		Disclosed in
E4.5	Emission management goals and plan	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
E4.6	Initiatives to reduce emissions	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
E4.7	Exhaust gas pollutant emissions	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
E4.8	Solid waste management goals and plans	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
E4.9	Initiatives to dispose of solid wastes	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
E4.10	Solid waste emissions	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
E4.11	Amount of solid waste recycling, utilization and disposal	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
E4.12	Other pollutant management	3.3 Regulating Pollution Discharge by Addressing Both Symptoms and Root Cause
E5 Climate Change		
E5.1	Identify climate change risks and establish goals and strategies to address climate change	Topic 2: Making Joint Efforts for Promising Zero-carbon Future
E5.2	Measures to support the "double carbon" goal	Topic 2:Making Joint Efforts for Promising Zero-carbon Future
E5.3	Initiatives for carbon verification/inventory	3.2 Double Control of Energy Consumption for Low-carbon Development
E5.4	Greenhouse gas emissions	3.2 Double Control of Energy Consumption for Low-carbon Development
E6 Biodiversity		
E6.1	Biodiversity conservation system	3.2 Double Control of Energy Consumption for Low-carbon Development
E6.2	Biodiversity conservation initiatives	3.2 Double Control of Energy Consumption for Low-carbon Development
S1 Products and Services		
S1.1	Product safety and quality management system	2.2 Exercising Innovative Mind to Pursue Excellence
S1.2	Pass product quality management system certification	2.2 Exercising Innovative Mind to Pursue Excellence
S1.3	Product R&D Innovation	2.1 Technological Innovation and Intelligent Development
S1.4	Intellectual property protection	2.1 Technological Innovation and Intelligent Development
S1.5	Customer information protection and privacy	2.3 Putting Customer First and Deepening Cooperation
S1.6	Customer service management system	2.3 Putting Customer First and Deepening Cooperation
S1.7	Responsible publicity	1.3 Fulfilling Responsibilities and Improving Communication

Indicator system		Disclosed in
S1.8	Number of customer complaints/complaint resolution rate	2.3 Putting Customer First and Deepening Cooperation
S1.9	Customer satisfaction	2.3 Putting Customer First and Deepening Cooperation
S2 Employee Responsibilities		
S2.1	Employment and employees composition	5.1 People Orientation, Inclusiveness and Sharing
S2.2	Turnover rates	5.2 Talent Cultivation for Mutual Achievement
S2.3	Democratic management of employees	5.1 People Orientation, Inclusiveness and Sharing
S2.4	Salary and benefits system	5.1 People Orientation, Inclusiveness and Sharing
S2.5	Employee care	5.1 People Orientation, Inclusiveness and Sharing
S2.6	Employee satisfaction	/
S2.7	Employee occupational health and safety management	5.3 Care for Health and Safety Protection
S2.8	Pass occupational health and safety management system certification	5.3 Care for Health and Safety Protection
S2.9	Safety emergency management measures	5.3 Care for Health and Safety Protection
S2.10	Total investment in safety production	5.3 Care for Health and Safety Protection
S2.11	Safety production training performance	5.3 Care for Health and Safety Protection
S2.12	Work-related injuries and deaths	5.3 Care for Health and Safety Protection
S2.13	Employee physical examination coverage	2023 Highlights
S2.14	Employee career development system	5.2 Talent Cultivation for Mutual Achievement
S2.15	Employee training and practical initiatives	5.2 Talent Cultivation for Mutual Achievement
S2.16	Effectiveness of employee development	5.2 Talent Cultivation for Mutual Achievement
S3 Supply Chain Responsibility		
S3.1	Supplier management system	4.2 Supply Management for Better Development
S3.2	Supplier ESG review	4.2 Supply Management for Better Development
S4 Community Responsibility		
S4.1	Carry out public welfare and charity activities	6.1 Contributing to Rural Revitalization 6.2 Charitable Donations to Show Care to the Society 6.3 Community Care to Warm Others
S4.2	Charitable investment	6.3 Community Care to Warm Others
S4.3	Volunteer service performance	6.2 Charitable Donations to Show Care to the Society
S5 Corporate Responsibilities		
S5.1	Strategies for serving the state or Shanghai	Topic 1: Serving National Strategy and Writing A New Chapter of Common Development
S5.2	Respond to public crises	6.3 Community Care to Warm Others

Indicator system		Disclosed in
S5.3	Information security	2.3 Putting Customer First and Deepening Cooperation
S5.4	Public Service	6.1 Contributing to Rural Revitalization 6.2 Charitable Donations to Show Care to the Society 6.3 Community Care to Warm Others
S5.5	Tax contribution	2023 Highlights
G1 Corporate Governance		
G1.1	Party leadership	1.1 Striving to Build A Top-class Enterprise Under the Party Leadership
G1.2	Chairman/General Manager	1.2 Responsible Governance and Strict Self-discipline
G1.3	Proportion of external directors	1.2 Responsible Governance and Strict Self-discipline
G1.4	Compliance management system	1.2 Responsible Governance and Strict Self-discipline
G1.5	Risk management system	1.4 Preventing Risks and Improving the System
G1.6	Audit system	1.4 Preventing Risks and Improving the System
G1.7	Measures to avoid violation against business ethics	1.2 Responsible Governance and Strict Self-discipline
G1.8	Antitrust and fair competition	1.3 Fulfilling Responsibilities and Improving Communication
G2 ESG Governance		
G2.1	Board involvement in ESG management	1.3 Fulfilling Responsibilities and Improving Communication
G2.2	ESG organizational structure	1.3 Fulfilling Responsibilities and Improving Communication
G2.3	ESG strategy/objectives	Topic 2: Making Joint Efforts for Promising Zero-carbon Future
G2.4	ESG stakeholder identification	1.3 Fulfilling Responsibilities and Improving Communication
G2.5	Identification of substantive issues	1.3 Fulfilling Responsibilities and Improving Communication
G2.6	ESG related systems	1.3 Fulfilling Responsibilities and Improving Communication
G2.7	Conduct stakeholder communication activities	1.3 Fulfilling Responsibilities and Improving Communication
G2.8	Management compensation linked to ESG performance	1.3 Fulfilling Responsibilities and Improving Communication
G2.9	Consideration to ESG factors for specific businesses	Topic 2: Making Joint Efforts for Promising Zero-carbon Future
G3 Data Governance		
G3.1	Basic platform construction	2.1 Technological Innovation and Intelligent Development
G3.2	Data aggregation and interoperability	2.1 Technological Innovation and Intelligent Development
G3.3	Data governance system	2.1 Technological Innovation and Intelligent Development

Appendix III List of Major Subsidiaries Involved in Environmental Data

1	Shanghai Electric Power Generation Equipment Co., Ltd Turbine Works
2	Shanghai Electric Power Generation Equipment Co., Ltd Auxiliary Equipment Works
3	Shanghai Electric Power Generation Equipment Co., Ltd Turbine Generator Works
4	Shanghai Boiler Works, Ltd.
5	Shanghai Electric Group Shanghai Electric Machinery Co., Ltd
6	Shanghai Electric Heavy Machinery Milling Special Equipment Co., Ltd.
7	Shanghai Electric Wind Power Equipment Dongtai Co., Ltd.
8	Shanghai Electric Wind Power Equipment Gansu Co., Ltd.
9	Shanghai Electric Power-Electronics Co., Ltd.
10	Shanghai Najie Complete Sets Of Electric Co., Ltd.
11	Shanghai Feihang Electric Wire And Cable Co., Ltd.
12	Shanghai Dahua Electrical Equipment Co., Ltd.
13	Shanghai Nanhua-Lanling Electrical Co., Ltd.
14	Shanghai Jiejin Power New Materials Co., Ltd.
15	Wujiang Transformer Co., Ltd.
16	Shanghai Huapu Cable., Ltd.
17	Shanghai Mitsubishi Elevator Co., Ltd.
18	Goss Graphic Systems(China)Co., Ltd.
19	Shanghai Simike Welding Material Co., Ltd.
20	Shanghai Electrical Hydraulics and Pneumatics Co., Ltd
21	Shanghai United Bearing Co., Ltd.
22	Shanghai Tian'an Bearing Co., Ltd.
23	Shanghai Zhenhua Bearing Plant Co., Ltd.
24	Wuxi Turbine Blade Co., Ltd
25	Shanghai Tool Works Co., Ltd.
26	Shanghai High Strength Bolts Plant Co., Ltd.
27	Shanghai Centrifuge Institute Co., Ltd.
29	Shanghai Cyeco Environmental Technology Co., Ltd
29	Shanghai Denso Fuel Injection Co., Ltd.
30	Shanghai First Machine Tool Works Co., Ltd.
31	Shanghai Electric Shanghai Heavy Machinery Forging Co., Ltd.
32	Shanghai Electric Nuclear Power Equipment Co. Ltd.
33	SEC-KSB Nuclear Pumps&Valves Co., Ltd.
34	Shanghai Electric Machine Tool Works, Ltd.
35	Renmin Electrical Apparatus Works of Shanghai Electric Group Co., Ltd
36	Shanghai Electric Group (Zhangjiagang) Transformer Co., Ltd.
37	Shanghai Electric Group Tengenchi Technology (Suzhou) Co., Ltd.
38	Huizhou Yinghe Technology Co., Ltd.
39	Huizhou Yinghe Industrial Technology Co., Ltd.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