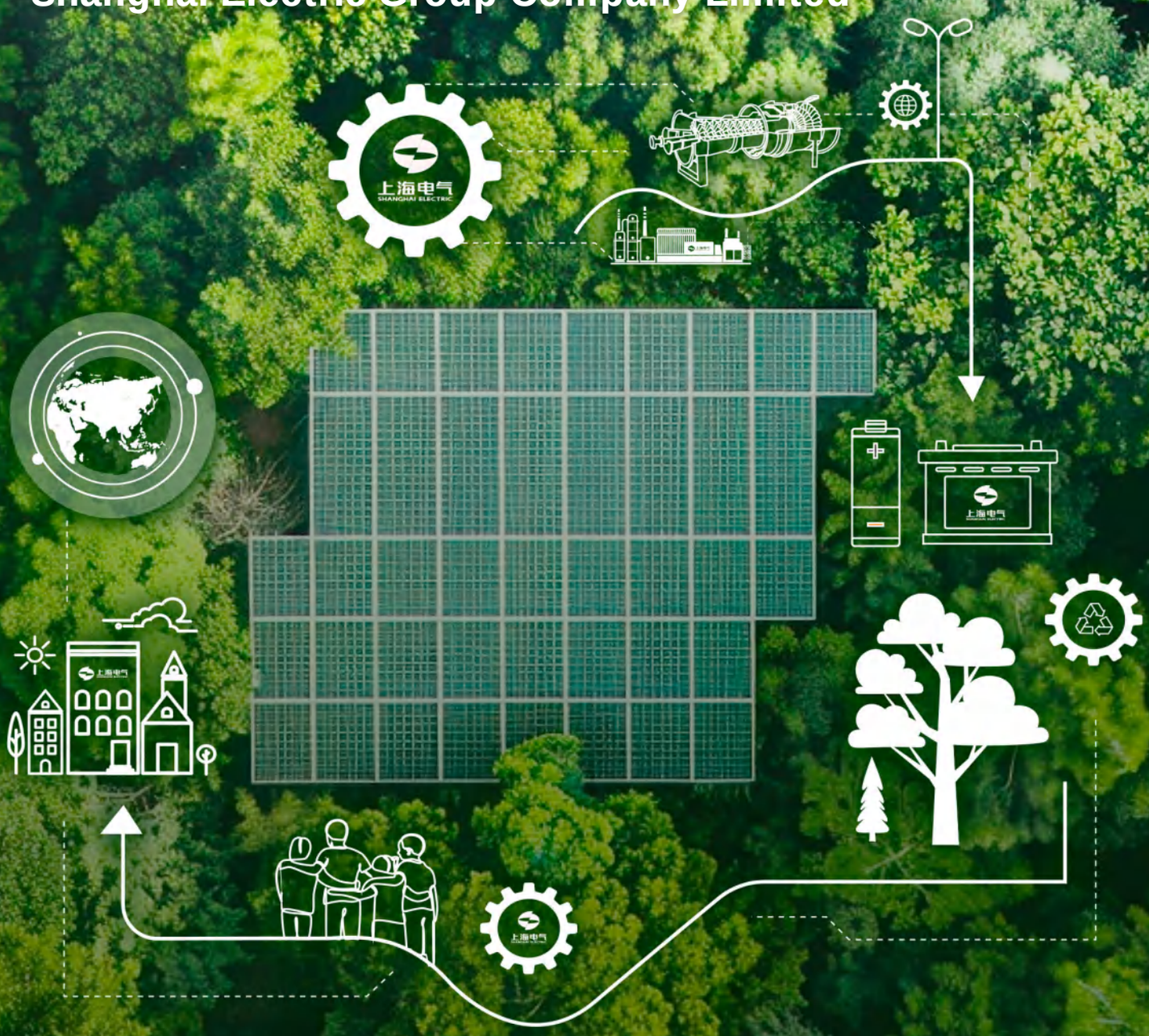
上海电气
SHANGHAI ELECTRIC

2024
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 Ninth 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 Shanghai Stock Exchange Listed Companies Self-regulatory Regulatory Guidelines No. 14 - Sustainable Development Report (Trial), the Environmental, Social and Governance Reporting Guide (the "ESG Reporting Guide") of 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, conducting double materiality assessments, 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 headquarters, 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 1 January 2024 to 31 December 2024. Unless otherwise specified, the currency mentioned in the report is RMB, and the density data is based on revenue data in 2024 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 28 March 2025.

List of Companies Mentioned in the Text of this Report

Full Name	Short Name
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 Electric Power Generation Group	Power Generation Group
Shenzhen Yinghe Technology Co., Ltd.	Yinghe Technology
Shanghai Electric SHMP Casting & Forging Co., Ltd.	SHMP Casting & Forging
Shanghai Electric Nuclear Power Group Co., Ltd.	Nuclear Power Group
Shanghai Electric Nuclear Power Equipment Co., Ltd.	Shanghai Electric Nuclear Power
Shanghai Electric Group Property Company Limited	Shanghai Electric Property
Shanghai Nanhua-Lanling Electrical Co., Ltd.	T&D Nanhua-Lanling
Shanghai Electric Gas Turbine Co., Ltd.	Shanghai Electric Gas Turbine
Siemens Switchgear Ltd. Shanghai	Siemens Switchgear Shanghai

Board of Directors Statement

The Board of Directors of Shanghai Electric guarantees that this report contains no false records, misleading statements, or material omissions, and makes the following statement regarding its ESG supervision and management:

Governance Structure

Shanghai Electric has established an ESG governance structure led by the Board of Directors, aimed at implementing the company's commitment to corporate social responsibility through refined management. Our top-down ESG governance structure comprises the Board of Directors, the ESG Management Committee, and the ESG Working Group. The ESG Management Committee oversees the ESG Expert Committee. The ESG Expert Committee operates under the ESG Management Committee. The ESG Working Group consists of the Group Office (Board Office) and three sub-working groups which are staffed by relevant functional departments and responsible for liaison and communication with corresponding departments of affiliated companies.

The Board of Directors, as Shanghai Electric's highest governing body for ESG strategy and management, is responsible to considers of the Group's ESG-related risks and materiality, considers and approves the company's sustainable development strategy and objectives, monitors and evaluates the Group's ESG-related policies, management approaches, performance, and progress toward targets, and considers and approves public disclosures regarding the Group's ESG performance. For details on the ESG governance framework, please refer to the "ESG Governance" section.

Management Policies and Strategies

Shanghai Electric engages in extensive and in-depth communication with stakeholders through various channels to analyse, identify, assess, and prioritize key ESG issues of concern to stakeholders. In 2024, the Group conducted a double materiality assessment, evaluating and confirming the impact and significance of issues from dual perspectives - "financial materiality" and "impact materiality." For details on dual materiality, please refer to the "Dual Materiality Analysis" section.

Target Review

The Board of Directors of Shanghai Electric regularly reviews the establishment and implementation of ESG goals, and receives reports on the effectiveness of ESG risk management and internal control systems, fully integrating ESG at the operational level.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Striving to Become a World-class Equipment Enterprise

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Cultivating and Retaining High Quality Talent Teams

Pursuing A Path of Warm-hearted Public Welfare

Chairman's Statement

In 2024, global manufacturing demonstrated strong resilience and innovation amidst numerous challenges and opportunities. Despite ongoing geopolitical tensions, supply chain fluctuations, and pressure from energy transition, the deep integration of high-end, green and intelligent development has injected new growth momentum into the industry.

As a world's leading provider of industrial and green intelligent system solutions, Shanghai Electric continued to play a pivotal role in 2024. Guided by the strategic direction of "serving the national strategy, developing new quality productive forces, forming core competitiveness, and achieving high-quality development " , we have earnestly fulfilled our economic and social responsibilities, accelerated our development as a world-class professional leading enterprise, and continuously created value for a good human life.

Responsibility: Leveraging globally leading technology and a diversified product portfolio, Shanghai Electric has been deeply intertwined with China's development over the past decades. By driving technological advancements in energy equipment, facilitating intelligent manufacturing and digital transformation, supporting urban infrastructure construction, and advancing "Belt and Road" initiatives, Shanghai Electric has not only made significant contributions to the China's energy structure transformation and industrial upgrading but also enhanced the international competitiveness of China's equipment manufacturing industry, providing solid support for achieving the goals for "Carbon Peaking and Carbon Neutrality" and safeguarding national strategic security.

Symbiosis: Promoting the green and low-carbon economic and social development is a key component in achieving high-quality development and an important pillar of Shanghai Electric's sustainability strategy. As China's leading provider of comprehensive energy solution, Shanghai Electric offers a wide array of clean technology solutions to facilitate low-carbon transformation across industrial, power, transportation, and building sectors, making production, work, and life more sustainable. Simultaneously, Shanghai Electric focuses on three pathways - energy substitution, energy efficiency improvement, and resource recycling - to create demonstrative "green factories," "green enterprises," and "green parks," and accelerate its own low-carbon operations.

Talent: Shanghai Electric upholds core talent as its primary resource, fostering an open and inclusive environment to attract talented individuals and maintaining a flexible and versatile approach to utilize people's talents for mutual achievement and shared value creation between us and talented individuals. From talent rights and development to talent safety, Shanghai Electric is committed to fostering an inclusive, equitable, and safe work environment that attracts, retains, and motivates high-calibre professionals. We believe that talent is essential for achieving a sustainable future.

Trust: Shanghai Electric's consistent progress is linked to the unwavering trust and support from stakeholders including customers, employees, governments, investors, partners, and society at large. Shanghai Electric is dedicated to upholding a governance culture rooted in integrity and transparency, giving appropriate consideration to all stakeholders and striving to meet their expectations.

Looking ahead to 2025, Shanghai Electric will continue to focus on national strategies, closely align with national needs, actively fulfil the mission and responsibilities of a state-owned enterprise, benchmark against globally leading technologies, industry-leading enterprises, and national exemplars, spearheading in the high-end, intelligent and green reforms, forge new paths in accelerating the development of new quality productive forces, act as a pioneer in achieving high-level scientific and technological self-improvement, and move toward a sustainable future with all stakeholders.

Wu Lei

Secretary of CPC Party Committee
Chairman

President's Statement

In 2024, Shanghai Electric seized market opportunities, actively addressed challenges, and embraced transformative development amidst a complex and evolving global environment, focused on high-end, green, and intelligent directions, and achieved leapfrog development.

High-end: Supported by technological innovation, Shanghai Electric continued to increase investment in high-end manufacturing, focused on scientific reasch and development ("R&D") of core technologies including floating offshore wind turbines, advanced nuclear power equipment, new energy storage systems, industrial gas turbines, and high-end industrial components and provided efficient, safe, and reliable solutions for customers in ships, large aircraft, new energy vehicles and other industries to significantly enhance the market competitiveness. During the reporting period, we initiated planning for several key sectors including industrial gas turbines, industrial mother machines, and humanoid robots, creating new productivity capabilities in high-end equipment.

Green: Guided by the national goals for "Carbon Peaking and Carbon Neutrality", Shanghai Electric implemented systematic planning and continued to explore effective models for collaborative carbon reduction across energy and industry and developed "comprehensive" new power system solutions and "three-dimensional" zero-carbon industrial park solutions to inject new momentum into green transformation and demonstrate corporate responsibility and commitment. During the reporting period, we released the world's largest 16MW low-frequency offshore wind turbine and built the world's largest wind power testing platform. The Shanghai Municipality Key Laboratory of Resource Electro-thermal Conversion and Recycling that we are establishing obtained China's first ISCC EU certification for the complete green methanol process.

Intelligent: In the process of "digital intelligence" transformation, Shanghai Electric strengthened the construction of digital infrastructure including cloud computing, industrial internet, AI, blockchain and the application of cutting-edge technologies, created intelligent scenarios such as "digital twin+", "AI+", and "Big data+", built intelligent workshops and factories, developed smart supply chains, established industry benchmark projects, and enhanced our industry influence. During the reporting period, we created the "Xinglian Digital-Green Energy Carbon Manager," forming a multi-level industrial digitalisation carbon management platform.

In 2025, we will continue to firmly pursue the high-end, green and intelligent development direction, strive to achieve our goal of becoming a "globally leading provider of industrial-grade green intelligent system solutions", and contribute more "Shanghai Electric wisdom" to global sustainability.

Zhu Zhaokai

Party Committee Deputy Secretary of CPC
President

Topic 1

Clean Technology, the Solution Driving a Sustainable Future

Since the Industrial Revolution, the economic growth model driven by Fossil Fuels has created prosperity while also bringing serious challenges such as climate crisis, environmental pollution and resource depletion. Greenhouse gas emissions from fossil fuels have accelerated ecological disasters such as glacier melting and extreme weather events, prompting a search for more sustainable and environmentally friendly solutions. Within this context, clean technology has emerged as a core engine of global transformation towards sustainability.

Clean Technology Strategy

In response to the development opportunities presented by clean technology, Shanghai Electric strategically positions itself as a world-class "high-end, green, and intelligent" equipment enterprise, comprehensively promoting large-scale applications of clean energy, energy efficiency, pollution prevention and control, sustainable water sources and green buildings and transportation through technological innovation and industrial synergy to fuel the achievement of global energy transition and carbon neutrality goals.

Clean Technology Goals

Shanghai Electric strives to promote green development at both corporate and product levels while facilitating internal and external circulation throughout the Group. At the corporate level, Shanghai Electric has set goals to ensure carbon peaking before 2030, achieve operational carbon neutrality by 2035, and attain value chain carbon neutrality by 2055. At the product level, Shanghai Electric has set a goal to achieve a 15% proportion of new energy equipment by 2026.

Clean Technology Investment

In 2024, Shanghai Electric:

allocated approximately **46.92%** of investments to the fields of clean technology

allocated approximately **69.37%** of R&D investments to the fields of clean technology

Note: In 2024, our clean technology statistics cover the following fields: wind power technology, photovoltaic technology, energy storage technology, hydrogen energy technology, new energy utilization technology (solar thermal, supercritical carbon dioxide), solid waste treatment technology, water treatment technology, power plant environmental protection technology, intelligent factory solutions, industrial software technology (low-carbon rail transit), clean coal-fired power technology, gas power technology, nuclear energy technology, energy system solutions, power transmission and distribution technology, blade technology, product digitalization technology, service intelligentization technology, and industrial internet platform technology.

Clean Technology Products and Services

As of the end of the reporting period, Shanghai Electric has been active in multiple fields of clean technology, primarily including:

Clean Energy

Integrated onshore and offshore wind power
24/7 Solar energy generation
Competitive collaboration of "diversified energy storage"
Integrated hydrogen "production-storage-refueling-usage" systems
Distributed green energy supply
Advanced low-consumption carbon capture technology
Clean and environmentally friendly green methanol
Efficient clean coal-fired power
Efficient and flexible gas power regulation
Safe and advanced nuclear power units
Intelligent and robust power grid equipment

Energy Efficiency*

Green intelligent manufacturing production line
Industrial driving energy efficiency enhancement

Sustainable Water Sources*

Seawater desalination with waste heat

Pollution Prevention and Control*

Integrated "solid, gas, and water" management

Green Buildings and Transportation*

Design and construction of green industrial plants
Low-carbon operation of smart buildings
Low-carbon mobility through rail transit

*Note: Clean technology and intelligent manufacturing are cross-integrated. For more information on energy efficiency, pollution prevention and control, sustainable water sources, green buildings, and transportation, please refer to "Topic 2: Green Manufacturing, the Driver for Sustainable Development and Innovation".

Topic 1

Shanghai Electric has developed comprehensive new power system solutions, and consistently promotes innovation and breakthroughs in clean technology through technology R&D and project investments.

Key Clean Technology Products and Services

Integrated onshore and offshore wind power

In the field of wind power, Shanghai Electric has maintained its leading position in the offshore wind power market through its commitment to integrated onshore and offshore wind power. Shanghai Electric's offshore wind turbine manufacturing technology is exceptional, with large-scale units offering superior wind resistance and high power generation capacity, helping coastal provinces optimize their energy structure from shallow to deep sea. The company continuously promoted its "Technology-Led Comprehensive Solutions" development strategy, strengthened its two core competencies - "Technology R&D" and "Agile Organization," vigorously advanced the deep integration of "Digital Design and Intelligent Manufacturing," and achieved synergy across wind power equipment R&D, manufacturing, sales and service, as well as wind resource development and investment.

24/7 Solar energy generation

In the field of solar energy, Shanghai Electric has been able to supply main equipment for the entire system, including heliostat field, receiver, molten salt thermal energy storage & heat exchange units, steam turbine generator units and air-cooled condenser, enabling 24/7 continuous power generation with 100% renewable energy. At the same time, new photovoltaic cell R&D and system integration progressed concurrently, improving photoelectric conversion efficiency. From distributed rooftop photovoltaic systems to large-scale ground-mounted power stations, Shanghai Electric actively adapted to the "concurrent" development trend of centralized and distributed photovoltaic industries, focused closely on core manufacturing processes such as advanced photovoltaic cell and module production, established open cooperation alliances with leading enterprises across the industrial chain, and leveraged the Group's existing advantages in semiconductor intelligent manufacturing foundation and "PV+" integrated solutions, along with other comprehensive market advantages, with support of institutional and mechanism innovation, to promote the construction of the group's core value in the photovoltaic equipment industry chain.

Competitive collaboration of "diversified energy storage"

In the field of energy storage, Shanghai Electric further consolidated and enhanced the Group's energy storage industry development capabilities, expanded and enriched specialized application scenarios for energy storage technologies, and collaboratively created energy storage system solutions that deliver greater customer value. Shanghai Electric expanded its energy storage business in areas of molten salt energy storage, compressed air energy storage, flywheel energy storage, lithium battery energy storage, and flow battery energy storage to achieves effective integration of traditional manufacturing advantages with emerging energy storage operations and formed a positive development landscape for "new energy storage" technologies.

Integrated hydrogen "production-storage-refueling-usage" systems

In the field of hydrogen energy, Shanghai Electric focused on breakthroughs in key core equipment across the four major segments of "production, storage, refueling, and utilization, " contributing to overcoming the bottlenecks in the large-scale, low-cost development of the hydrogen energy industry. In partnership with industry partners, Shanghai Electric jointly built a public platform for industrial measurement and testing services covering the entire industry chain, full life cycle, and complete traceability of hydrogen equipment to concentrated on overcoming critical "bottleneck" technologies and equipment, fully leveraged its integrated advantages spanning both power and chemical industries to promote scaled development of renewable energy utilization and raw material energy application, exploring economically viable implementation pathways for "deep decarbonization" in energy and industrial sectors.

Distributed green energy supply

In the field of distributed green energy supply, with the domestically leading system integration technology capabilities and first-mover advantages in distributed energy services, Shanghai Electric has long been committed to the research, development and application of comprehensive distributed energy solutions, including energy management and control technology, diversified energy storage technology, power electronics control technology, efficient unmanned photovoltaic cleaning robot technology, and intelligent energy management cloud platforms, to help enterprises achieve green and low-carbon transformation of energy supply, autonomous energy consumption management and value preservation and appreciation of diverse assets, and ultimately facilitate their transition into the zero-emission era.

Advanced low-consumption carbon capture technology

In the field of carbon capture, Shanghai Electric's carbon capture systems adopt advanced chemical absorption and physical separation technologies, characterized by high capture efficiency, low energy consumption, and strong adaptability, and can be widely applied across high-carbon emission industries including power generation, chemical manufacturing, and steel production. Shanghai Electric also actively explored the integration of carbon capture with utilization, using captured carbon dioxide in manufacturing synthetic fuels, chemicals, and building materials to promote circular economy development and contribute to global sustainable development goals.

Clean and environmentally friendly green methanol

In the field of green methanol, Shanghai Electric's green methanol technology integrates a series of cutting-edge processes including green electricity-coupled hydrogen production, pure oxygen pressurized circulating fluidized bed biomass gasification, biomass gasification syngas purification and CO2-rich syngas methanol synthesis to efficiently convert agricultural and forestry waste and wind power into high value-added green methanol and achieve efficient synergistic utilization of biomass and wind energy. Green methanol can serve as an alternative fuel for ships, heavy trucks, and other transportation vehicles, as well as a chemical raw material or energy storage medium, providing sustainable solutions for energy structure adjustment and industrial decarbonization.

Efficient clean coal-fired power

In the field of coal-fired power, with world-class technical capabilities, Shanghai Electric has developed a comprehensive product system ranging from 300MW to 1350MW units. Leveraging the technology and market presence in the thermal power field, Shanghai Electric focused on the "coordinated three initiatives" for coal-fired power market, maintaining the global record for lowest coal consumption in coal-fired units, enabling coal saving and carbon reduction, deep peak load regulation, heat-power decoupling and efficient heating, continuously playing a crucial role in building a safe and efficient energy system. Our ultra-supercritical unit technology that is unparalleled in China delivers efficient clean power generation, significantly improves energy conversion efficiency, reduces carbon emissions, and paves the way for green upgrades in thermal power.

Efficient and flexible gas power regulation

In the field of gas turbines renowned as the "pearl in the industrial crown", Shanghai Electric continued to raise its domestic production rate. Possessing all the technologies for heavy-duty gas turbines, from research and design, processing and manufacturing to maintenance and upgrades, Shanghai Electric has established itself as the domestic leader truly mastering the core technologies of heavy-duty gas turbines. With independent technologies, localized supply and service industry chain, Shanghai Electric has been committed to providing comprehensive, one-stop, and independent gas turbine products and services throughout the entire life cycle.

Safe and advanced nuclear power units

In the field of nuclear power, Shanghai Electric has the complete manufacturing industrial chain for nuclear power equipment from forgings, nuclear island main equipment, conventional island, and instrumentation and control systems, and possesses a complete portfolio of nuclear power technology pathways and manufacturing capabilities for nuclear island main equipment, and consistently maintains a leading position by comprehensive market share.

Intelligent and robust power grid equipment

In the field of power transmission and distribution, Shanghai Electric forms an industrial structure system of high-voltage, intelligent, power electronics and modernized services with its complete industrial chain and diverse product portfolio, covering the entire life cycle of the power transmission and distribution industry and serving various sectors including power, water conservancy, rail transit, postal services, telecommunications, textiles, petrochemicals, metallurgy, mining and construction, and is dedicated to becoming a provider and industry benchmark of integrated, intelligent comprehensive solutions in the power transmission and distribution field, creating efficient, stable, and robust intelligent power grids for its customers.

Topic 1

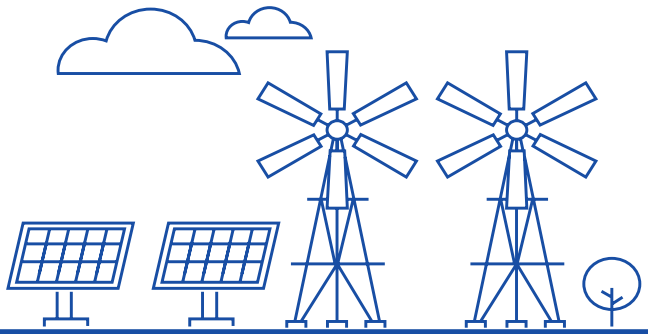
Aligned with its strategic positioning and to cultivate the Group's core competitiveness, Shanghai Electric has accelerated its investment in the clean technology industry to address the triple challenges of climate change, energy security, and economic growth. In recent years, Shanghai Electric's important clean technology investment cases include:

Case Study | Shanghai Electric's Wind Power Energy Storage Project in Baicheng, Jilin

The Shanghai Electric's Wind Power Energy Storage Project in Baicheng, Jilin is an important new energy initiative developed by Shanghai Electric in Baicheng City, Jilin Province, which combines wind power generation with energy storage technology to promote efficient utilization of clean energy and sustainable development. Capitalizing on the abundant wind resources in Baicheng, the project establishes large-scale wind farms equipped with advanced energy storage systems, effectively addressing the intermittent nature of wind power generation while enhancing power grid stability. Beyond reducing carbon emissions and facilitating energy mix transition, the project provides substantial support for local economic development and green energy industry upgrades, demonstrating Shanghai Electric's innovation and commitment to social responsibility in the field of new energy.

Case Study | Shanghai Electric's Renewable Energy Industry Project in Wenling

The Shanghai Electric's Renewable Energy Industry Project in Wenling is an important strategic initiative of Shanghai Electric in Wenling City, Zhejiang Province, designed to drive innovation and growth in the new energy industry. The project concentrates on wind power, high-efficiency motors, energy storage, and other clean energy domains, and is dedicated to building an integrated new energy industrial base encompassing R&D, manufacturing, and operations and maintenance. Relying on Shanghai Electric's strengths in high-end equipment manufacturing and energy technology, combined with Wenling City's advantageous location and industrial foundation, the project promotes intelligent and digital transformation of new energy equipment and fuels the green transformation of the regional economy.



Case Study | Shanghai Electric's Active Contribution to Building a New Power System

In active response to the Action Plan for Accelerating the Construction of New Power Systems (2024-2027) policy jointly issued by the National Development and Reform Commission and two other ministries, Shanghai Electric continuously made innovative breakthroughs in key areas and launched a series of energy equipment, innovative technologies, and comprehensive solutions that align with the characteristics of new power systems to provide strong technical support and equipment assurance for building new power systems.

· In the field of ultra-high voltage ("UHV"), Shanghai Electric Wujiang Transformer Co., Ltd. has independently developed a series of high-performance ultra-high voltage equipment, including 1000kV UHV AC transformers, 1100kV shunt reactors, and ±500kV and ±800kV converter transformers, supporting China's UHV power grid construction with core equipment.
· In the field of power distribution, Shanghai Electric Power Transmission & Distribution Group has developed compact low-voltage switchgear products with reduced cabinet width, creating additional space for the connection of electric vehicle charging facilities.
· In the field of energy storage, Shanghai Electric Power Transmission and Distribution Group has launched a centralized air-liquid cooled 5.2MW energy storage converter that features enhanced grid-connected performance and grid-forming technology applications to accommodate a wider power grid frequency range, deliver faster power response times, and offer superior grid-connected performance. The device also adopts various grid-forming technologies to enable multi-machine grid connection and black start operation. Furthermore, it can be integrated with wind power, photovoltaic systems, and diesel generators to create isolated microgrid systems for off-grid operation.
Shanghai Electric will continue to focus on achieving key technological breakthroughs in priority areas, and consistently provide more robust equipment, stronger technical support, and optimized solutions for the construction of our country's new power systems.

Case Study | The World's First 16 MW Offshore Low-Frequency Unit Rolls Off the Production Line

In September 2024, the world's first 16MW offshore low-frequency unit rolled off the production line at the Shantou base of Shanghai Electric Wind Power Group Co., Ltd. ("Electric Wind Power Group"). Applying 20Hz low-frequency power transmission technology on the basis of the "Haishen" platform, this unit represents another innovative product customized for the low-frequency power transmission market,. The unit will be deployed in the Zhejiang offshore wind power low-frequency demonstration project, which is expected to further solidify Zhejiang's position in the clean energy field and make significant contributions to the sustainable development of the regional economy.

With the global emphasis on sustainable development and clean energy, Shanghai Electric continues to expand its technological presence in the fields of clean technology. In its future clean technology strategy, Shanghai Electric will further optimize its investment structure, ensure effective resource allocation, prioritize support for high-potential clean technology projects and achieve greater progress in technological innovation, product development, demonstration project implementation and market expansion to provide diversified and innovative solutions for global energy transition and sustainable development.

Topic 2

Green Manufacturing, the Driver for Sustainable Development and Innovation

With the rapid development of the global economy and continuous technological breakthroughs, traditional manufacturing faces multiple challenges, such as production efficiency improvement, cost control, and resource optimization. Globally, the Industry 4.0 wave is driving manufacturing toward digitalization and intelligentization and prompting countries competing for strategic advantages through technological innovation. China has successively issued the Made in China 2025 and the 14th Five-Year Plan for Intelligent Manufacturing Development, clearly establishing intelligent manufacturing as its primary focus and accelerating the industry's progression toward high-end and intelligent development to enhance global competitiveness.

Intelligent Manufacturing Strategy

As China's largest comprehensive equipment manufacturing enterprise, Shanghai Electric is dedicated to serving major national and regional strategies, pursuing high-quality development, building a world-class equipment enterprise, leading equipment industry upgrades through technological innovation, and establishing technological innovation as the primary driving force for development, follows the paths of innovative development, industrial upgrading and intelligent manufacturing, enhances its capacity for technological innovation, accelerates the R&D and industrialization of original and leading technologies, and strives to secure technological advantages in the industry.

Intelligent Manufacturing Goals

Shanghai Electric is committed to promoting industrial digitalization and digital industrialization while facilitating internal and external circulation within the Group:

· Enterprise level: Shanghai Electric implements the "intelligent transformation and digital conversion" initiative to accelerate the digital and intelligent development of energy equipment, focus on data, perception, platforms and application, expedite the establishment and improvement of the Group's "digital intelligence and digital manufacturing" integrated system, implement five major actions of "intelligent manufacturing leadership demonstration, intelligent manufacturing upgrading acceleration, intelligent manufacturing empowerment enhancement, intelligent manufacturing security protection, and intelligent manufacturing talent cultivation," promote the application of emerging technologies such as AI, digital twins, big data and blockchain; advance the adoption of enterprise intelligent manufacturing maturity assessments, use 15 benchmark enterprises as leading examples to drive significant improvement in the Group's intelligent manufacturing level; and actively explores value creation from data elements, organize and integrate high-quality data across multiple scenarios, and exert the multiplier effect of data.

· Product Division: Shanghai Electric implements the "intelligent industry" initiative to exert the Group's advantages in intelligent manufacturing application scenarios, continuously develop and deliver an integrated hardware and software intelligent manufacturing product system consisting of "intelligent basic components + intelligent manufacturing equipment + intelligent manufacturing system integration + industrial software + industrial internet platform," and create a new growth engine.

Intelligent Manufacturing Products and Services

With a focus on the emerging field of intelligent manufacturing, Shanghai Electric targets hardcore technology, concentrates resources on pioneering original and leading technical breakthroughs, accelerates the development of its proprietary industrial foundation system and independent R&D framework, and forms a portfolio of self-developed products with core competitiveness.

Key Intelligent Manufacturing Products and Services

Green intelligent manufacturing production line

By virtue of best practices and strong value chain ecological integration capabilities, Shanghai Electric provides diversified high-end equipment and solutions, creates intelligent manufacturing automation solutions for new energy lithium batteries, aerospace, automotive, security and other fields, and continuously empowers global industries. Shanghai Electric aims to promote industrial automation and digital transformation and boost enterprises to achieve efficient and intelligent production models through advanced intelligent manufacturing equipment.

Industrial driving energy efficiency enhancement

The "Efficient Electric Drive System" launched by Shanghai Electric primarily focuses on optimizing energy utilization at the power generation side and industrial low-carbon energy-saving transformation at the consumption side. Examples include the "Steam-Electric Dual Drive" system that utilizes waste heat and steam for power generation at the power generation side, high-speed direct drive systems for "fuel-to-electricity & steam-to-electricity" conversions at the consumption side, domestically produced efficient transformation units, and general-purpose fan and mill variable frequency electric drive systems. Significant system efficiency improvements can be realized through deep integration of performance parameters across various equipment, and energy savings and emission reductions can be accurately calculated through energy-saving measurements.

Integrated "solid, gas, and water" management

Shanghai Electric adheres to the collaborative governance of "pollution reduction and carbon reduction," operates environmental protection fields such as solid waste treatment, water treatment and air pollution control, and offers comprehensive solutions for pollution and carbon reduction underpinned by various cutting-edge technologies, including organic solid waste resource utilization and carbon reduction technology, system-wide solid waste energy/resource utilization technology, and one-stop low-carbon sewage treatment and resource utilization technology. Simultaneously, digitalization and intelligentization technologies are applied to achieve full-chain interconnected, digitalized and intelligent coordination across "solid waste, gas, and water source" and effectively improve environmental cleaning efficiency, operational efficiency and energy efficiency.

Seawater desalination with waste heat

Shanghai Electric has independently developed efficient hot water flash evaporation technology coupled with low-temperature Forward-Feed Multi-effect Distillation (F-MED) to form an innovative process for waste heat utilization in thermal seawater desalination, which is a energy-efficient, environmentally friendly, economical and low-carbon solution providing coastal power, steel, chemical, and other companies with one-stop seawater desalination services and ensuring a reliable supply of high-quality freshwater for customers, with significant social benefits.

Topic 2

Key Intelligent Manufacturing Products and Services

Design and construction of green industrial plants

Shanghai Electric's "Zero Carbon Ecological Park" centred around features including "enhanced building envelopes, renewable energy utilization, landscaping, comfortable indoor environments, energy storage, prefabricated construction, water conservation and CCHP" is located reasonably and planned meticulously, adopting modern technological approaches, such as production line arrangements, logistics, site layout, lean manufacturing, production waste treatment and operational management, to maximize the reduction of energy consumption and pollution emissions, achieving zero growth in carbon emissions.

Low-carbon operation of smart buildings

Shanghai Electric's smart buildings provide intelligent and energy-efficient building management solutions through the integration of advanced Internet of Things ("IoT"), big data, and AI technologies and encompass energy management, equipment monitoring, security systems, environmental optimization, and other functions, aimed at improving building operation efficiency, reducing energy consumption, enhancing user experience, and facilitating the achievement of green, intelligent, and sustainable building environments.

Low-carbon mobility through rail transit

Relying on extensive experience in the urban rail transit industry, Shanghai Electric has established a comprehensive rail transit industry system which covers virtually all electromechanical equipment and systems in the urban rail transit sector, with operations extending to the majority of rail transit cities across China.

As a comprehensive equipment manufacturer specializing in energy and industrial equipment, Shanghai Electric is dedicated to following the paths of innovative development, industrial upgrading and intelligent manufacturing, is positioned at the forefront of intelligent manufacturing, leads industrial development trends with its exquisite craftsmanship and innovative technology, and contribute Chinese wisdom and solutions to global industrial progress.

Case Study | Shanghai Electric Added 5 More Advanced Intelligent Factories in Shanghai

On 24 December 2024, the Shanghai Municipality Economic and Information Technology Commission published its latest list of advanced intelligent factories for 2024, where Shanghai Boiler Works Co., Ltd. ("Shang Boiler Works"), Shanghai Electric Group Shanghai Electric Machinery Co., Ltd. ("Shanghai Electric Machinery"), Shanghai Renmin Electrical Apparatus Works ("Renmin Electrical Apparatus Works"), Shanghai Nanhua-Lanling Electrical Co., Ltd. ("T&D Nanhua-Lanling") and Shanghai Electric Nuclear Power Equipment Co., Ltd. ("Shanghai Electric Nuclear Power") under Shanghai Electric were included, which reaffirms the wide recognition of Shanghai Electric's leading position in the field of intelligent manufacturing.

Shanghai Boiler Works focused on intelligent factory product life cycle management, utilizing big data, AI, industrial internet and other technologies to achieve digital product R&D, design and production management, with the unit product cost down 10% in 2024.

Shanghai Electric Machinery integrated multiple systems to achieve personalized R&D and design and intelligent production scheduling to improve production efficiency by 29.80%, and applied AI and big data technology to enhance production coordination and smart decision-making.

Renmin Electrical Apparatus Works insisted on continuously refining the digitalization of operational processes and the automation, greening and intelligentization of production processes to raise the factory production efficiency by 25%.

T&D Nanhua-Lanling proposed a three-step intelligentization strategy and developed the "Lanjingling Smart Management Platform," achieving an average plate utilization rate of 95% and reducing labour costs by an average of 50%.

Shanghai Electric Nuclear Power was committed to achieving full-process digital manufacturing of nuclear island main equipment, with workshop productivity up more than 20% in 2024.

Topic 2

Case Study | With Intelligent Technology, Shanghai Mitsubishi Elevator Delivered Comprehensive Safety Services for the 7th CIIE

The 7th China International Import Expo ("CIIE") was successfully held at the National Exhibition and Convention Center (Shanghai) in November 2024. As the exclusive elevator equipment supplier and maintenance service provider for the venue, Shanghai Mitsubishi Elevator Co., Ltd. ("Shanghai Mitsubishi Elevator") deployed three key intelligent technologies - elevator IoT systems, passenger flow detection devices and an intelligent operation and maintenance platform, along with multiple measures, to ensure the efficient and stable operation of elevators throughout the exhibition and achieve "zero failures" for all elevators and escalators during the event. This performance earned high commendation from government bodies, including the China International Import Expo Bureau.

Shanghai Mitsubishi Elevator served at 7th CIIE

Case Study | Ultra-low Emission Technology for Flue Gas Facilitated Sustainable High-quality Development of Enterprises

Integrated dry process for desulfurization, denitrification and dust removal utilizing catalytic ceramic fibre filter tubes

The Group has consistently prioritized air pollution prevention and control and been active in environmental protection sectors including solid waste treatment, water treatment, and air pollution control. The ultra-low emission technology for flue gas independently developed by Shanghai Electric Environmental Protection Group has yielded remarkable results in the thermal power industry, accelerating the reform across waste incineration, biomass power generation and hazardous waste treatment sectors.

An integrated dry process for desulfurization, denitrification and dust removal utilizing catalytic ceramic fibre filter tubes, combined with synergistic technologies for efficient acid removal, catalytic denitrification and dust removal, was adopted for the project to achieve ultra-low emissions of particulate matter, SO_2, and NOx. Through technical retrofitting, the flue gas treatment pathway has been optimized, including incorporation of sodium-based desulfurization, ceramic filter tube dust removal and denitrification and high-temperature waste heat recovery technologies, to comprehensively enhance the flue gas purification process, reduce operating costs and improve equipment efficiency. The innovative addition of an activated carbon adsorption fixed bed achieved ultra-clean dioxin emissions, establishing a technical benchmark for flue gas pollution control.

The successful implementation of the project has established a benchmark in atmospheric governance, being included in the National Environmental Protection Technology Equipment Directory and demonstrating significant social, economic, and environmental benefits.

Case Study | Park-Level Intelligent Operation and Maintenance Platform for Energy Consumption Management - Smart Energy and Carbon Manager

Smart Energy and Carbon Manager

As urbanization accelerates and industrial parks continue to expand, achieving efficient, green, and sustainable development has become an urgent challenge for park managers. Shanghai Electric Group Co., Ltd. Central Academe ("Central Academe") has independently developed a park-level intelligent operation and maintenance platform for energy consumption management - Smart Energy and Carbon Manager, which aims to enable comprehensive management of equipment within a park and optimize energy consumption by incorporating advanced IoT technology and big data analytics capabilities, thereby promoting the realization of the park's green and low-carbon development goals.

The platform allows data coupling across multiple energy forms, monitoring energy consumption in real time and implementing timely adjustment measures to improve energy utilization efficiency and reduce operational costs by integrating and analysing data about electricity, solar energy and energy storage. The platform collects various energy system data, environmental data, and building facility information to generate valuable data assets that lay a foundation for future energy usage trend analysis. Featuring AI intelligentization control functions, the platform can automatically or manually execute pre-defined energy management strategies. Through its monitoring and early warning systems, the platform reduces the need for manual inspections and lowers maintenance costs.

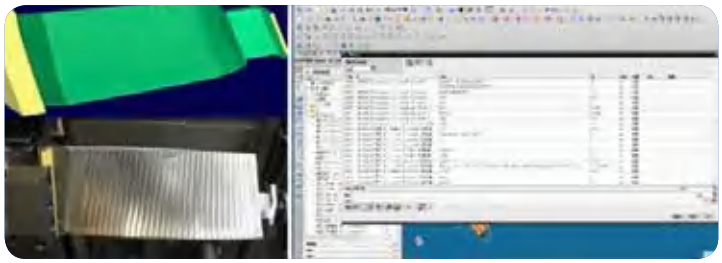
Topic 2

Case Study | Demonstration Scenario of AI Integration in High-end Equipment Blade Component Manufacturing Innovation

Currently, "New Industrialization" and "New Quality Productive Forces" constitute key components of China's development strategy, making AI+manufacturing an inevitable trend in the development of the manufacturing industry.

Shanghai Electric Power Generation Equipment Co., Ltd. Turbine Plant ("Shanghai Electric Turbine Plant"), in collaboration with digital technology companies and Central Academe, has created the "Demonstration Scenario of AI Integration in High-end Equipment Blade Component Manufacturing Innovation, " aiming to reshape the R&D and design, production & manufacturing, and operation & maintenance of blades through the application of AI throughout the entire life cycle of blades. In the R&D and design phase, AI drives simulation analysis and assisted design, optimizes thermal calculations and material applications, automatically generated models and engineering drawings, and improved design efficiency and quality. In the production & manufacturing phase, AI intelligent scheduling is combined with visual perception technology to establish unmanned production lines, enable automated processing from raw materials to finished products, and boost efficiency and precision. In the operation & maintenance phase, intelligent sensors and AI data analysis facilitate real-time monitoring and predictive maintenance of blade operation to ensure stable equipment performance.

The implementation of this scenario is expected to increase the R&D efficiency of turbine blades by 30%-50%, shorten the production cycle by 20%, accelerate customization response by 30%, and achieve a qualification rate exceeding 99.9%, which will propel turbine blade manufacturing toward a new stage of intelligentization and establish a new benchmark for the intelligent design and production of complex industrial products.

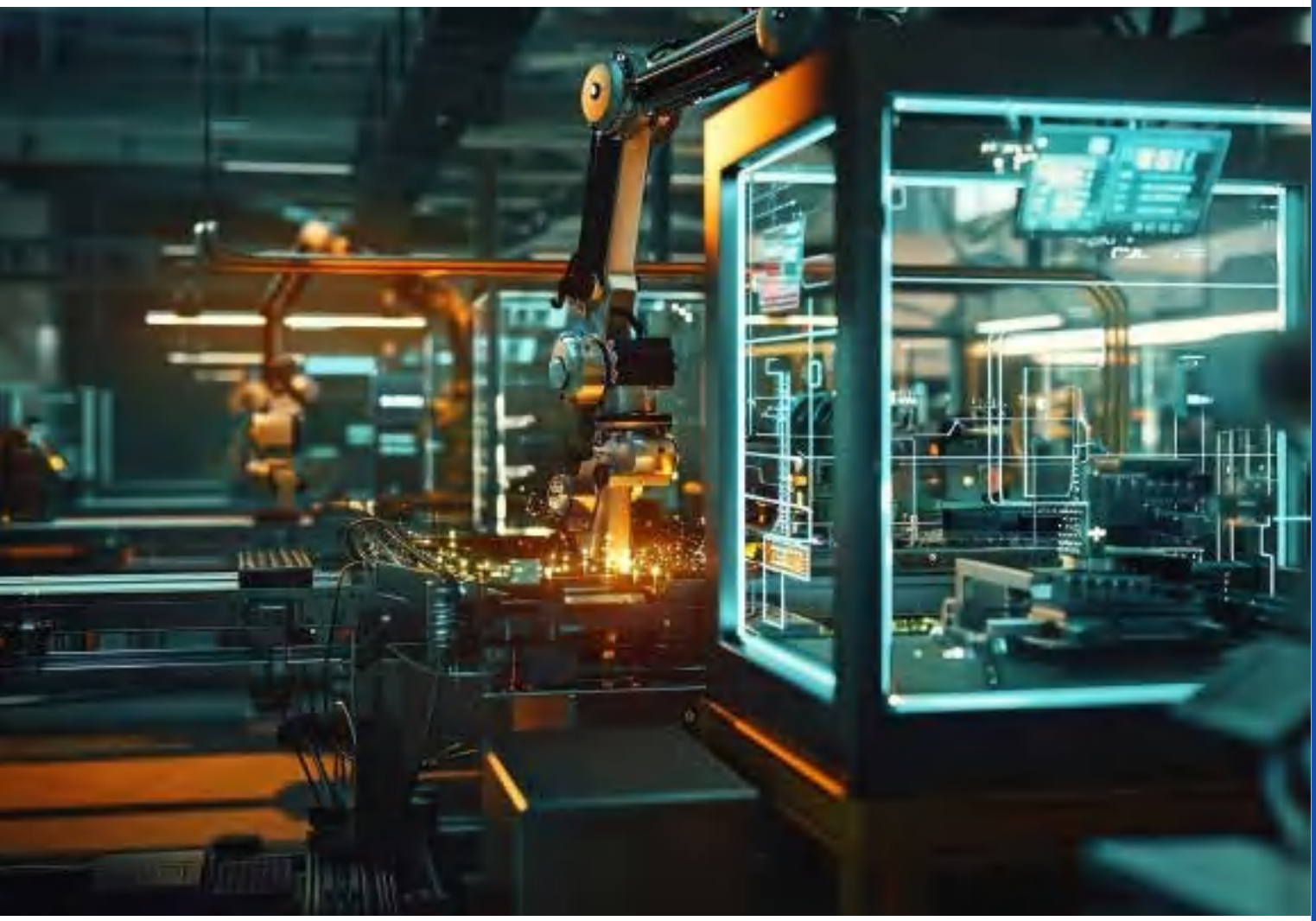


Application Scenario 1: AI-Driven Simulation Analysis and Assisted Design

Application Scenario 2: Unmanned Production Lines Based on AI Visual Perception and Automatic Control

Application Scenario 3: AI-based Blade Fault Diagnosis and Predictive Maintenance

Intelligent transformation and digital conversion are inevitable for the development of Shanghai Electric. In the future, Shanghai Electric will continue to deepen its intelligent manufacturing presence, build a whole-chain intelligent manufacturing system, develop core competitiveness in intelligent manufacturing, establish as a benchmark in the intelligent manufacturing industry, and propel China's manufacturing industry towards the high end of the global value chain.



2024 Highlights

Environmental Performance Indicators

Environmental Performance Indicators	2023	2024
Total investment in environmental protection (RMB'0,000)	7,002.41	8,421.46
Harmless waste density (tons/RMB'0,0000000 revenue)	59.99	59.58
Water consumption density (tons/ RMB'0,000 revenue)	0.3224	0.2839
Total investment in environmental protection training (RMB'0,000)	218.9	500.13
Number of Entities with ISO 14001 Environmental Management System Certification	98	111

Social Performance Indicators

Social Performance Indicators	2023	2024
Total Number of Employees (persons)	42,190	40,260
Labor Contract Signing Rate	100%	100%
Social Insurance Coverage Rate	100%	100%
Labor Union Coverage Rate	100%	100%
Percentage of Female Managers	42.1%	41.8%
Employee Medical Examination Coverage Rate	100%	100%
Total Investment in Employee Training (RMB'0,000)	10,600	10,784
Employee Training Coverage Rate	98.66%	98.61%
Average Training Days Per Employee	3.4	3.4
Employee Turnover Rate	3.4%	3.3%
Workdays Lost Due to Occupational Injuries (days)	7,850	3,570
New Occupational Disease Cases	0	0
Charitable Donations (RMB'0,000)	508.8	513.1
Tax Contribution (RMB'00 million)	48	52

About Shanghai Electric

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.

Guiding Principles

Lead the way in transformations towards high-end, intelligent and green development, take bold steps in accelerating the development of quality productive forces, and pioneering high-level self-reliance and self-strengthening in science and technology

One overarching principle:

Upholding the comprehensive leadership of the Chinese Communist Party ("CCP") over the Group.

One overarching requirement:

Serving national strategies, aligning closely with national needs, and achieving high-quality development.

One overarching goal:

Committing to becoming stronger, more excellent, and larger in scale, while accelerating the transformation of Shanghai Electric into a world-class equipment enterprise.

Three benchmarking standards:

Benchmarking against globally leading technologies, industry-leading enterprises, and nationally recognized exemplars. Pursuing steady progress with breakthrough innovations in key areas to continuously strengthen Shanghai Electric's irreplaceable core competitiveness.

Three perspectives:

Think from the perspective of international industrial division and cooperation, operate and arrange from the perspective of the national strategy of building a strong manufacturing country, and take responsibility and action from the perspective of solving the nation's "bottleneck" core technologies to serve as the critical equipment provider for a great power.

Mission、Vision 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.

ENTERPRISE SPIRITS

Spiritual Spectrum

Spirit of innovation, spirit of perfection, spirit of shouldering, spirit of undertaking, spirit of ant and spirit of Li Bin

Spirit of innovation

This spirit emerged during the 1950s and 1960s when China's motor manufacturing industry was virtually non-existent, and the people of Shanghai Electric boldly targeted the state-of-the-art motor technology - double water inner cooling - embodying a spirit of innovation through courageous implementation.

Spirit of perfection

This spirit emerged in 1953 when the people of Shanghai Electric fearlessly undertook the trial production of large-scale precision power generation equipment - embodying the spirit of diligent research during the development of China's first 6,000kW steam turbine.

Spirit of shouldering

This market-oriented spirit emerged in the early 1980s, representing the people of Shanghai Electric racing against time and providing wholehearted customer service while maintaining uncompromising quality standards.

Spirit of undertaking

This spirit emerged during the 1960s and 1970s when the people of Shanghai Electric spent four years to successfully develop China's first ten-thousand-ton hydraulic press, demonstrating the spirit of self-reliance and determined progress despite the absence of specialized heavy equipment and technical expertise.

Spirit of ant

This spirit emerged shortly after the founding of New China when the people of Shanghai Electric dared innovation and tackled significant challenges with limited resources under rudimentary production conditions.

Spirit of Li Bin

This spirit emerged in the 1990s, Shanghai Electric employees represented by Li Bin exemplified dedication to their work, rigorous study, innovative courage, and selfless contribution, vividly embodying the valuable qualities of the people of Shanghai Electric.

Corporate Culture

Shanghai Electric has established corporate culture platforms in five colours - "CCP Flag Red, Technical Blue, Ecological Green, Vitality Orange, and Open Gold" - integrating the soft power of corporate culture throughout all processes and aspects that promote the accelerated development of new quality productive forces.

CCP Flag Red

Always maintaining the red heritage as Shanghai Electric's cultural foundation.

Technical Blue

Always positioning technological innovation as Shanghai Electric's driving force.

Ecological Green

Always establishing green low-carbon practices as Shanghai Electric's commitment to sustainability.

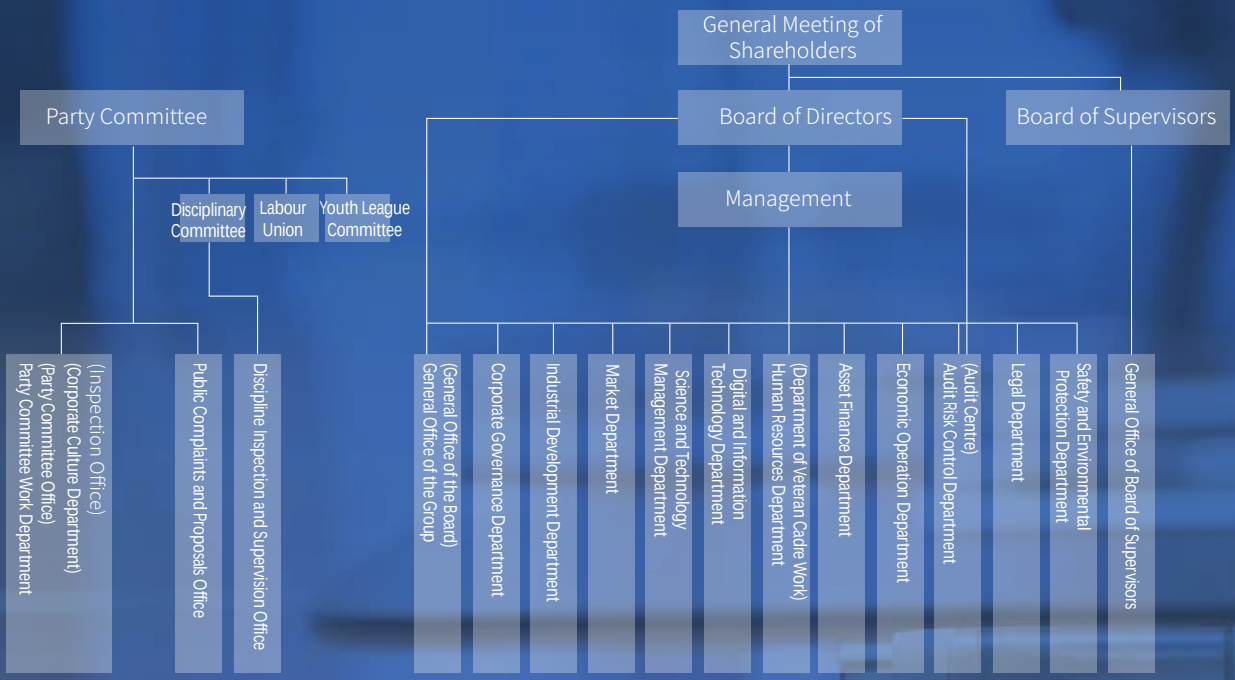
Vitality Orange

Always fostering organizational vitality as Shanghai Electric's internal growth driver.

Open Gold

Always embracing open cooperation and mutual benefit as Shanghai Electric's development framework.

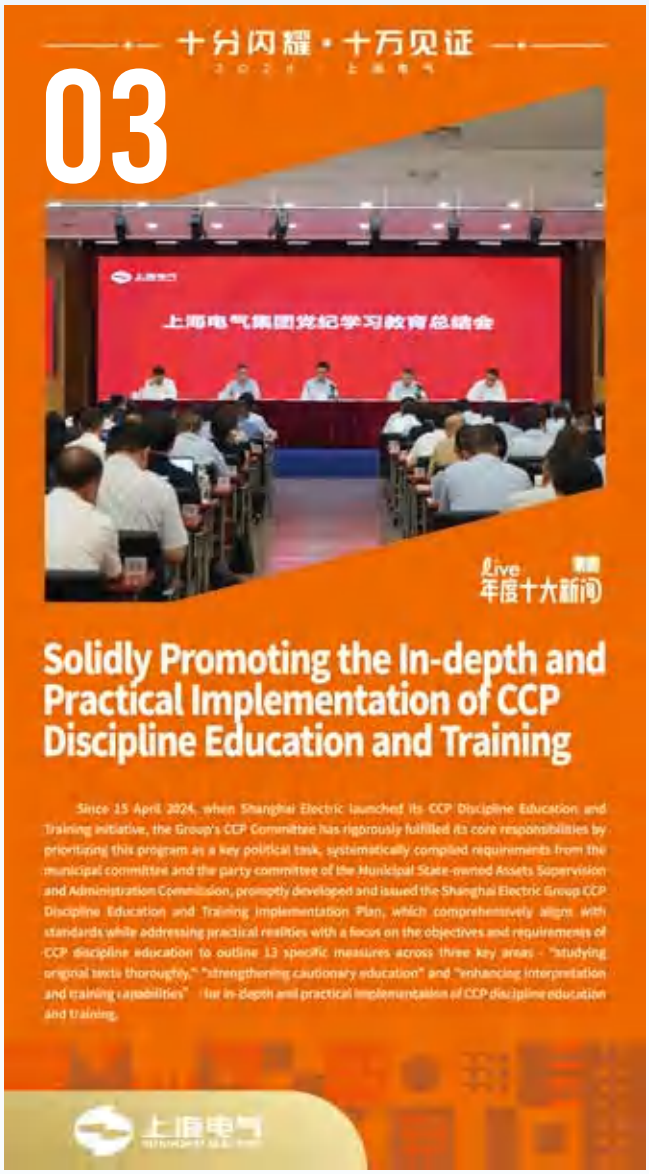
Organizational Structure



Shanghai Electric has established a functional framework with clear divisions of responsibility that creates fully coordinated management relationships with the Group's various industry lines and subsidiaries, practicing its responsibility as a state-owned enterprise in terms 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.

2024 News Top 10


十分闪耀·十万见证
02
Live
年度十大新闻
Shanghai Electric Strives to Reach a "Turning Point"
On 17 July 2024, Shanghai Electric Group held its semi-annual economic operations analysis meeting, where the Group's economic performance during the first half of the year was thoroughly examined. Shanghai Electric Group's net profit attributable to the parent company reached its budgetary targets for the first half of the year, with industrial operating cash flow achieving significant growth; order acquisition was overall better than the same period last year; and market shares for coal-fired power and nuclear island products maintained industry-leading positions. In a complex and volatile external environment, Shanghai Electric has demonstrated strong operational resilience through steady progress and excellent management capabilities. The meeting emphasized the necessity of creating genuine "turning points" in key performance indicators to achieve qualitative improvements and reasonable quantitative growth.


十分闪耀·十万见证
03
上海电气集团党纪学习教育总结会
Live
年度十大新闻
Solidly Promoting the In-depth and Practical Implementation of CCP Discipline Education and Training
Since 15 April 2024, when Shanghai Electric launched its CCP Discipline Education and Training initiative, the Group's CCP Committee has rigorously fulfilled its core responsibilities by prioritizing this program as a key political task, systematically compiled requirements from the municipal committee and the party committee of the Municipal State-owned Assets Supervision and Administration Commission, promptly developed and issued the Shanghai Electric Group CCP Discipline Education and Training Implementation Plan, which comprehensively aligns with standards while addressing practical realities with a focus on the objectives and requirements of CCP discipline education to outline 13 specific measures across three key areas - "studying original texts thoroughly," "strengthening cautionary education" and "enhancing interpretation and training capabilities" - for in-depth and practical implementation of CCP discipline education and training.

Top 10 News in 2024

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Top 10


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Supporting Major Breakthroughs in Domestic Heavy-Duty Gas Turbines
On 28 February 2024, the first 300 MW F-class heavy-duty gas turbine prototype assembled and manufactured by Shanghai Electric with participation from over 200 enterprises, research institutes, and universities across 19 provinces and cities including Beijing, Liaoning, Shanghai, and Jiangsu rolled off the assembly line in Shanghai Lingang. On 7 October of the same year, this heavy-duty gas turbine was successfully ignited for the first time in Shanghai, marking another significant breakthrough for our country in the field of high-end energy equipment.
上海电气


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上海电气
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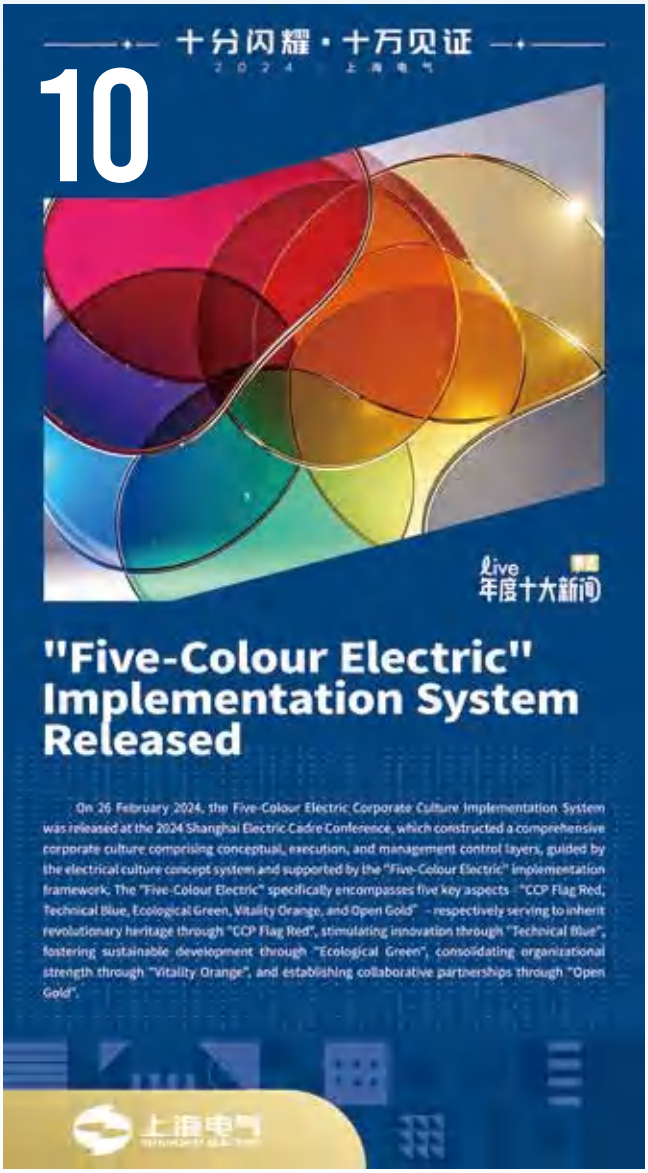
Facilitating 100% Domestication of "Guohe No. 1"
On 26 November 2024, People's Daily published an article titled Building a High-Level Socialist Market Economic System, explaining how the "Guohe One" industrial chain alliance strengthens complementary advantages and joint development across various ownership economies and specifically highlighting the steam generator developed by Shanghai Electric, known as the "lungs of nuclear power." This steam generator not only earned a place on the prestigious Third Batch of Major Technical Equipment Projects in the Energy Field list but also achieved the milestone of complete domestication for "Guohe One," effectively overcoming numerous core technical and process challenges in China's nuclear power sector. From the early Qinshan Nuclear Power Plant to today's advanced "Guohe One," Shanghai Electric has created numerous pioneering products that lead both domestic and international markets based on its continuous innovation.
上海电气

2024 News Top 10


十分闪耀·十万见证
2024 上海电气
09
WORLD BRAND LAB CHINA'S 500 MOST VALUABLE BRANDS 2024
WINNER
2024年度中國500
最具價值品牌
Live 年度十大新闻
Brand Value Surpasses ¥200 billion
On 18 June 2024, the 2024 World Brand Conference released the list of China's 500 Most Valuable Brands, ranking Shanghai Electric 47th with a brand value of RMB215.628 billion, representing a year-on-year increase of 25%. Shanghai Electric has appeared on the TOP50 list for 9 consecutive years, consistently leading China's machinery industry. Shanghai Electric remains committed to serving the national strategy and closely aligning with national needs, benchmarks against globally leading technologies, industry-leading enterprises, and nationally leading examples while accelerating the cultivation of new momentum for green development, and creates indispensable and irreplaceable new quality productive forces in the digital era through technological innovation continuously driving industrial development, transformation and upgrading.
上海电气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"Five-Colour Electric" Implementation System Released
On 26 February 2024, the Five-Colour Electric Corporate Culture Implementation System was released at the 2024 Shanghai Electric Cadre Conference, which constructed a comprehensive corporate culture comprising conceptual, execution, and management control layers, guided by the electrical culture concept system and supported by the "Five-Colour Electric" implementation framework. The "Five-Colour Electric" specifically encompasses five key aspects - "CCP Flag Red, Technical Blue, Ecological Green, Vitality Orange, and Open Gold" - respectively serving to inherit revolutionary heritage through "CCP Flag Red", stimulating innovation through "Technical Blue", fostering sustainable development through "Ecological Green", consolidating organizational strength through "Vitality Orange", and establishing collaborative partnerships through "Open Gold".
上海电气

Honours and Awards

Quality Awards

No.	Award Name	Name of Entity Awarded
1	2nd prize of Key Product Awards for Breakthroughs in Quality 2024	Shanghai Electric Power Equipment Co., Ltd. Generator Plant ("Shanghai Generator Plant")
2	3rd prize of Key Product Awards for Breakthroughs in Quality 2024	Shanghai Boiler Works
3	1st prize of the National Machinery Industry Excellent Quality Trustworthy Team	Shanghai Electric Turbine Plant
4	1st prize of the National Machinery Industry Excellent Quality Management Achievement	Shanghai Electric Turbine Plant, Shanghai Electric Machinery, Shanghai Boiler Works
5	2nd prize of the National Machinery Industry Excellent Quality Management Achievement	Shanghai Electric Machinery
6	First Batch Group Standard Pilot Evaluation Unit for the Implementation Guide for Intelligent Manufacturing and Production Site Management of High-end Equipment	Shanghai Electric Turbine Plant
7	1st Prize of the Quality Technology Progress Award from the Shanghai Quality Association	Shanghai Electric Gas Turbine Co., Ltd. ("Shanghai Electric Gas Turbine")
8	Excellence Award of the Quality Technology Progress from the Shanghai Quality Association	Shanghai Electric Gas Turbine
9	Minhang District 5th "Golden Key" Cup Quality Control Group Achievement Display Award	Shanghai Electric Turbine Plant
10	Shanghai Brand Leadership Benchmark Enterprise 2023	Renmin Electrical Apparatus Works
11	RMW3 Series Intelligent Universal Circuit Breaker Products, receiving the Shanghai User Satisfaction Product Award 2023	Renmin Electrical Apparatus Works
12	RMW3 Series received certification as a Shanghai High-Tech Achievement Transformation Project	Renmin Electrical Apparatus Works
13	Shanghai Brand Cultivation Benchmark Enterprise 2023	T&D Nanhua-Lanling
14	"Main Package Management Subcontract Benchmark Supplier" by China Nuclear Power Engineering Co., Ltd. 2023	Shanghai No.1 Machine Tool Works
15	"Five-Star Supplier" Award for Internal Reactor Components by China Nuclear Power Engineering Co., Ltd. 2023	Shanghai No.1 Machine Tool Works
16	Shanghai Quality Craftsman Award	Shanghai No.1 Machine Tool Works
17	Shanghai Municipality Common Quality Technology Breakthrough Project Achievement Award 2024	Central Academe

Science and Technology Awards

No.	Award Name	Name of Entity Awarded
1	1st Prize of Mechanical Industry Science and Technology Progress Award	Shanghai Electric-KSB Nuclear Pumps and Valves Co., Ltd., Shanghai Electric-KSB Pumps Co., Ltd.
2	2nd Prize for Mechanical Industry Science and Technology Progress Award	Shanghai No.1 Machine Tool Works
3	2nd Prize for Mechanical Industry Science and Technology Progress Award	Shanghai Electric Power Generation Equipment Co., Ltd.
4	2nd Prize for Mechanical Industry Science and Technology Progress Award	Shanghai Electric Power Generation Environment Protection Engineering Co., Ltd
5	2nd Prize for Mechanical Industry Science and Technology Progress Award	Nuclear Power Group
6	3rd Prize of Mechanical Industry Science and Technology Progress Award	Shanghai Electric Gas Turbine
7	3rd Prize of Mechanical Industry Science and Technology Progress Award	Shanghai Electric Power Generation Equipment Co., Ltd.
8	3rd Prize of Mechanical Industry Science and Technology Progress Award	Shanghai Electric SHMP Casting & Forging Co., Ltd. (SHMP Casting & Forging)

Human Resources Awards

No.	Award Name	Name of Entity Awarded
1	Global HR Think Tank - Annual HR Navigation Practice Award	Shanghai Electric
2	Shanghai Jiaotong University Education Group - Corporate Benchmark Learning Platform (formerly China Corporate University Rankings) 2024	Shanghai Electric
3	51Job - Chinese College Students' Favorite Employer Brand 2024	Shanghai Electric

Shanghai Electric adheres to the leadership of the Party building, constructs a clear- structured and well-defined corporate governance framework, continuously promotes the in-depth integration of Party building and business operations, and consolidates the foundation of governance. We continue to deepen the standardized operation, strengthen the scientific governance, constantly improve the construction of business ethics, risk management, audit supervision and the legal system, actively share the achievements of enterprise development with stakeholders such as investors, partners and customers, and drive the upstream and downstream partners to create long-term value together.

Highlighting the Responsibilities of State-owned Enterprises

01

- Guided by Party Building for Fulfilling Responsibilities
- Information Transparency to Enhance Trust
- Intelligent Protection and Data Security
- Excellent Governance and Standardized Operation
- Efficient Supervision and Risk Prevention and Control

Guided by Party Building for Fulfilling Responsibilities

Party Building Leadership

Shanghai Electric deeply studies and implements Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, and always adheres to the overall leadership of the Party and the strengthening of Party building throughout the reform and development of the Group, firmly implements the decision-making and deployment of the Central Party Committee, the Shanghai Municipal Party Committee and the Municipal Government, and the Shanghai State-owned Assets Supervision and Administration Commission. The Group adheres to the general work requirements of "serving the national strategy, closely following the national needs, developing new productive forces, building core competitiveness, and achieving high-quality development", unifies thoughts and builds consensus, and leads high-quality development with high-quality Party building. Shanghai Electric persists in finding directions and guidelines from the latest important speeches of General Secretary Xi Jinping and the decision-making and deployment of the Central Party Committee, the Shanghai Municipal Party Committee and the Municipal Government. The Group strengthens the research and study of national policy directions, and seeks for ideas and opportunities from the policy documents of national ministries and commissions such as the National Development and Reform Commission, the Ministry of Industry and Information Technology, and the National Energy Administration, as well as the relevant municipal commissions and offices. Additionally, the Group closely focuses on accelerating the promotion of the reform-deepening and upgrading action, and promoting the implementation of the Group's "14th Five-Year Plan" strategy for creating a world-class equipment enterprise. By focusing on building a "grand Party building" work pattern that is adapted to a world-class equipment enterprise, implementing a comprehensive and strict Party governance work system with the characteristics of Shanghai Electric, promoting the organic integration of the Party's leadership and corporate governance, shaping the "Colorful Electric" corporate culture system that is adapted to the Group's high-quality development, building a high-quality cadre and talent team that supports the Group's high-quality development, and stimulating the vitality and motivation of the grass-roots Party organizations and Party members, a strong political and organizational guarantee for the enterprise's high-quality development can be achieved.

Governance Integration

Integrate into corporate governance and enhance the effectiveness of corporate governance and control

- At the group level, clarify the responsibilities among the Party committee, the board of directors and the management level, and optimize the procedures for the Party committee's prior review.
- At the enterprise group level, strengthen the integration of the Party's leadership into corporate governance.
- In terms of supervision and control, improve the capabilities of the discipline inspection and inspection teams.

Integrate into production and operation and give play to the combat effectiveness of grassroots Party organizations

- Focus on Party building in light of the key tasks of "strengthening Party building, seeking development, optimizing control, emphasizing science and technology, building teams, and reducing risks".
- Adhere to promoting trade union building and youth league building through Party building.
- Consolidate and deepen the carriers for integrating Party building into economic work and stimulate the role of grassroots organizations.

Stimulate vitality and motivation and create a good atmosphere for doing business and starting undertakings

- Make more efforts to strengthen the construction of the cadres and talents.
- Make good use of the fine traditions of state-owned enterprises and care for and serve employees with affection
- Inherit and carry forward the excellent cultural genes of Shanghai Electric and promote the implementation of the corporate culture of "Colorful Electric"

Measures for Governance Integration

Learning and Education of Disciplinary Party Rules

The Party Committee of Shanghai Electric, in accordance with the unified arrangements of the Central Committee and the Shanghai Municipal Party Committee, and under the guidance of the Party Committee of the Shanghai State-owned Assets Supervision and Administration Commission, regarded the development of disciplinary Party rules learning and education as an important political task. The Group strengthened the main responsibilities, firmly grasped the target tasks of "learning, knowing, understanding and abiding by the Party disciplinary rules", centered on the principle of "Three Focuses and Three Attainments", and solidly promoted the learning and education of disciplinary Party rules to be deeply rooted in the minds and actions of Party members, achieving visible results.

Guided by political construction, Shanghai Electric has established a solid foundation for Party member education system, providing a strong organizational guarantee for the high-quality development of the enterprise. In 2024, we formulated institutional documents such as the Work Arrangement for the 'Three Meetings and One Class' and Theme Party Day Learning and Education of Party Branches and the Implementation Plan for Disciplinary Party Rules Learning and Education. Through measures such as establishing an information assessment mechanism, promoting the development of characteristic Party lectures, and carrying out special training, we have innovated the learning mode and strengthened supervision and assessment.

Party Building Work Carriers

Shanghai Electric takes Party building as the leading factor to stimulate the red productivity. The Group has formulated the Measures for the Management of Party Building Brands, and deeply implemented and promoted the new round of the "Ten, Hundred, Thousand and Ten-Thousand" Party Building Project and the Party building brand creation activities. Focusing on strategic fields such as scientific and technological innovation and market breakthroughs, it has established 252 Party member commando teams, set up 202 Party member responsibility areas and 2,077 Party member demonstration posts. In addition, 12,000 Party members were organized to carry out the commitment campaign of "I Contribute to High-quality Development", forming a vivid practical pattern where Party building leads production and operation.

"On-the-chain" Party Building Joint Construction

Shanghai Electric takes Party building as the leading factor for the modernization construction of the industrial chain, and formulates the Operational Opinions on Deeply Promoting the 'On-the-chain' Party Building Joint Construction Work. Adhering to the working principles of value co-creation, complementary advantages and win-win cooperation, the Group promotes Party organizations at all levels to carry out joint construction work around the industrial chain, innovation chain, supply chain and talent chain through means such as organizational co-construction, resource sharing, business mutual promotion, talent co-cultivation and activity co-organization. By invigorating the industrial chain through Party building, it promotes industrial upgrading and transformation, and strengthens and supplements the industrial chain. In 2024, party organizations at all levels of the Group carried out a total of 234 pairs of Party building joint construction activities throughout the year.

Case Study **Party Building Research Center of Shanghai Electric**

The Building Research Center of Shanghai Electric Party is characterized by the integration of a virtualized form and centralized practical operation. By effectively linking and integrating shared resources, it has established a research, consultation, communication, and resource platform for Party building in state-owned enterprises, contributing to the high-quality development of the Group.

In 2024, the Party committee of the Group strengthened the construction of the center's position, effectively promoting innovation in both the theory and practice of Party building in state-owned enterprises. It continued to strengthen research on topics, facilitating the achievement of 37 research results in 2023. These results were popularized and applied both online and offline through means such as research collections and video micro-courses. Additionally, it continued to promote the full lifecycle management of 40 newly approved Party building research topics. It helped to develop Party courses with the characteristics of Shanghai Electric, launched the collection activity titled "New Concepts • Revitalizing Shanghai Electric", and based on the submission and design of 19 Party course applications, implemented the three-stage training program of "Pioneers in Party Courses", empowering the practice of developing Party courses by grassroots Party organizations. It deepened internal and external exchanges and cooperation, closely followed the strategic planning with two themed salons, reached cooperation agreements with the Marxism Institutes of universities such as Shanghai Dianji University, Shanghai Jiao Tong University, and Fudan University, expanded the resources and horizons of Party building work, and effectively gave play to the key roles of Party organizations and Party members.

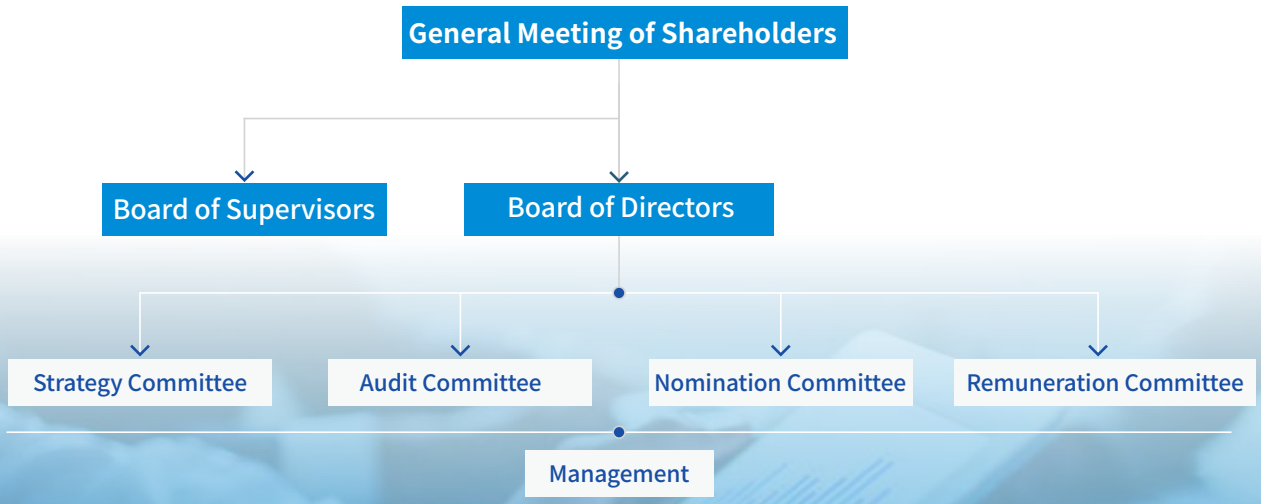
Excellent Governance and Standardized Operation

Shanghai Electric integrated compliance management into the entire business process, established a sound governance structure and effective management processes, supported and maintained a fair and free market competition environment, to ensure the healthy and sustainable development of the enterprise through the construction of an integrity culture.

Corporate Governance

Shanghai Electric strictly complies with laws and regulations on the governance of listed companies, such as the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, the Guidelines for Corporate Governance of Listed Companies, and the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited. The Group has established a clear-structured and well-defined corporate governance structure internally. The governance entities consist of the general meeting of shareholders, the board of supervisors, the board of directors, and the management. Moreover, professional committees such as the strategy committee, audit committee, nomination committee, and remuneration committee are established under the board of directors to ensure their effective operation within their respective terms of reference.

Shanghai Electric Corporate Governance Framework



We are committed to building a diversified board of directors structure, ensuring that directors have different professional backgrounds, possess professional knowledge and rich experience in areas such as enterprise management, intelligent manufacturing, financial management, audit and risk control, investment management, human resources management, and legal compliance. This safeguards the scientific and forward-looking nature of the board's decisions and effectively enhances the board's strategic leadership capabilities.

As of the end of the Reporting Period, Shanghai Electric had a total of 8 board members, including 3 executive directors, 2 non-executive directors, and 3 independent non-executive directors, with independent non-executive directors accounting for more than one-third of the total. During the Reporting Period, we formulated the Independent Director System and the Rules of Procedure for Independent Director Special Meetings to give full play to the functions of independent directors in decision-making participation, supervision and balances, and professional consultation within the board of directors. This further improves the corporate governance structure, protects the interests of minority shareholders and stakeholders, and promotes the standardized operation of the Company. During the Reporting Period, the Company held a total of 6 independent director special meetings to review related-party transaction matters such as the Company's equity acquisitions and asset sales.

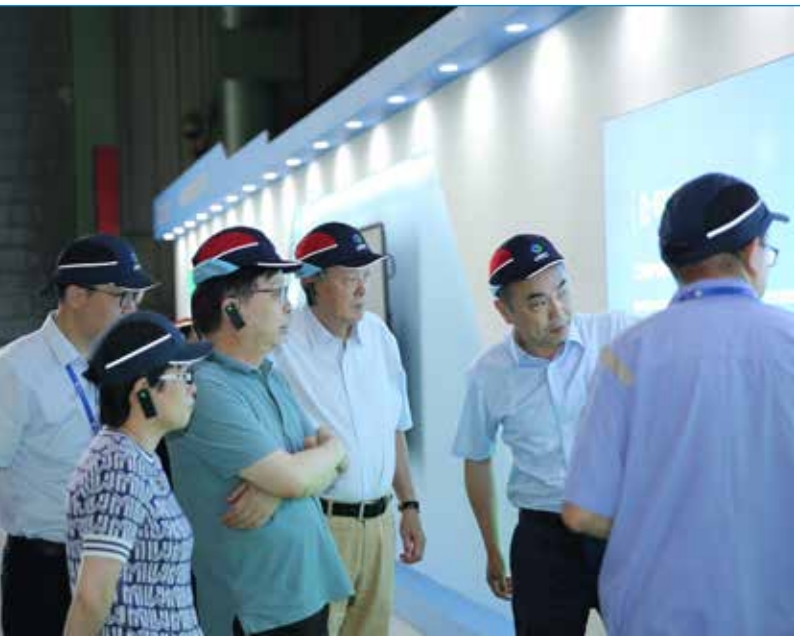
Shanghai Electric promotes the operation of the board of directors and the general meeting of shareholders of the joint-stock company in a standardized manner, continuously follows up and implements the regulatory requirements of the capital market, formulates various management systems of the Company, and focuses on improving the operation level of corporate governance, so as to plan operations, implement tasks, and strengthen management. In 2024, Shanghai Electric organized a total of 44 general meetings of shareholders, board of directors meetings, and meetings of various specialized committees, including 1 annual general meeting of shareholders, 5 extraordinary general meetings of shareholders, and 2 separate meetings of classes of shareholders. A total of 22 proposals were deliberated and approved. A total of 17 board meetings, 10 audit committee meetings, 6 nomination committee meetings, and 3 remuneration committee meetings were held, and a total of 121 proposals were deliberated.

Composition of the Board of Directors

Director Name	Position	Gender	Professional Background
Wu Lei	Chairman, Executive Director	Male	Enterprise management, intelligent manufacturing, financial management
Zhu Zhaokai	Executive Director, President	Male	Enterprise management, intelligent manufacturing, human resources management
Dong Jianhua	Executive Director, Vice President	Male	Enterprise management, financial management, audit risk control
Shao Jun	Non-executive Director	Male	Investment management
Lu Wen	Non-executive Director	Female	Investment management, audit risk control
Xu Jianxin	Independent Non-executive Director	Male	Financial management, audit risk control
Liu Yunhong	Independent Non-executive Director	Male	Legal compliance
Du Zhaohui	Independent Non-executive Director	Male	Intelligent manufacturing

The Board of Supervisors of Shanghai Electric, as the Company's supervisory body, is responsible for overseeing the Company's business operations, financial status, as well as the performance of duties by directors and senior management, and putting forward suggestions. As of the end of the Reporting Period, the Board of Supervisors of Shanghai Electric consisted of three supervisors, who collaborated to fulfill their respective responsibilities. For more detailed information about the Company's Board of Directors and Board of Supervisors, please refer to the 2024 Annual Report of Shanghai Electric.

As of the end of 2024, Shanghai Electric had a total of eight senior management personnel, among whom female senior executives accounted for 50%.



External directors conducted an investi ation into the nuclear power roup

External directors conducted an investigation into the Zhangye wind-power blade factory

Field Research

To comprehensively strengthen the compliance awareness and performance capabilities of directors, supervisors, and senior management, we organized them to participate in a number of special training programs organized by the China Securities Regulatory Commission, the Shanghai Stock Exchange, the China Association for Listed Companies, etc. Through these training programs, they can gain an in-depth understanding of the boundaries of their responsibilities under the new regulatory policies, improve the standardization of corporate governance, and promote the deep integration of a compliance culture with high-quality development.

In addition, to support external directors in performing their duties efficiently and gain a deep understanding of the operation status of the enterprises under the Group, during the Reporting Period, we organized external directors to conduct field research on subsidiaries and projects of the Company, such as the Nuclear Power Group, the Taonan Green Methanol Project, and the Zhangye Wind Turbine Blade Factory, and listened to the introduction of new energy projects in Northeast China. During the research period, external directors had full communication with the relevant persons in charge of various enterprises and projects, and gained an in-depth understanding of the production, management, and market conditions of each project. They obtained a more comprehensive understanding of the Group's business layout and operation environment, could evaluate and supervise the Group's operations objectively, and provided professional suggestions for the Group's development.

External directors conducted an investigation into the Taonan green methanol project

External directors communicated with the subsidiaries about the new energy projects in Northeast China

Business ethics and anti-corruption

Governance Structure

Shanghai Electric takes a zero-tolerance attitude towards any violations of business ethics and corruption. It has set the goal of combating corruption, and established a Coordination Group for the Construction of a Clean Party Conduct and the Fight against Corruption, which is led by the Secretary of the Group's Discipline Inspection Commission and the Supervisor of the Municipal Supervisory Commission stationed in the Group. Its main members are from functional departments such as the Group's Discipline Inspection and Supervision Office and the Audit and Risk Control Department. They assist in implementing relevant work on the construction of a joint supervision system for the construction of a clean Party conduct and the fight against corruption within the Group. We regularly convene member units to hold joint meetings to discuss, agree on, and coordinate the promotion of work related to the construction of a clean Party conduct and the fight against corruption within the Group. In addition, we guide and promote the formation of a closed-loop system that includes top-level design, resource coordination, joint operation, and summarization and improvement.

To effectively achieve the coordinated management of personnel and affairs, as well as the team and business, and enhance the awareness of honest practice in all employees, the Group has formulated the Operational Process (Guidance) for the 'One Post, Two Responsibilities' of the Group Leadership Team Members, and has continuously promoted the implementation of the Measures for Preventing Conflicts of Interest in the Operation and Management Activities of State-owned Enterprises. The tasks of the "One Post, Two Responsibilities" are closely linked to the assessment, making it an important basis for the selection, appointment, and evaluation of cadres, as well as for awarding honors. This helps to continuously improve the credibility of personnel selection and firmly implement the responsibility system for the construction of a clean Party conduct.

Management Objectives

The goal of combating corruption of Shanghai Electric

Shanghai Electric is committed to building a large-scale supervision pattern, improving a strict system, and firmly grasping the construction of a clean Party conduct. The Group resolutely holds the bottom line and ensures that the Company's behaviors comply with high-standard social responsibilities and ethical norms.

Management System

We are committed to integrating integrity management into the Company's daily operations and decision-making processes. We have formulated and continuously optimized internal management measures such as the Administrative Measures for Problem Clues of Discipline Inspection and Supervision Organizations, the Handbook for Supervision and Discipline Enforcement by Discipline Inspection and Supervision Organizations, and the Measures for Preventing Conflicts of Interest in the Operation and Management Activities of State-owned Enterprises. During the Reporting Period, we have also formulated the Administrative Measures for the Integrity Files of Leading Cadres and the Flow Chart of Party and Government Disciplinary Sanctions for Party Members and Cadres. With a more refined and standardized system, we have strengthened the defense line of integrity.

We have also extended the requirements of business ethics to the supply chain. All suppliers are required to sign an Integrity Agreement when signing contracts, and various responsibilities and strong disciplinary measures are clearly specified in the agreement to jointly create a clean and upright business environment. For more management requirements regarding suppliers, please refer to Chapter 4, "Responsible Procurement, Stable Supply".

Reporting Mechanism

We are committed to creating a transparent and fair supervision environment. We have opened up diverse reporting channels for both internal and external personnel, covering methods such as email, telephone, and handling of letters and visits, to ensure that complaints can be promptly addressed. In terms of whistleblower protection, we strictly abide by regulations such as the Shanghai Electric Discipline Inspection and Supervision Petitioning Work System, the Administrative Measures for Problem Clues of Discipline Inspection and Supervision Organs, the Working Rules for Handling Reports and Complaints by Discipline Inspection and Supervision Organs, and the Regulations on Petitioning Work. In addition, we have established a sound confidentiality system for reports and complaints, fully implemented confidentiality requirements, and clearly prohibited any organization or individual from retaliating against complainants. For violations, we will seriously investigate and deal with them in accordance with regulations, disciplines, and laws. If a crime is constituted, criminal liability will be investigated in accordance with the law to effectively protect the legitimate rights and interests of whistleblowers.

During the Reporting Period, no cases of corruption litigation occurred within the Group.

Prevention and Control of Integrity Risks

Every year, we formulate a plan for integrity risk investigation and carry out special integrity risk investigation operations; organize companies at all levels to comprehensively investigate the integrity risks of key positions in various departments, sort out integrity risk points, and formulate targeted prevention and control measures. Additionally, we establish integrity files for leading cadres, strengthen the daily supervision of personnel in key positions involving human resources, finances, and materials, and supervise the implementation of the regular job rotation system. By doing so, corruption problems caused by long-term work in the same position is prevented, ensuring the compliance and fairness of the Company's human resources management, and improving the Company's integrity governance level.

Training and Education

We have carried out various forms of meetings, training, and publicity and education activities for all employees. By using these as a starting point, we have effectively strengthened all employees' compliance with regulations on honest and ethical business conduct, successfully created a clean and upright atmosphere within the enterprise, and built a solid ideological defense line for the Company's stable development.

Case Study 2024 Full and Strict Party Governance Conference of Shanghai Electric

In March 2024, Shanghai Electric held a conference on full and strict governance over the Party. In the conference, we summarized past work, carried out education on Party conduct and clean government, and arranged tasks for the new year. The Party committees of all its subsidiaries signed the target responsibility letter for full and strict governance over the Party to clarify the responsibility for such governance. In addition, we emphasized deepening theoretical study in the conference, promoted the integration of Party building and business operations, firmly grasped the work on Party conduct and clean government, carried out education on Party conduct and clean government, conducted a number of recognition and plaque-awarding ceremonies, and promoted Party members to make public commitments.

Case Study 2024 Summary Conference on Party Discipline Learning and Education of Shanghai Electric

In September 2024, Shanghai Electric held a summary conference on Party discipline learning and education to summarize experience and arrange the construction of a long-term mechanism. Before the conference, the Group's Party Committee conveyed the relevant instructions of General Secretary Xi Jinping as the "first topic". During the learning and education period, the party committees and grassroots party organizations at all levels earnestly implemented the relevant work, and party members received profound education. In the conference, it was emphasized normalizing discipline education, promoting the integration of knowledge and practice, cultivating a clean culture, requiring cadres to abide by rules and disciplines and actively act. It also called for leading reform and development with full and strict governance over the Party, deepening the integration of party building and business, creating a clean and upright environment for the Group's development, and practicing the requirements of clean culture construction.

Case Study "Disciplinary Party Conduct and Anti-corruption Education Month" Activity

In order to consolidate the achievements of Party discipline learning and education and strengthen the construction of a clean culture, Shanghai Electric launched the "Disciplinary Party Conduct and Anti-corruption Education Month" activity in September 2024. The activity centered on themes of "being honest and dedicated in serving national strategies and promoting the 'main theme' of a clean and upright work environment for starting businesses" and etc. Six key activities were carried out, including organizing special study sessions on anti-corruption education, hosting the themed salon of "Clean Electric", conducting relevant subject research, investigating risks related to disciplinary Party conduct and anti-corruption, issuing anti-corruption reminders during important festivals, and carrying out joint construction and exchange activities with an anti-corruption theme. These activities further strengthened the construction of a clean culture and solidly promoted the normalization and long-term effectiveness of discipline education.

As of the Reporting Period, our anti-corruption education has been carried out for all employees. Among them, the average training hours for senior management personnel, middle management personnel, and engineers was 22 hours, and the average training hours for general and technical employees was 10 hours. We have also made every effort to conduct clean training for suppliers, and the rate of signing the Anti-corruption Agreement reached 100%.

Information Transparency to Enhance Trust

Shanghai Electric deeply implements the ESG concept, fully integrating it into all aspects of the Company's management and operations. We actively seize ESG development opportunities, strengthen interaction and communication with investors and potential investors. Through transparent information disclosure, all parties have increased their awareness of the Company's ESG strategy and practices, and achieved a steady increase in corporate value.

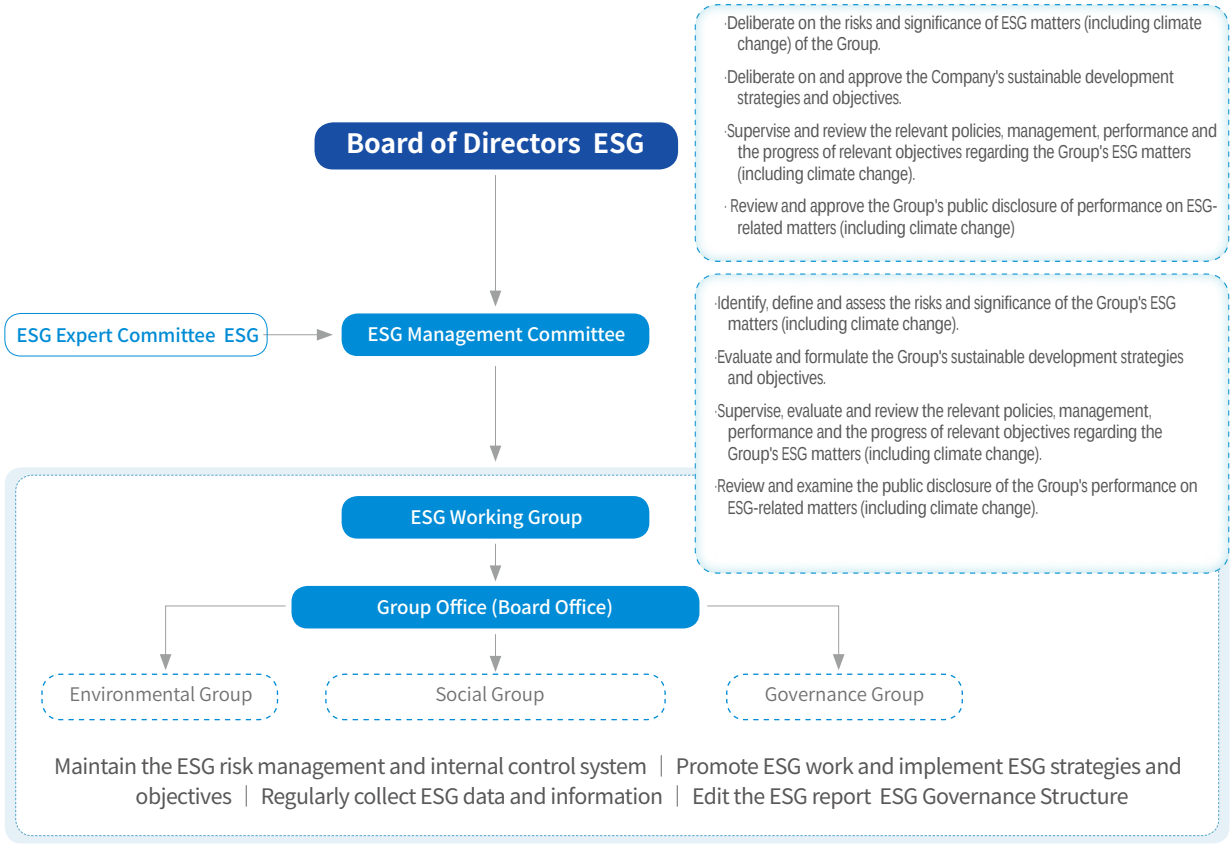
ESG Governance

Shanghai Electric follows the ESG Indicator System for State-owned Holding Listed Companies in Shanghai, the Environmental, Social and Governance Reporting Guide of the Hong Kong Stock Exchange, the Self-regulatory Supervision Guidelines for Listed Companies on the Shanghai Stock Exchange No. 14-Sustainable Development Report (Trial) and the Self-regulatory Supervision Guidelines for Listed Companies on the Shanghai Stock Exchange No. 1-Standardized Operations to establish a scientific, rigorous, and effective ESG management system, ensuring the efficient implementation and orderly progress of ESG-related matters.

Governance Structure

The Company has established an ESG governance structure consisting of the board of directors, the ESG management committee, and the ESG working group in a hierarchical manner, and clarified the functional division of each level in ESG management. The ESG management committee has an ESG expert committee under its jurisdiction. The ESG working group is composed of the Group Office (Board of Directors Office) and three sub-working groups on environment, society, and governance. These three sub-working groups are formed by integrating relevant functional departments and are responsible for contacting and communicating with the relevant departments of affiliated companies and coordinating the promotion and implementation of specific matters.

Shanghai Electric ESG Governance Framework



During the Reporting Period, the Group held a meeting of the ESG Management Committee. The attendees discussed and shared the ESG progress and direction of Shanghai Electric. In terms of progress, the Group has clarified the management responsibilities for carbon peak and carbon neutrality; carried out the selection activity of Shanghai Electric's outstanding ESG cases for two consecutive years and invited third-party experts to conduct ESG training for many consecutive years. In 2024, we invited professional institutions to give presentations and training on topics such as new ESG regulations and ESG case sharing of listed companies, aiming to enhance the awareness of ESG among all employees. Regarding the future direction, we will take "serving national strategies" as an important path for ESG development, promote the matching between the enterprise's business strategy and ESG strategy, integrate the ESG concept into strategic planning and daily management, and embed the ESG culture in people's hearts.

Case Study **Selection of Shanghai Electric's Outstanding ESG Practice Cases in 2024**

In December 2024, in order to identify the outstanding pioneers in the ESG field of Shanghai Electric, we held the selection activity of outstanding ESG practice cases, which attracted the participation of many enterprises from various industrial groups. These pioneering cases included ranging from "green energy projects for lighting up the light of urban sustainable development" to "factory emission reduction for safeguarding the blue sky and white clouds", from "serving the national sustainable development strategy" to "community co-construction actions for demonstrating the power of social responsibility". After multiple rounds of strict evaluation, we conducted in-depth analysis and quantitative scoring from multiple dimensions including the environment, society, and corporate governance. Finally, the first, second, and third prizes were selected. Through the demonstration effect of these benchmarks, we aimed to encourage more enterprises to engage in ESG practices and contribute Shanghai Electric's strength to promoting high-quality economic development and social sustainable progress.

ESG Performance

We have set "binding matters" related to ESG, such as work safety, social stability, and environmental protection incidents, in the management performance task. The assessment results are directly linked to the salary.

In 2024, we incorporated the "formulating a carbon emissions peak plan" into the 2024 annual assessment of the industrial group. Moreover, the supplier management, network security, business ethics, work safety, and audit risk control were included in the ESG negative list assessment of the Group's functional departments, and the veto mechanism will be triggered depending on the circumstances, aiming to ensure the implementation of ESG goals at all levels through a clear performance indicator mechanism.

ESG Honors

Shanghai Electric has continued to deepen its efforts in the ESG field and steadily promoted ESG construction. In 2024, its Hang Seng ESG rating was upgraded to "A", and included in the three major Hang Seng sustainable development indices, namely the Hang Seng A-Share Sustainable Development Enterprises Index, the Hang Seng Mainland and Hong Kong Sustainable Development Enterprises Index, and the Hang Seng A-Share Sustainable Development Enterprises Benchmark Index.

Thanks to its excellent performance in the ESG field, Shanghai Electric has won recognition from all sectors of society. The Group has successively received awards such as the "Top 50 Yangtze River Delta Pioneers of Chinese ESG Listed Companies (2024)" from the Financial Program Center of China Media Group, the "State-Owned Enterprises Social Responsibility • Pioneer 100 Index (2024)" from the State-owned Assets Supervision and Administration Commission of the State Council, the "Top 50 Industrial Enterprises in Sustainable Development" by Forbes China, the "Annual ESG Practice Case" of Jiemian News in 2024, and the "Top 500 Chinese ESG Excellent Enterprises" by Sina Finance.


证书

上海电气集团股份有限公司

鉴于贵公司在环境、社会和治理（ESG）方面的卓越实践，在中央广播电视总台“中国ESG（企业社会责任）《长三角ESG行动报告（2024）》”中，贵公司荣登“中国ESG上市公司长三角先锋50”榜单（2024）企业。特发此证，期待与贵公司携手，共促ESG发展，共创绿色未来。

中央广播电视总台财经节目中心
2024年8月

CMG

State-Owned Enterprises Social Responsibility • Pioneer 100 Index (2024)

Case Study **Shanghai Electric was selected for the "2024 ESG Excellent Practice Report**

In October 2024, the ESG China Innovation Annual Conference (2024) with the theme of "Empowering New Quality Productivity and Creating a Sustainable Future" was opened. Shanghai Electric was selected for the "2024 ESG Excellent Practice Report" with its "Piloting a Green Future — ESG Comprehensive Practice and Innovation Case", and its ESG management has entered the first echelon in China. In the future, Shanghai Electric will deepen the integration of ESG concepts, optimize the governance structure, improve the professional level of management, strengthen cooperation with all parties, and continuously enhance its comprehensive ESG performance.

Stakeholder Engagement

Shanghai Electric attaches great importance to the concerns and demands of stakeholders, regarding them as important reference guidelines for the implementation and continuous improvement of ESG work. Based on the characteristics of the Company's business, we have identified key stakeholders such as investors, employees, partners (including suppliers and contractors), customers, surrounding communities, and the media. Additionally, we have established diversified communication channels and actively taken measures to provide reasonable responses, laying a solid foundation for Shanghai Electric's ESG work.

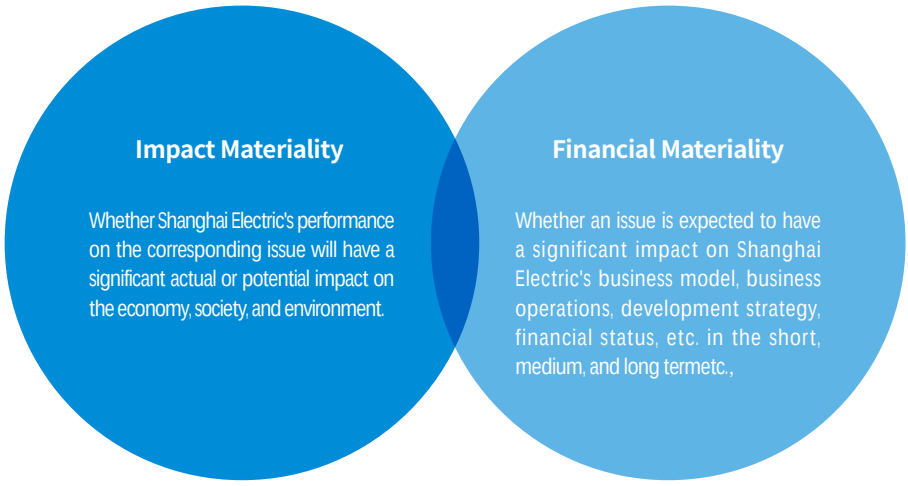
Stakeholder Group	Communication Channels/Feedback Methods	Key Concerns
 Investorss	- General Meeting of Shareholders - Announcement Interpretation - Performance Conference - Roadshow Activities - Investor Research Activities - Investor Factory Visits - Investor Summits - Shanghai Stock Exchange e-Interaction - Investor Hotline - Company Announcements - WeChat Official Account - Facebook Page - Bimonthly Shanghai Electric News - Shanghai Electric Investor Relations Email - Industry News Dissemination - Executive Interviews	- Industry Trends and Policies - Governance Structure - Technology and Innovation - Product Safety and Health - Economic Impact - Legal Compliance - International Trade Situation
 Employees	- Employee Training - Employee Activities - Employee Satisfaction Surveys - Symposia	- Occupational Health and Safety - Employee Benefits and Remuneration - Sustainable Development Strategy - Human Rights
 Partners (including Suppliers and Contractors)	- On-site Assessments - Supplier Evaluations - Technical Training - Online Communication	- Product Safety and Health - Renewable Energy - Climate Change Mitigation

Stakeholder Group	Communication Channels/Feedback Methods	Key Concerns
Customers	- Customer Satisfaction Surveys - Customer Complaint Handling - Brand Promotion Events	- Product Quality and Operation and Maintenance - Customer Privacy Information Protection - Product Safety and Health
End-users of Products	- Brand Promotion Events - Press Releases/Information Announcements	- Product Quality and Operation and Maintenance - Legal Compliance
Surrounding Communities	- Community Public Welfare Activities - Regular Visits	- Exhaust Emissions - Biodiversity at the Operation Site - Public Welfare and Donations
Media	- Press Releases/Information Announcements - Interviews - Performance Release Conferences	- Sustainable Development Strategy - Product Quality and After-sales Maintenance - Governance Structure
Regulatory Authorities	- Press Releases/Information Announcements - Regular Communication	- Renewable Energy - Industry Trends and Policies - Legal Compliance
NGOs or Public Welfare Organizations	- Regular Communication - Community Public Welfare Activities	- Public Welfare and Donations - Community Development Support
Colleges and universities	- Scientific Research Exchange and Cooperation - Recruitment	- Wastewater Discharge - Exhaust Emissions - Product Quality and Operation and Maintenance
Scholars	- Scientific Research Exchange and Cooperation	- Technology and Innovation - Wastewater Discharge - Exhaust Emissions
Recipients of Donations	- Public Welfare Activities of Communities - Regular Visits	- Public Welfare and Donations - Community Development Support

Double Materiality Analysis

Materiality assessment is an important method followed by Shanghai Electric in carrying out ESG work and provides a key direction for ESG management. In 2024, we applied the "double materiality" principle and followed the steps of "identification-assessment-analysis-confirmation". Through stakeholder research interviews and management discussions, we evaluated and confirmed the impact and materiality of issues from the dual dimensions of "financial materiality" and "impact materiality".

Double Materiality Analysis



STEP 1 Identification

We comprehensively considered industry characteristics and the actual situation of company management, and combined with the changes in the internal and external ESG environment, including regulatory policies, standard guidelines, industry trends, and peer concerns, to update the ESG issue library. In addition, we identified, screened, and sorted out its impacts, risks, and opportunities, involving 21 issues highly relevant to Shanghai Electric's sustainable development.

STEP 2 Assessment

We defined different assessment dimensions and developed an impact materiality assessment questionnaire and a financial materiality assessment questionnaire respectively. Besides, we distributed the impact materiality assessment questionnaire to 11 types of key internal and external stakeholders, such as investors, customers, partners, and regulatory authorities. Through the means such as double materiality management interviews, we invited management representatives from various business departments to conduct double materiality assessments (financial and impact).

Impact materiality assessment dimension	Financial materiality assessment dimension
Impact scale	Possibility of occurrence
Impact scope	Impact extent
Possibility of occurrence	
Irreparable negative impact	

STEP 3 Analysis

We analyzed and calculated the results of the stakeholder questionnaire surveys and interview assessments, and separately obtained the ESG issues with impact materiality and financial materiality. External experts and the Company's management conducted management discussions to provide suggestions on the materiality assessment of the Company's ESG issues.

STEP 4 Confirmation

The board of directors and the ESG management committee finally confirmed the results of the double materiality assessment. The highly important financial materiality issues and impact materiality issues were disclosed in the sustainability report.

Impact Materiality Results

Issue	Impact Content	Result
Innovation-driven	The design, development, and production of clean technologies such as wind,-solar hydrogen storage, as well as green and low-carbon products, facilitate to optimize the energy structure, promote the utilization of renewable energy, and improve resource efficiency, thereby reducing greenhouse gas emissions and promoting the low-carbon transformation of society. By integrating the ESG concept into product design, and through the application of green innovation, energy-saving technologies, and environmentally friendly materials, the environmental friendliness and resource efficiency of products are improved, contributing to sustainable development.	Important

Issue	Impact Content	Result
Climate Change Mitigation/Energy and Resource Utilization	Energy consumption in the Company's own operations and the production and operation processes of the supply chain will generate greenhouse gas emissions, causing climate change and air pollution. Some products consume fossil fuels during the use stage, such as coal-fired generators and gas turbines. The use of fossil fuels will generate greenhouse gas emissions and other exhaust emissions, causing climate change and air pollution. Promoting clean production by replacing old equipment and processes with more energy-efficient and high-performance ones can improve equipment energy efficiency, reduce greenhouse gas emissions, and minimize the environmental impact of the Company's production and operation. Increasing the purchase and use of renewable energy and reducing dependence on traditional energy sources can reduce the greenhouse gas emissions. The design, development, and production of clean technologies such as wind-solar hydrogen storage, as well as green and low-carbon products, facilitate to optimize the energy structure, promote the utilization of renewable energy, and improve resource efficiency, thereby reducing greenhouse gas emissions and promoting the low-carbon transformation of society.	Important
Product and Service Safety and Quality	Failure to establish a systematic and effective quality management system (such as failure to allocate appropriate resources for quality control and testing) cannot guarantee product quality, which may lead to consumer dissatisfaction and complaints. In addition, it may cause product safety accidents, endangering the health and safety of consumers.	Important
Suppliers and Customers	Due to the long-cycle of some orders, the procurement and use of key materials may be affected by geopolitical uncertainties, making some products face supply chain risks. By establishing a close cooperative relationship with customers, Shanghai Electric can better understand customer needs, provide customized products and services, meet customers' personalized requirements, thereby promoting long-term cooperative relationships with customers.	Important

Financial Materiality Results

Issue	Impact Content	Result
 Climate Change Mitigation	Climate change can lead to extreme weather events such as floods and droughts, which can damage infrastructure, cause production disruptions or property damage; disrupt the supply chain, leading to production interruptions or increased production costs; and harm human health, increasing expenditures on employee safety and welfare. The introduction of climate-related laws, regulations, and policies in various countries may increase compliance costs; capacity expansion may be affected by laws, regulations and policies, restricting capacity expansion and reducing profitability; the renewal and replacement of outdated production equipment may increase compliance costs. If carbon emissions are not effectively managed, the fulfillment of carbon emission rights such as purchasing quotas will increase operating costs and affect the corporate reputation. In the context of climate change, the prices of grid electricity and fossil fuels may fluctuate. The Company's energy use type, consumption volume, and energy management strategy may affect the cost and reliability of energy supply, potentially leading to increased operating costs, regulatory risks, and revenue decline. With effective carbon emission management measures, companies may have surplus carbon emission rights such as quotas. While enhancing the Company's carbon emission management capabilities, selling carbon emission rights such as quotas can bring additional income to the Company. The increasing demand from customers for high-energy-efficiency and low-environmental-impact products at a lower cost will expand the market demand for green/clean products and services such as wind-solar hydrogen storage, promoting the income growth. Investing in green energy and clean technologies, such as wind-solar hydrogen, enhances the Company's competitiveness in sustainable development and promotes the expansion of new markets and the acquisition of government subsidies.	Important
 Product and Service Safety and Quality	Excellent quality management not only reduces operating costs, but also improves product quality and customer satisfaction. Thus, it can enhance the market competitiveness, attract new customers, and drive sales growth. If appropriate resources are not invested in quality control and testing, product failures, recalls, and increased regulatory and litigation risks may be increased, which will have a negative impact on the Company's finance. Failure to report known product safety hazards to the relevant departments in a timely manner may result in civil penalties, causing economic losses and damage to the reputation.	Important

Financial Materiality Results

Topic Title	Impact Materiality Topic	Financial Materiality Topic	Other Topics of Concern to the Company	Corresponding Section in the Report
Addressing Climate Change	✓	✓	-	3.1 Driving change to address climate issues
Pollutant Emissions	-	-	✓	3.3 Green governance and clean production
Waste Management	-	-	✓	3.3 Green governance and clean production
Ecosystem and Biodiversity Conservation	-	-	✓	3.5 Respecting nature and giving priority to protection
Environmental Compliance Management	-	-	✓	3.2 Improving the system for an environmentally friendly environment
Energy Resource Utilization	✓	-	-	3.4 Resource utilization and circular development
Water Resource Utilization	-	-	✓	3.4 Resource utilization and circular development
Circular Economy	-	-	✓	3.3 Green governance and clean production 3.4 Resource utilization and circular development
Rural Revitalization	-	-	✓	6.1 Rural revitalization to assist agricultural development
Social Contribution	-	-	✓	6.1 Rural revitalization to assist agricultural development 6.2 Public welfare and charity to enhance well-being 6.3 Cultural silk road, moving towards the passage of time 6.4 Industrial civilization, the source of science and technology
Innovative Research and Development	✓	-	-	2.1 Hardcore technology for intelligent transformation
Technology Ethics	-	-	-	Not applicable
Suppliers and Customers	✓	-	-	4.2 Responsible procurement for stable supply 2.3 First-class service with customers as the top priority
Equal Treatment of Small and Medium-sized Enterprises	-	-	✓	4.2 Responsible procurement for stable supply
Safety and Quality of Products and Services	✓	✓	-	2.2 Supreme quality with the pursuit of excellence
Data Security and Customer Privacy Protection	-	-	✓	1.5 Intelligent protection for data security
Employees	-	-	✓	5.1 Respecting rights and interests and democratic management 5.2 Driven by talent and sharing growth 5.3 Safety first to safeguard health
Due Diligence	-	-	-	Not applicable
Stakeholder Communication	-	-	✓	1.3 Information transparency to enhance trust
Anti-bribery and Anti-corruption	-	-	✓	1.2 Excellent governance and standardized operation
Anti-unfair Competition	-	-	✓	1.2 Excellent governance and standardized operation

We also seek and collect the expectations and suggestions of various stakeholders regarding the Company's important issues and ESG work during the dual materiality research process. Based on the results of the dual materiality assessment, we formulate and implement internal management plans and disclose relevant information in the ESG report to address the concerns of stakeholders about Shanghai Electric's ESG work.

Standardized Disclosure

Shanghai Electric has always regarded information disclosure as an important cornerstone of corporate governance. By establishing an institutionalized disclosure system featuring "timeliness, transparency, efficiency and rigor", the Group strictly fulfills its compliance obligations and sets up information disclosure norms covering the whole process, including regular reports, temporary announcements, and investor relations management. This ensures that market entities can obtain accurate and complete business information in a timely manner.

The Group adheres to the Listing Rules of the Shanghai Stock Exchange and the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, and formulates core documents such as the Articles of Association and the Information Disclosure Management System to establish a clear system of information disclosure responsibilities with defined rights and obligations. This ensures that the disclosed content not only complies with regulatory requirements but also reflects the Company's strategic intentions, injecting new impetus into enhancing the transparency of the capital market and investors' confidence.

In terms of ESG disclosure, the Group closely follows the overall national plan, continuously optimizes and upgrades its ESG reports, and keeps supplementing the disclosed information to comprehensively showcase the Group's business strategies, risk control measures, and performance of social responsibilities, fully demonstrating the stance and responsibility that a large state-owned enterprise should have. As the Group's 9th annual ESG report, this report closely revolves around national decision-making and deployment, focuses on the dual-carbon theme, and systematically demonstrates the Company's practical achievements in the fields of clean energy development, green manufacturing upgrading, and rural revitalization assistance, providing a comprehensive window of value recognition for stakeholders.

Investor Interaction

The Group attaches great importance to investor relations management and always ensures the timely and accurate disclosure of key information such as the financial situation, business operations, and important decisions to investors, enabling them to comprehensively grasp the true status of the Group's operations. When releasing periodic reports, the Group simultaneously launches visual interpretation forms such as performance briefings and annual report diagrams, and uses charts, data comparisons, and other auxiliary explanations to make information dissemination more intuitive and clearer, helping investors to deeply understand the Company's business achievements, financial situation, and development strategy. In 2024, the Group released the "One Chart to Understand the Annual Report", "One Chart to Understand the Interim Report", and "One Chart to Understand the ESG Report" to present the Company's financial and business operation status, strengthen the close connection with investors, and demonstrate its commitment to sustainable development and social responsibility.

Building Communication Bridges through Multiple Channels

Shanghai Electric has established a comprehensive and multi-level communication channel for investors. The Group disclosed key information such as the Company's strategic planning, financial situation, and progress of major projects through traditional means such as periodic reports and temporary announcements, and in addition, actively embraced new media. The Company has set up an investor relations zone on its official website to integrate various types of information, making it convenient for investors to obtain information in one stop. Meanwhile, it makes full use of new media platforms such as WeChat official accounts and video accounts to promptly push the Company's news and industry information, interpret the Company's business and development in an easy-to-understand language, and enhance investors' awareness of the Company.

In terms of telephone and email communication, the Company has set up a dedicated investor hotline and an Investor Relations (IR) email address, and arranged professional personnel to be on duty. This ensures that investors' questions and demands can be promptly answered and resolved.

Conducting Diverse Interaction Activities

Shanghai Electric regularly holds performance briefings and organizes online and offline interaction and communication between management and investors. In 2024, a total of three performance briefings were held. Investor questions were widely solicited in advance, and during the meetings, the management elaborated in detail and answered questions regarding the Company's industry situation, development strategy, production and operation, financial situation, dividend distribution, risks, and challenges, which are of concern to investors. Through forms such as videos and voice, more investors were able to participate.

Shanghai Electric actively conducts investor research activities, inviting investors, fund managers, analysts, etc. to visit the Company's production bases and R&D centers in person to learn about the Company's production processes, technical strength, and innovation achievements. Professional personnel are arranged to accompany and explain throughout the process, enabling investors to have a more intuitive and in-depth understanding of the Company.

Investor's research activities

In addition, the Group also actively participates in securities firm strategy meetings, sharing the Company's development plans and investment highlights at the meetings, communicating with market professionals, and absorbing cutting-edge industry views and suggestions. It organizes online exchange meetings, leveraging platforms such as the "Shanghai Stock Exchange Roadshow Center" to conduct real-time interactions with investors regarding the Company's business operations, financial performance and earnings, breaking through the time and space limitations of interaction.

ESG and listing compliance training

Improving Service Levels Professionally

The Group strengthens the construction of the investor relations management team, regularly organizes team members to participate in training courses held by regulatory authorities and industry associations, and learns the latest laws and regulations, policy requirements, and investor relations management techniques. It also conducts internal training and experience sharing activities to improve the overall business capabilities and professional qualities of the team.

Shanghai Electric introduces advanced investor relations management systems and uses technical means such as big data and artificial intelligence to efficiently manage and analyze investor information, accurately grasp investors' needs and concerns, and provide data support for formulating targeted communication strategies, further improving the efficiency and quality of investor relations management work.

We continuously optimize investor communication channels, conduct in-depth exchanges through various forms such as announcement interpretation, performance report interpretation, industry news dissemination, and executive interviews, and establish an effective shareholder feedback mechanism. In addition, we set up an investor hotline to handle consultations, suggestions, and complaints, regularly hold general meetings of shareholders and investor communication meetings for face-to-face communication, and make full use of the Internet and new media platforms to optimize communication methods. Besides, in order to enable investors to deeply understand the industry characteristics, business models, and strategic directions of Shanghai Electric, the Group actively cultivates industrial group spokespersons, effectively conveys the Company's strategies, and achieves high-quality coordination. Through a combination of online and offline methods, we fully consider the needs of different investors, broaden interaction channels, enrich interaction methods, and comprehensively enhance the interaction between the Company and investors.

In 2024, Shanghai Electric achieved remarkable results in investor relations management, and successfully won the "Top 100 Most Popular Listed Companies" award from iFinD and the "Best Investor Relations Team" award from Cailian Press.

Case Study **Shanghai Electric's 2024 Performance Briefing Session**

In May 2024, Shanghai Electric participated in the collective performance briefing session of Shanghai state-owned holding listed companies. At the meeting, the Company focused on introducing positive achievements such as new growth in operating indicators, and the simultaneous increase in profit indicators and gross profit margin. In terms of market value management, the Company's management stated that it attaches great importance to the rights and interests of shareholders, and will convey the Company's investment value through various means, while actively exploring the paths to optimize the market value performance. In addition, we responded to issues of concern to investors, such as share repurchases, and committed to disclosing information in accordance with regulations and strengthening communication and interaction with investors.

2024 Performance Briefing Session

Responsible Brands

The Group has always regarded brand building as a strategic support for its enterprise development. It strictly complies with laws and regulations such as the Advertising Law of the People's Republic of China, formulates the Brand Management System, and establishes a three-dimensional brand management system. During the Reporting Period, the documents such as the Brand Visual Manual and Group Official Website Management were updated, which further strengthened the unity of the brand image and the standardization of brand communication. Meanwhile, the Group deepened the construction of its brand communication system, effectively improving the transmission and achievement of the brand's core value, strengthening the collaborative empowerment of the industrial groups, and enhancing the construction of the Group's integrated media center, further consolidating the Group's "grand publicity" pattern. In 2024, the brand value of Shanghai Electric increased by 25% year-on-year, reaching RMB 215.628 billion, continuously leading the Chinese machinery industry.

Through professional division of labor and cross-departmental collaboration, Shanghai Electric has formed an efficient brand management closed loop. The Corporate Culture Department, as the responsible department for brand management functions, coordinates the systematic promotion of brand classification management, annual brand activities, and the planning and implementation of brand public relations communication at all levels of the Group. The Corporate Culture Department, Market Expansion Department, and Industrial Development Department collaborate to standardize the review and evaluation of the brand classification management model, and standardize and review the authorization of Shanghai Electric's trademarks and trade names. The Group Office (Board of Directors Office), Human Resources Department, and other departments focus on the construction of the shareholder brands and employee brands. Relevant functional departments and subsidiaries provide technical and legal support and collaborate on implementation. The Group strictly implements the News and Publicity Management System and conducts publicity work concerning the Group's central tasks and business strategic objectives at various stages. Throughout the entire process of brand publicity, the Group strictly adheres to the "three rounds of review and three rounds of proofreading" mechanism to ensure the professional accuracy, content dissemination, and compliance and safety of the publicity.

In 2024, Shanghai Electric promoted the continuous improvement of its brand value through a multi-dimensional brand construction system, implemented the "Global Communication Matrix" strategy, jointly carried out 39 communication themes with foreign media and the media tour activity of "Promoting Quality with Innovation", achieving a total reading volume of the communication content exceeding 20 million times. In terms of brand management, we completed the reconstruction of classification models of 368 corporate brands, established a dynamic management list and standardized the brand authorization mechanism. We also simultaneously promoted the upgrading of the trademark strategy, completed the address change of 128 trademarks and the revocation of three types of similar trademarks, and carried out a standardization inspection of the brand visual application across the entire group, effectively preventing legal risks. With the achievements of systematic brand construction, the Group was selected into the "Top 500 Asian Brands in 2024" and the "List of China's 500 Most Valuable Brands" during the Reporting Period.

Top 500 Asian Brands in 2024

China's 500 Most Valuable Brands

Case Study The Thematic Review Film "Courageous Move in 2024"

In order to deeply convey the enterprise's value and spirit, the Group planned and shot the thematic review film "Courageous Move in 2024" during the Reporting Period. This film vividly presents how Shanghai Electric remained true to its original aspiration in the tide of the times in 2024, actively participated in national strategies, continuously gave birth to new and high-quality productive forces through innovative measures, adhered to the indomitable spirit to promote the path of green development, expanded the international cooperation landscape across numerous challenges, and provided meticulous care to its employees. Shanghai Electric has always kept its responsibilities in mind, taken them upon itself, and fulfilled them through actions, striving to write a new chapter of high-quality development and paying tribute to every hardworking creator.

Special Retrospective Film- "Courageous Actions in 2024"

Efficient Supervision and Risk Prevention and Control

Shanghai Electric continuously improves its risk management system. It identifies, evaluates, and analyzes risks according to the business environment, and controls and responds to them through appropriate methods. Meanwhile, the Group attaches great importance to the audit supervision and construction of legal systems. Through strict audit processes and a sound legal framework, it ensures the compliance and transparency of the Company's operations.

Risk Management and Internal Control

The Group has established and continuously optimized its risk management mechanism. In accordance with the provisions of the Basic Norms for Enterprise Internal Control and its supporting guidelines, as well as other internal control regulatory requirements, we have established a complete risk management and internal control system. The Group's board of directors and the audit committee are responsible for supervising and evaluating the integrity and effectiveness of the Company's risk management and internal control system, and deliberating 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, reviewing the Company's plans and reports on risk management and internal control. By performing their respective duties and working together, the Company's stable operation is ensured.

We have constructed a comprehensive and systematic "three lines of defense" for risk management and an internal control framework to strengthen the systematic operation of risk management.

Three Lines of Defense for Risk Management and Internal Control

The First Line of Defense	**Each Business Department** Design and implement the risk management and internal control system for relevant businesses, and promote the implementation and execution of control measures
The Second Line of Defense	**Risk Management Department** Lead to promote the construction of the risk management and internal control system. Organize the risk identification, assessment, response and reporting on yearly basis, and urge the implementation of responses to major risks and rectification
The Third Line of Defense	**Audit and Supervision Department** Carry out comprehensive internal audits of the Company's business, and regularly evaluate the effectiveness of risk management and internal control.

Risk Management

Shanghai Electric continues to improve its risk management system. It compiles the Risk Management Manual and the Implementation and Report of Risk Management, clarifies the scope of risk management responsibilities, standardization processes, evaluation criteria, and risk identification mechanisms of each department in the Group, and ensures the standardized operation of risk prevention and control work. The Group has established annual risk identification and evaluation mechanism, formulated risk prevention and response plans for major risks, regularly conducted self-examinations of the implementation progress and effectiveness, and continuously improved the Company's risk management capabilities.

We adhere to the concept of comprehensive risk management. Focusing on five key areas, namely strategy, market, finance, operation, and legal affairs, we have established a standardized risk assessment map for the Group and continuously reviewed and improved it, systematically sorted out and accurately identified various risks. In 2024, in light of the changes in the internal and external development environment, we also included risks such as safety, health, environmental protection, and climate change, providing a clear guideline for the Group to comprehensively identify, evaluate, and respond to risks. In addition, we continue to strengthen the risk investigation and identification in key areas. By strengthening the classified management of risks according to their levels, we further implement the main responsibility for preventing and resolving risks, continuously improve the ability to prevent and resolve major risks, and build a solid barrier for the Company's stable development.

Case Study Enhancement of Risk Control Capabilities

We enhance the risk awareness of all employees by constructing a systematic risk control mechanism. We have established a quarterly risk control meeting mechanism, organized business departments to conduct joint risk research and judgment. Through cause analysis, measure formulation and information sharing, we strengthen the concept of "everyone is responsible for risk management" and promote the formation of a joint force for risk control through cross-departmental cooperation. In addition, we conducted special training on risk early warning, organized more than 30 people in the risk control line to systematically study the Group's risk control requirements, and improved the ability to predict risks through case analysis and practical drills.

Special Training on Risk Early Warning

Internal control

Shanghai Electric continues to improve its internal control system, formulates systems and regulations such as the Internal Control Manual and the Self-evaluation of Internal Control Effectiveness, directs and promotes the implementation of each business department and its subordinate holding units, effectively promoting the continuous improvement of the internal control system.

01 Continuous Improvement of the Construction of the Internal Control System

In 2024, taking the adjustment of "control, authorization, and delegation of power" as an opportunity, the Group systematically carried out the structured sorting of its systems. By establishing a dynamic update mechanism of "abolishing, amending, and establishing", focusing on control requirements, important risk points, and internal control specifications, the Group completed the revision of 24 systems and regulations throughout the year, abolished redundant systems, optimized business processes, strengthened the setting of risk prevention and control nodes, effectively improved the scientificity and applicability of the system, and provided a solid institutional guarantee for the Company's high-quality development.

02 Strengthening the Execution Effectiveness of Internal Control

On the one hand, we continue to promote the "online + offline" publicity and implementation methods. Through lectures by leading cadres, regular meetings of the business line, online video micro-courses, etc., we strengthen the publicity and training of the system, and continuously enhance the effectiveness of system implementation.

On the other hand, we continue to improve the linkage inspection mechanism of "enterprise self-inspection + business line inspection + group spot check", do a good job in the enterprise's internal control self-evaluation, the Group's supervision and evaluation, and internal control audit, etc., promote the self-inspection, self-correction, and self-improvement of internal control, and strengthen the rectification of internal control deficiencies and the implementation of internal control requirements.

Audit Supervision

Shanghai Electric always adheres to the main line of "strengthening internal control, preventing risks, and promoting compliance", continuously establishes and improves the corporate governance structure in which the board of directors, the board of supervisors, and the management perform their respective duties, coordinate operations, and effectively balance each other. Focusing on the strategic development goals and annual key tasks; and based on the audit plan approved by the board of directors, the Group orderly conducts various audit projects, increases the supervision, quality, and efficiency in key areas, and provides a solid guarantee for the Company's stable operation and development.

We closely focus on the strategic development goals and annual key tasks. In accordance with the principle of "centralized and unified, hierarchical compilation, two submissions and two reviews", based on the audit plan approved by the board of directors, and focusing on key areas such as inventory management and new energy projects, we orderly carry out various audit projects, increase the supervision, quality, and efficiency in key areas, and provide a solid guarantee for the Company's stable operation and development.

Improve the Audit Leadership Mechanism

- Establish an audit work leading group under the leadership of the Party committee to further strengthen the centralized and unified leadership of the Party committee over internal audit work.
- Enhance the coordination and collaboration among the audit, risk control, discipline inspection, and inspection departments. Establish a working mechanism featuring information sharing, result sharing, coordinated work, and mutual support to give full play to the combined supervision force.

Effectively Promote the Implementation of Audit Projects

- Focus on improving the economic benefits, asset quality, and operation conditions of the group, etc. Carry out audit projects such as internal control evaluation, special audits, and economic responsibility audits in a timely manner to disclose problems and risks promptly and promote management improvement.
- Implement the "Four-in-One" joint rectification mechanism. Pay close attention to the rectification of problems discovered in audits, strengthen causal analysis to identify the root causes. Improve the overall effect in terms of strengthening system implementation and rectification responsibilities..

Continuously Improve Audit Quality Control

- Establish and improve the audit quality control mechanism, refine audit work norms and standards, coordinate and promote plan management, strengthen process tracking and inspection, and enhance the overall audit quality.
- Strengthen the capacity building of the audit team. Continuously improve the professional competence of audit personnel to faciliate their career development paths through mechanisms such as on-the-job training, secondment for practical training, "training through auditing", and step-by-step cultivation.

We focus on enhancing the capabilities and qualities of audit personnel. In accordance with the principle of "stratifying objects and classifying courses", we conducted classified training for different groups such as audit heads and key audit staff to improve the pertinence and effectiveness of the training. Meanwhile, we actively participated in the special training organized by the Shanghai Municipal State-owned Assets Supervision and Administration Commission, to systematically study the latest policies, regulations and audit methods, and improve the professional qualities and policy implementation capabilities of the audit team through internal and external cooperation.

Audit Professional Capacity Training

Construction of the Legal System

Shanghai Electric strictly complies with national laws and regulations and state-owned assets supervision requirements. In terms of fair market competition, following the laws and regulations such as the Anti-Monopoly Law of the People's Republic of China and the Anti-Unfair Competition Law of the People's Republic of China, we are committed to building a legal and compliant market-oriented business environment. We have organized and established a leading group and working groups for legal construction to coordinate and manage the legalization process of the Group. In line with the requirements of the latest laws and regulations, we keep improving the institutional management and guiding operations. In 2024, in response to the new legislative changes of the Company Law of the People's Republic of China, we carried out a legal check-up based on the list of inspections and implementation measures issued by the State-owned Assets Supervision and Administration Commission. Under the unified organization of the Group headquarters, all industrial groups completed the check and self-inspection of the current situation of corporate governance, and defined subsequent improvement measures for the identified weak links. During this period, the issued Interpretation of Key Points of the New Company Law became a popular learning material.

In 2024, we held the Group's annual legal work conference. At the conference, the Compilation of Legal Dispute Cases of Shanghai Electric was released, summarizing management experience, drawing lessons and suggestions, and integrating case teaching into various trainings within the Group to promote management improvement through cases.

In 2024, Shanghai Electric won the Group competition merit award in the "Eighth Shanghai Enterprise Legal Skills Competition".

The Merit Award of the Team Competition in the Eighth Shanghai Corporate Legal Affairs Skills Competition

Legal Training

In accordance with the Eighth Five-Year Plan for the Promotion of Legal Awareness and Education in Shanghai Electric, we have continuously advanced the Implementation Plan for the Construction of the Group's Grand Legal Training System. Each functional management line integrates the comprehensive management requirements, consolidates relevant course resources, lecturer resources, and training materials. By adopting diversified training forms, we provide suitable legal trainings in a hierarchical, categorized manner, according to different stages and cross-needs, forming a list-based and standardized curriculum catalog. We continuously strengthen the content of the courses within the grand legal system, discover outstanding talents among in-house trainers, and comprehensively improve the legal awareness and management capabilities of employees at all levels of the Group.

Measures for Improving the Legal Awareness

Legal training

- Focus on implementing the study and application of laws by leading cadres, and conduct a special training on the new Company Law in the Cadre Lecture Hall.
- Tightly grasp the hierarchical and categorized training for key operating business positions at the front line, and organize professional trainings on laws, regulations and provisions such as the Civil Code, Company Law, Intellectual Property Law, State-owned Assets Rights and Appraisal, etc.
- Organize discipline inspection cadres to participate in the training on the theme of "Enterprise Criminal Risk Prevention and Crime Governance".
- In terms of harmonious labor relations, hold training courses for labor relations coordinators, with active participation from enterprise employee representatives and trade union cadres.

Various activities

- Organize group enterprises and employees to participate in the Eighth Shanghai Legal Affairs Skills Competition, and the Power Station Group, on behalf of the group, has won the honor of the Merit Award.
- Organize the "Building a Protection Wall for Employees' Innovation" legal service salon activity, with the participation of some enterprise trade union cadres, scientific and technological workers, representatives of model workers and craftsmen, core members of innovation studios, and leading figures with high technical skills.
- Organize the public welfare legal publicity day activity themed "The Civil Code and Our Life".

Cultural promotion

- Produce a computer screensaver program themed on the Company Law of the People's Republic of China, and play the key point interpretations to comprehensively publicize the latest legal development dynamics.
- Based on the Work Safety Law of the People's Republic of China, the Regulations on Work-Related Injury Insurance, and the Company Law, we launch a series of micro-videos respectively, such as "The Warm Spring Breeze in March, Women's Legal Promotion is Here to Escort", "June and Safety, Here Comes the Safety Manual for Workers!" and "The Impact of the Revision of the Company Law on Workers".

"Legal Service Salon Activity of Building a Protection Wall for Employees' Innovation"

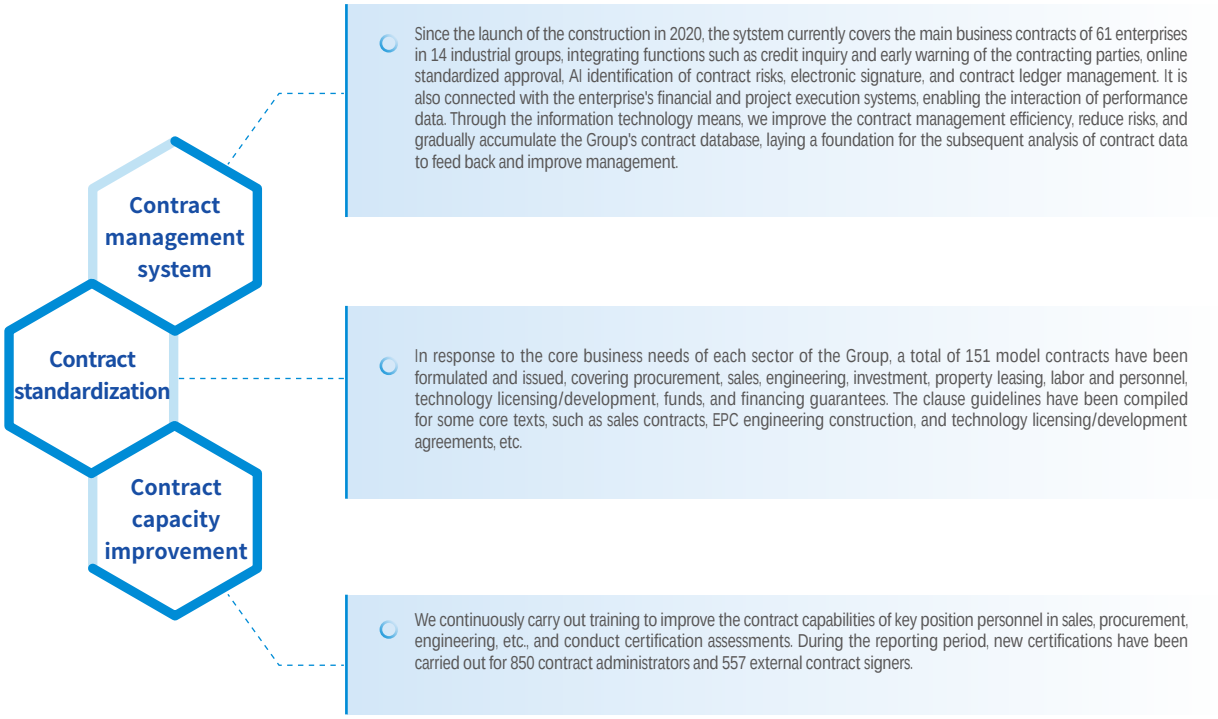
"Civil Code and Our Life" Public Welfare Law Promotion Day Event

In addition, through the platform of the Mechanical and Electrical Trade Union's work and the online and offline service management platform of "Mobile WeChat Legal Aid", Shanghai Electric provides comprehensive legal consultation services for enterprise employees. The online services include the interpretation of legal regulations such as work-related injury insurance and the Company Law, legal knowledge Q&A, and the legal consultation module, with the contents involving the matters such as housing lease disputes and the retirement of female employees in management and technical positions. Meanwhile, during the Reporting Period, we participated in the review plan of the enterprise restructuring, and provided legal consultation services on hot issues such as democratic procedures, labor relations, salary and benefits, and the cancellation of the labor union for the enterprise, comprehensively assisting the enterprise and employees in solving legal-related problems.

Contract Management

We continuously optimize the contract management process. Through multiple measures such as introducing advanced management systems, implementing standardized operations, and improving the team's professional capabilities, we comprehensively improve the contract management efficiency and the awareness of contracts, ensuring that risks are controllable and rights and interests are protected in business cooperation, and promoting the Company's sustainable development.

Contract Management Measures



Anti-unfair Competition

Shanghai Electric has always adhered to legal and compliant operation, strictly abided by laws and regulations such as the Anti-monopoly Law of the People's Republic of China and the Anti-unfair Competition Law of the People's Republic of China, and firmly fought against any form of unfair competition behaviors. We firmly believe that fair competition is the cornerstone for promoting the healthy development of the industry and technological progress, and we resolutely resist unfair means such as malicious low-price competition, commercial bribery, and false advertising. We call on our industry colleagues to jointly maintain a good market order, work together to create a fair, transparent, and sustainable competitive environment, and contribute to the high-quality development of China's manufacturing industry and the enhancement of its global competitiveness.

During the cooperation process, according to the contracts of some subsidiaries of the Group, cooperation parties are required to comply with all relevant laws and regulations applicable to their business activities, strictly prohibit unfair trading behaviors, and emphasize honest cooperation. In addition, the Group's procurement text templates have also incorporated clauses related to anti-unfair competition in the supplier guidelines.

Intelligent Protection and Data Security

Information Security

Shanghai Electric strictly complies with laws and regulations such as the Cybersecurity Law of the People's Republic of China and the Administrative Measures for Information Security Classification Protection, formulates internal systems and standards such as the Regulations on Cybersecurity and Informatization Work Management, IT Fixed Assets and Equipment Management, Computer Software Management, and Design and Development Specifications for Application Systems, and establishes a comprehensive protection system for information security to comprehensively standardize information security protection work.

Shanghai Electric has established a leading group for cybersecurity and informatization as the responsible institution for the Group's information security, and has set up a subordinate working group for cybersecurity and informatization to promote the implementation of the goals and tasks of cybersecurity and informatization.

In 2024, Shanghai Electric took a series of important measures to comprehensively ensure the Group's information security from multiple aspects, including holding special meetings, conducting cybersecurity inspections, protecting data security, and carrying out cybersecurity training and drills.

Holding Special Meetings

- The Group organized and held several meetings of the working group for cybersecurity and informatization throughout the year, reporting the policies related to commercial cryptography, requirements and models for cryptographic construction and cybersecurity incidents, publicizing relevant policy requirements and deploying the work plan.

Cybersecurity Inspections

- The Group conducted annual on-site cybersecurity inspection. Nearly thirty secondary units or key enterprises were randomly inspected on site, and rectification requirements and suggestions were put forward in writing to help the enterprises identify problems and potential hazards.

Cybersecurity Training and Drills

- Throughout the year, four training sessions were organized for professionals within the system, covering the publicity of cybersecurity policies, the publicity of development standards, the interpretation of APP filing, and the plan for cybersecurity emergency drills. More than one hundred subsidiaries of the Group and nearly one thousand people participated in the training.
- A "phishing email prevention" drill involving more than 20,000 on-the-job employees of the Group was planned and organized to enhance employees' skills in identifying and preventing phishing emails and improve their safety awareness and response capabilities.
- The employees participated in activities such as the "Gongfu Liwang" offensive and defensive drills, cybersecurity forums, and cryptographic forums to learn about the latest trends in cybersecurity technologies and conduct technical exchanges with professionals.

Data Security Protection

- The data auditing and monitoring were carried out, and an evaluation plan for commercial cryptographic construction was studied and confirmed in terms of the cryptographic system construction, general technologies, technical application requirements, and management requirements. During the Reporting Period, there were no data security incidents in the Group.

During the Reporting Period, the Group did not experience any data security incidents.

Privacy Protection

Shanghai Electric is committed to protecting the personal information of customers, employees, and business partners in all its business activities, ensuring that their right to privacy is fully respected and safeguarded. We strictly adhere to the requirements of the Personal Information Protection Law of the People's Republic of China, and have formulated strict privacy protection policies. When collecting and using personal information, we ensure compliance with the principles of legality, fairness, and transparency. Additionally, we employ conventional de-identification methods for the personal sensitive information involved. Every year, we dispatch dedicated personnel to conduct on-site spot checks on the implementation of personal information protection policies by our subsidiaries. For example, we check whether individuals are fully informed about the scope and purpose of information collection and whether their consent has been obtained during the collection process. We also conduct spot checks and verification on whether corresponding security protection measures have been implemented for personal sensitive information.

Regarding customer privacy protection, Shanghai Electric requires all employees to attach great importance to it. We have formulated a special customer information confidentiality system, which stipulates the handling methods and confidentiality measures for customer data, including encryption technology, access control, and regular audits. Meanwhile, we have launched an IT operation and maintenance audit system to record and audit the operation behaviors of internal special accounts such as system administrators and support accounts such as external consultants, to prevent the leakage of customer information. We also strengthen the special confidentiality management of major projects, formulate administrative regulations for confidentiality work of major projects, and require relevant personnel to sign confidentiality commitment letters. Moreover, through training and publicity, we continuously enhance the confidentiality awareness of all employees. Throughout the year, no privacy leakage incidents occurred.

In terms of employee privacy protection, Shanghai Electric attaches great importance to the security of employee information. We adopt strict measures to standardize the process of providing human resources information and data, and strictly manage the information review records to ensure the security of human resources information. This effectively prevents any unauthorized information leakage, thus protecting the privacy rights and interests of employees.

Data Governance

With the advancement of the Group's digital transformation, the importance of high-quality data resources has become increasingly prominent. On the one hand, the Group fully explores the value of data. Relying on the data full lifecycle management system of "Data Aggregation-Intelligent Processing-Value Mining-Shared Application-Iterative Optimization", it constructs a data governance methodology covering the main business chains, fully explores the data value, and realizes the transformation from data resources to the improvement of decision-making efficiency. On the other hand, it strengthens data security protection. At the technical level, strategies such as sensitive data encryption, off-site disaster recovery backup, and intelligent emergency recovery are implemented. At the management level, management requirements and mechanisms, such as the Group's data security supervision and inspection rules, the Group's data interface management, data access authentication, and database auditing, are established to reduce the risks brought about by data leakage, data loss, etc.

Key tasks we carried out in 2024:

Plan to establish the Group's public data resource catalog, gather high-quality data resources, and strengthen data sharing. Formulate a management framework for the public data resource catalog by taking the data of internal organizations, customers, suppliers, etc. as breakthrough points.

Optimize the Group's related party risk model and strengthen data risk prompts. Integrate internal and external industrial and commercial, judicial data, etc., optimize the related party risk list model, realize the aggregation of risk lists at the Group, industry, and enterprise levels, and empower the Group's supply chain procurement and risk control.

Carry out data interface governance to clear and build data docking bridges. Through the parameterized governance of interfaces, the explicit display of more than 600 interface parameters is realized, the standardized development of interfaces is regulated, the reusability of standard interfaces is enhanced, and the reuse and flow of data across enterprises and business fields are promoted.

Carry out the projects of including data assets in financial statements and explore the path from data resources to data assets. In strict accordance with the requirements of the Interim Provisions on the Accounting Treatment of Relevant Enterprise Data Resources, the Group has completed the sorting out of data resources of pilot enterprises, the compliance analysis of data resources, the analysis of economic benefits, and the collection of costs, etc., and formed 5 reports related to data assets.

In terms of the construction of the data infrastructure platform, by giving play to the Group's advantages of multiple industries and scenarios, we actively promote the dual base construction of the Group's operation and management big data platform and the industrial Internet platform, create professional data resources in the industrial field, drive enterprise transformation with data, optimize the allocation efficiency of manufacturing resources, and promote the coordinated development of the industrial chain, value chain, and innovation chain.

We continuously consolidate the Group's big data platform. We have established a data processing and sharing framework of "standardized collection-standardized modeling-cataloged resources", consolidated the capabilities of the big data platform in data collection management, data standards, data catalogs, data display, etc., and strengthened the processing, analysis, mining, and shared utilization of operation and management data;

We continuously consolidated the "Xingyun Zhihui" industrial Internet platform. Through the data collection of industrial equipment, communication protocol conversion, and edge computing processing, a data foundation was constructed, and based on the general PaaS framework, innovative functions such as real-time industrial data processing, industrial data analysis, and industrial microservices were realized.

In terms of the innovative utilization of data, we comply with laws and data security, continuously promote the data trading, circulation, and value release, realizing the trusted interconnection, exchange, and sharing of some data.

We built a blockchain based on the off-core chain loan business and became one of the first batch of blockchain on-chain enterprises in the Shanghai state-owned assets system, and established cooperation with Shanghai Pujiang Shulian Digital Technology Co., Ltd. and Shanghai Bank Co., Ltd. to realize the smart contract and data on-chain based on the off-core chain loan business.

We cooperated with banks to explore the off-core chain loan business based on "data credit" and provided low-interest inclusive financial services for small, medium and micro enterprises. Relying on the supply chain data of "retailer cooperatives", the mutual trust, integration and interconnection of financial products, we provided more convenient and high-quality financial services for small and micro enterprises in the electrical ecological chain.

In 2024, the Group's data work has achieved some results. The "Data Service Capacity Building Project of the Xingyun Zhihui Industrial Internet Platform" was selected as one of the "Hundred Excellent Cases of Data Management" in the national software and information technology service industry in 2024. The "Xingyun Zhihui Industrial Internet Platform" was selected as a benchmark industrial Internet platform in Shanghai in 2024. The off-core chain loan of the "retailer cooperatives" smart supply chain platform was selected as a blockchain application case in the Shanghai state-owned assets system. The new supply chain financial application service project based on "blockchain + data credit" won the special prize of the 2024 Yangtze River Delta Blockchain Application Innovation Competition.

Special Prize for 2024 Yangtze River Delta Blockchain Application Innovation Competition

At present, the new round of scientific and technological revolution and industrial transformation is developing in depth, promoting the deep integration of scientific and technological innovation and industrial innovation. It is extremely urgent to boost the development of new quality productive forces. Shanghai Electric implements the important instructions of the Central Government and the Shanghai Municipal Government on scientific and technological innovation. Guided by the basic principle of "unswervingly taking the path of high-level scientific and technological self-reliance and self-improvement to support the high-quality development of the industry", the Group focuses on scientific and technological innovation, consolidates its scientific research strength, and is committed to manufacturing products at the forefront of manufacturing technology with excellent quality. By doing so, it continuously enhances its core competitiveness and moves towards the goal of building a world-class leading enterprise.

Striving to Become a World-class Equipment Enterprise

02

- Hardcore Technology and Intelligent Transformation
- Supreme Quality and Pursuit of Perfection
- First-class Service with Customer First

Hardcore Technology and Intelligent Transformation

Innovation Strategy

Shanghai Electric regards scientific and technological innovation as its most core competitiveness and continuously drives high-quality development through scientific and technological innovation, to establish and improve a scientific and technological innovation system. The Group has established and continuously deepened the implementation of the scientific and technological innovation strategy of "one unified plan, one collaborative platform, and one network of talent exchange". It has gradually formed a scientific and technological innovation mechanism featuring planning guidance, project coordination, and talent communication, promoting research and development cooperation among enterprises within the Group, facilitating complementary advantages and resource coordination within the Group, and building a multi-level and multi-field technical exchange platform for cross-industry groups.

Forming "one unified plan" for the rational distribution of scientific and technological resources and research and development

- By jointly researching and sharing scientific and technological resources and common technologies, the Group coordinates internal and external scientific and technological resources and research and development capabilities. It encourages the establishment of various technical exchange mechanisms such as maker clubs and professional technology alliances to promote the rational distribution and optimal allocation of scientific and technological resources.

Organize "one collaborative platform" for the joint research and discussion for science and technology and business

- Through major scientific research projects, the Group strengthens the joint research and discussion for science and technology and business, and promotes cross-disciplinary technical exchanges. Taking major scientific research projects in key fields of the Group as the carrier, it conducts technical exchanges and cooperation among cross-industry groups, explores the establishment of project organizations for cross-industry groups, further integrates the Group's scientific and technological resources, and promotes industrial collaborative innovation.

Build "one network of talent exchange" for the cultivation and flow of scientific and technological talents

- By establishing a system for the shared management of scientific and technological talent resources, the Group accelerates the construction of a scientific and technological talent team and promotes the cross-industry flow of scientific and technological talents. Through methods such as the employment of experts from cross-industry groups and temporary transfer for on-the-job training, it realizes the coordinated operation of the scientific and technological personnel system.

In 2024, Shanghai Electric focused on national and Shanghai's development strategies, and in line with the Group's new round of strategic development plan, formulated the "Three-Year Action Plan for Scientific and Technological Research of Shanghai Electric (2024-2026)" (hereinafter referred to as the "Three-Year Action Plan") and initiated rolling revisions to promote the continuous development of Shanghai Electric in the field of scientific and technological innovation and enhance its core competitiveness and industry influence. Guided by the development concepts of "innovation-driven, green development, collaborative openness, and shared win-win results", the Three-Year Action Plan focuses on strengthening the "three industrial clusters" in accordance with the business layout.

"Three Industrial Clusters"

Consolidate and upgrade the advantageous high-end equipment industrial cluster, precisely cultivate the emerging high-end equipment industrial cluster, and prospectively lay out the future high-end equipment industrial cluster.

"Four Chains"

Focus on emerging and future high-end equipment industries, and promote the establishment of industrial chains in the fields of new energy equipment, core environmental protection equipment, automation equipment, and industrial software;

Improve quality and efficiency, and accelerate the breakthrough of the first set of products for the advantageous high-end equipment industries;

Concentrate on solving the problems of domestic substitution of key components, key materials, core equipment, and basic software and hardware, increase the domestic production rate, and solve the "bottleneck" technical problems;

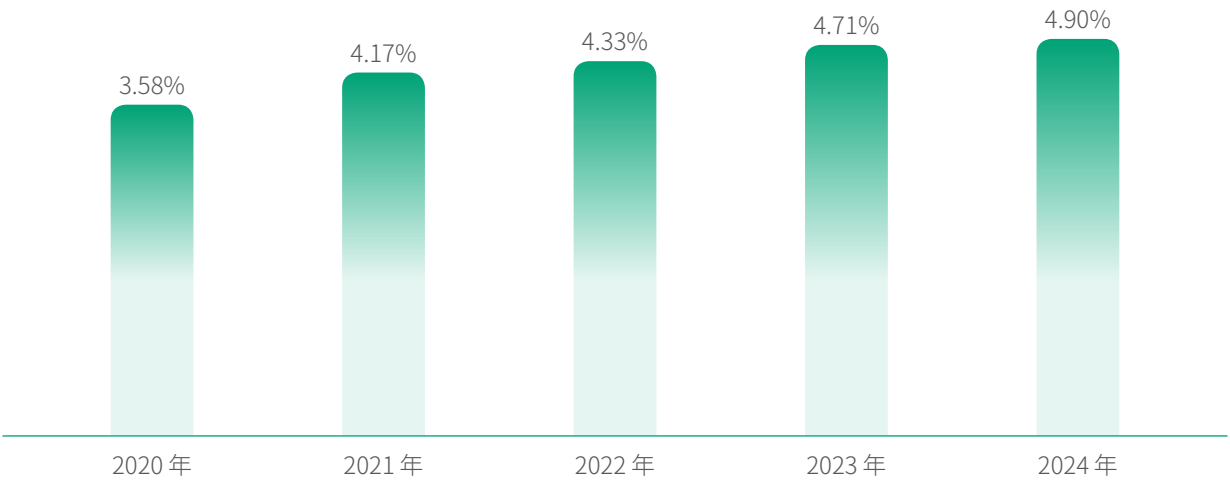
Optimize system solutions for smart energy, intelligent manufacturing, zero-waste cities, etc., and expand the markets through digital and intelligent approaches.

R&D Investment

To further promote scientific and technological innovation, Shanghai Electric has formulated the policy of Regarding R&D Investment as Assessed Profits, aiming to encourage increased R&D investment in the Group's strategic key areas and major technological innovations in existing industries, and fully stimulate the vitality and motivation of the enterprise's scientific and technological innovation.

In 2024, the Group established 814 core technology research projects. The level of scientific and technological investment reached a new historical high, increasing by 10.75% year-on-year to RMB 5.694 billion. Meanwhile, we have actively undertaken a series of major national projects, continuously increased investment in key areas of strategic emerging industries and future industries such as new energy, automation equipment, and high-end robots, with a proportion of R&D investment reaching 41.08%.

Increase in R&D investment for five consecutive years



R&D Strength

In 2024, Shanghai Electric continued to comprehensively deploy and carry out scientific research and innovation work according to the scientific and technological innovation strategy of "one unified plan, one collaborative platform, one network of talent exchange". Meanwhile, the Group formulated the Several Opinions on Accelerating the Scientific and Technological Innovation Development of Shanghai Electric Group (2024 Edition) to guide the Group's scientific and technological innovation work, build an open, scientific and technological innovation system for Shanghai Electric Group, cultivate a high-quality innovation talent team, create a good scientific and technological innovation atmosphere, promote high-quality development, and achieve high-level scientific and technological self-reliance and strength.

One Unified Plan

Shanghai Electric gives full play to the role of the three-level scientific and technological innovation system with the Central Research Institute as the hub and platform. The Group's Science and Technology Management Department worked together with the Central Research Institute, promoting the continuous in-depth integration. In terms of hardware resources, the Group and the Central Research Institute jointly built a scientific and technological innovation resource sharing platform to empower the coordinated development of industrial groups. In terms of technology research and development, personnel interspersion has been realized. Technical experts from the Central Research Institute participated in the review of the Group's scientific research project for approval, and the Science and Technology Management Department participated in the review of the Central Research Institute's scientific research project for approval. The two parties supported and promoted each other.

In 2024, we accelerated the construction of high-quality scientific and technological innovation platforms and made every effort to promote high-quality scientific and technological innovation. We initially carried out the construction of five innovation platforms, namely "High-end Energy Equipment Structural Materials, Green Resource Electrothermal Conversion and Circulation, Precision Manufacturing, Hydrogen Energy, and Energy Storage System Control", and successfully obtained approval to establish the "Shanghai Key Laboratory of Resource Electrothermal Conversion and Circulation", achieving a breakthrough from zero in "municipal key laboratories". In addition, we invited the experts and academicians in the two fields of "water electrolysis hydrogen production technology" and "high-end structural materials for future energy" respectively to form a leading academic committee, laying a solid foundation for the transformation and upgrading of energy conservation.

By the end of 2024, Shanghai Electric had more than 70 high-tech enterprises, 7 national-level enterprise technology centers, 23 enterprise technology centers in Shanghai and other provinces and cities, 12 engineering technology research centers in Shanghai and other provinces and cities, 1 Shanghai key laboratory, 17 CNAS-certified laboratories, 7 academician expert workstations, and 5 post-doctoral research workstations.

One Collaborative Platform

To integrate internal innovation resources and enhance the level of scientific research and innovation, we organized a monthly technical seminar in "one collaborative platform", involving various topics including welding technology, measurement technology, reliability technology, noise reduction technology, digital simulation technology, and the application of AI large language models. This enables numerous technical personnel within the Group to jointly discuss and explore common "underlying technologies" at the "one collaborative platform", promoting technical interoperability among different industries within the Group and its subsidiaries, and laying the foundation for forming a joint force in scientific and technological innovation.

In 2024, we integrated the internal and external resources to accelerate the establishment of a "2+X" open innovation system, optimized and incorporated scientific and technological innovation resources, and established an open scientific and technological innovation system. In 2024, Shanghai Electric signed strategic cooperation agreements with universities such as Tsinghua University and Shanghai Jiao Tong University. We jointly established the "Tsinghua University-Shanghai Electric Institute for Industry-University Integration of Advanced Manufacturing and Equipment Technology" with Tsinghua University, focusing on eight major directions including artificial intelligence and robotics technology; and jointly established the "Joint Research Center for Green and Intelligent Equipment" with Shanghai Jiao Tong University, focusing on key fields such as green energy and high-end equipment manufacturing. These measures help to promote in-depth integration of industry, university, and research, and improve the level of transformation of scientific and technological achievements and industrialization.

In addition, we further strengthened the communication between the Group and universities, scientific research institutions, and the upstream and downstream industrial chains through various forms such as exchange visits and scientific and technological forums, focusing on technical directions such as advanced manufacturing technology, artificial intelligence and robotics technology, low-carbon energy systems and building energy efficiency, industrial engineering management, bio-manufacturing and medical equipment, future nuclear energy technology, pollution control and resource recycling technology, and advanced motors and control. This has deepened our understanding and comprehension of national strategies, national plans, industrial development trends, industrial demands, cutting-edge technologies in the industry, and the development trends of technologies, initially forming a relatively fixed mechanism for promoting technical exchanges and cooperation.

One Network of Talent Exchange

The Group attaches great importance to the construction of a strategic support system for scientific research personnel, and is committed to forming an organizational system with orderly management and control, efficient coordination, and an open and cooperative scientific and technological innovation ecosystem, so as to strengthen the reserve of scientific and technological talents, promote technical exchanges and cooperation, implement the introduction and cultivation of leading talents in hard-core technologies, and enhance the core competitiveness.

In 2024, in order to find out the inventory of scientific and technological talents within the Group and continuously promote organized scientific research, Shanghai Electric built and launched the "Spark Ignites the Prairie Fire" Group Scientific and Technological Talent Pool, realizing the functions of talent retrieval, talent list, talent profiling, talent resumes, configuration management, and process applications. This supports the selection of scientific and technological innovation talents for emerging and future industries within the Group, empowers the cultivation of scientific and technological talents, and provides support for the scientific and technological innovation of the Group.

In order to integrate the Group's scientific and technological resources of and achieve synergistic effects, we have built the Group Science and Technology Innovation Resource Allocation System "Science and Technology Innovation Intelligence Ocean". The system generalizes and unifies the formats of data such as talents, projects, and policy information, and stores single pieces of data in the form of data blocks at the bottom of the knowledge base, realizing the cross-correlation of various types of information in the underlying knowledge base. The system automatically collects policy, guidance, guidelines, and award information from external sources, as well as intellectual property-related policies issued by departments such as the National Intellectual Property Administration, and notifies relevant scientific and technological personnel in real time in the form of daily emails.

We strengthened the incentive for the innovative achievements of scientific research personnel, and actively promoted the implementation of the requirements of the Several Opinions on Accelerating the Scientific and Technological Innovation and Development of Shanghai Electric Group (2024 Edition). We provided reward matching for relevant enterprises within the Group that won national and Shanghai municipal science and technology awards in 2024. At the same time, we carried out the selection of the "Outstanding Contribution Award for Scientific and Technological Innovation of Shanghai Electric Group in 2025", soliciting 82 projects, and after three rounds of expert reviews, 30 projects were finally selected, fully stimulating the innovative enthusiasm and creativity of scientific research personnel within the Group.

As of the end of 2024, the Group had a total of 13,397 technical research personnel, accounting for 33.28% of the total number of employees.

Scientific Research Achievements

In 2024, Shanghai Electric continued to focus on the core industries of the three major sectors of energy equipment, industrial equipment, and integrated services. Relying on the advantages of the core equipment industrial cluster, the Group seized the development opportunities of digitalization, greening, and servitization, and continuously promoted the dual-wheel drive strategy of "industrial intelligence and service industrialization", provided industrial-grade green and intelligent equipment and system solutions for customers in industries such as energy, automobiles, ships, rail transit, aviation, buildings, electricity, and petrochemicals, and achieved a series of major scientific research achievements.

Energy Equipment

As one of the largest energy equipment manufacturing enterprises in China, Shanghai Electric actively follows the national "dual carbon" strategy, focuses on the main line of comprehensive green and low-carbon transformation and development and the development direction of creating a new pattern of the equipment industry for the new power system; the Group continuously enhances the advantages of the energy equipment industry, not only maintaining a leading position in the traditional fields of thermal power and nuclear power, but also achieving rapid breakthroughs in new energy fields such as wind energy, solar energy, energy storage, and hydrogen energy. In 2024, we made efforts in multiple aspects including coal power, nuclear power, gas turbines, wind power, and power transmission and distribution. Through technological innovation, we strengthened the construction of smart energy and comprehensively promoted the low-carbon transformation and upgrading of energy.
The progress and achievements in the field of energy equipment in 2024 are shown in the table below.

Field of energy equipment	Progress
Coal-fired power	• Build the first unit of the Jiahuwan Phase II project, a single-reheat million-kilowatt-class unit with a main steam pressure of 32 MPa, significantly improving power generation efficiency and environmental protection performance. • Develop a 350-MW-class efficient and flexible coal-fired power steam turbine coupled with molten salt thermal energy storage, filling the gap in the field of molten salt thermal energy storage in China. • Research, develop and apply the comprehensive transformation technology for improving temperature and efficiency of coal-fired units, achieving a reduction of the power supply coal consumption of the original units by more than 25g/kWh, a significant decrease in carbon emissions, and a remarkable improvement in the safety and reliability of the units. This technology has been successfully applied in multiple demonstration projects such as Taishan and Luohe Power Plants.
Nuclear power	• Deliver the main equipment of the world's first fourth-generation advanced nuclear power 200-MW high-temperature gas-cooled reactor with independent intellectual property rights, and complete the 168-hour continuous operation test before commercial operation, marking possession of the core manufacturing technology of the nuclear island main equipment of the 200 MW high-temperature gas-cooled reactor.
Gas turbines	• Complete the 7% hydrogen blending combustion of the first domestic set of heavy-duty gas turbines. • Tackle the key technical problems of F-class heavy-duty gas turbines, achieve their localized manufacturing, and reach the internationally advanced level in terms of thermal efficiency and emission control.
Wind power	• Research and develop the world's largest grid-forming 10-MW-class wind turbine and put it into production. • Put the world's largest 16-MW low-frequency offshore wind turbine into production, making the energy system more flexible and controllable, achieving the safe and stable control of weak grids and even off-grid systems, and ensuring the efficient utilization of energy. • Roll off the line of the world's first 18-20 MW-class wind-storage-load-grid wind turbine
Power transmission and distribution	• Independently research and develop an 1,100- kV low-noise UHV shunt reactor and successfully pass the type test. Fill the gap in the noise reduction technology of UHV reactors in China and solve the worldwide problem of noise reduction of UHV reactors.
Photovoltaic	• Independently research and develop "Creator 2.0" high-efficiency heterojunction solar cells and successfully launch them into markets, which are suitable for a variety of application scenarios and harsh environments, promoting the development of cutting-edge technology products in the field and facilitating the widespread application of clean energy.
Energy storage	• Develop a 250 kW-class vanadium-iron flow battery prototype. Compared with traditional all-vanadium flow batteries, this battery significantly reduces the amount of vanadium ions in the electrolyte at the same energy density, effectively reducing the cost of the electrolyte and decreasing the cost per kilowatt-hour by 40%. • Release a series of energy storage converter system products for large-capacity battery cells, effectively solving the problem of the mismatch between renewable energy power generation and power consumption demand in terms of time and space, and improving the level of new energy consumption.
Hydrogen energy	• The independently developed Z-series new alkaline electrolyzers achieved a major breakthrough, winning the TÜV Rheinland certification and reaching the international leading level. • The assembly and testing of the independently developed 300 Nm^3/h PEM water electrolysis electrolyzer products were completed; it significantly improved the efficiency and stability of the PEM electrolyzer and reduced the manufacturing cost.

Case Study The Green Methanol Project of Shanghai Electric was successfully implemented

In 2024, the first large-scale commercial operation demonstration project of wind power coupled with biomass green methanol invested and constructed by Shanghai Electric was officially started in the Green Energy and Chemical Industry Park in the Western Region of Jilin (Taonan). This is a key layout of Shanghai Electric in the field of green energy and an important initiative for the Group to actively serve national strategies and promote energy transformation.

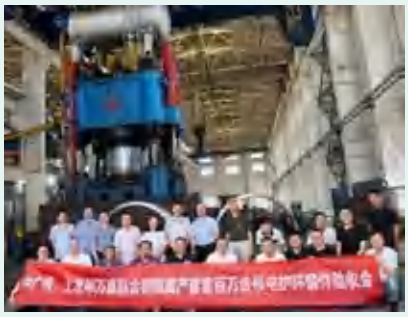
Because of abundant renewable resources of wind energy and biomass energy in Taonan, we constructed the industrial chain project of "green new energy + green chemical industry". The project adopts the technology of producing green methanol by coupling wind power hydrogen production with biomass. Its core technology and key equipment are all independently developed and produced by Shanghai Electric, successfully solving technical problems such as large-scale biomass gasification and the coupling of fluctuating green electricity and stable chemical production. This project has passed the full-process certification of ISCC EU (International Sustainability and Carbon Certification System). From raw material storage to end products, the project has achieved carbon emission traceability throughout the entire life cycle, and its technical indicators have reached the international advanced level, providing a replicable and scalable "Shanghai Electric solution" for the development of the green fuel industry across the country.

The first large-scale commercial operation demonstration project of wind power coupled with biomass green methanol invested and constructed by Shanghai Electric

Case Study Successful Development of the First Set of Domestic Million-kilowatt-class Nuclear Power Generator Retaining Ring Forgings

In August 2024, the first set of domestic million-kilowatt-class (1300MW-class) nuclear power generator retaining ring forgings jointly developed by Shanghai Generator Works, together with China General Nuclear Power Engineering Co., Ltd. and Deyang Wanxin Power Station Product Development Co., Ltd. successfully passed the acceptance inspection by the expert group composed of authoritative experts from China Nuclear Power Engineering Co., Ltd., Shanghai Jiao Tong University and Shanghai Generator Works.

Million-kilowatt-class nuclear power retaining ring forgings are key forgings of nuclear power units. Their diameter is much larger than that of conventional thermal power retaining ring forgings, and it is more difficult to control the cold expansion deformation and uniformity, so it is a "bottleneck" problem in the localization of nuclear power units. During the trial production process, the R&D team strictly followed the standard requirements of conventional imported nuclear power retaining ring forgings, and added additional trial production requirements such as hardness uniformity, grain size, stress corrosion and fracture toughness. The successful development of the first set of domestic 1300MW-class nuclear power generator retaining ring forgings has not only broken the long-term technical monopoly of foreign countries in this field, promoted the independent development of China's nuclear power industry, but also laid a solid foundation for the development of larger-scale 1500MW-class nuclear power retaining ring forgings in the future.



The First Set of Domestic Million-kilowatt-class Nuclear Power Generator Retaining Ring Forgings was Successfully Developed

Industrial Equipment

Over the years, Shanghai Electric has achieved numerous results in many fields of industrial equipment. In the elevator field, Shanghai Mitsubishi Elevator, a subsidiary of Shanghai Electric, has always been at the forefront of domestic elevator industry. In the field of manufacturing and service of industrial basic components, Shanghai Electric has continued to strengthen the four major services (bearings, blades, cutters and fasteners) and provided first-class industrial component solutions in the industry. In the field of automation equipment, with the rich experience and technical advantages, Shanghai Electric makes full use of advanced information technologies such as the Internet, the Internet of Things, big data and cloud computing, and provides industry-leading intelligent manufacturing system solutions, automation products and equipment, production management software systems and intelligent factory whole-line solutions for industries such as new energy vehicles and aviation, which creates an intelligent manufacturing whole industry chain of "basic products-intelligent equipment-software-integration-service".

In 2024, the progress and achievements we made in the field of industrial equipment are shown in the table below:

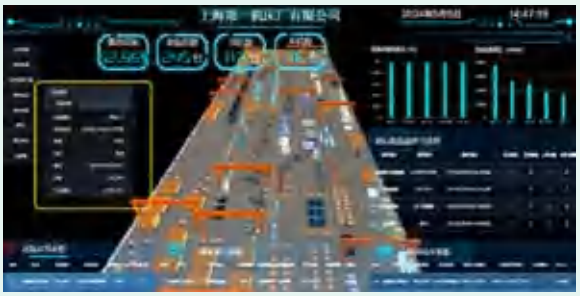
Field of industrial equipment	Progress
Elevators	•Independently developed and officially released the LEHY-H 12.5m/s ultra-high-speed elevator, filling the technological gap in the field of ultra-high-speed elevators in China.
Industrial basic parts	•Independently developed high-efficiency and long-life axle box bearings for subway bogies, and successfully applied to Shenzhen Metro Line 11, marking a significant improvement in China's independent innovation capability in the field of key components of high-end rail transit equipment. •Developed large titanium alloy steam turbine blades, filling the domestic gap in this field and breaking the technological monopoly of foreign enterprises. •Delivered sample bearings for the "dexterous hand" of humanoid robots.
Automation equipment	•Completed 6 industry-leading new products from the coating to the assembly of the lithium battery production line. •Independently developed and successfully launched a thermoplastic composite 3D printing/filament laying composite machine tool, solving the "bottleneck" problem in additive manufacturing for aerospace. •Developed the first 320 series high-end CNC compound grinding center with complete independent intellectual property rights, filling the domestic gap in high-end CNC compound grinding centers and achieving import substitution.
Desalination	•Independently developed a large-scale low-temperature waste heat cascade utilization thermal membrane coupling seawater desalination system, and built the world's first demonstration project for the industrial application of thermal membrane coupling seawater desalination using industrial waste heat cascade utilization. This comprehensively enhances the market competitiveness of domestic seawater desalination technologies, equipment, and engineering applications, and has been successfully applied in projects such as the public works of Yulong Petrochemical in Shandong.
Civil aviation	•Actively undertook the demonstration projects such as key links of the domestic large aircraft C919 and C929, the pulsation production line for aerospace engine, the demonstration projects of the digital aerospace engine assembly intelligent factory of Guizhou Liyang Power, and the automatic drilling and riveting production line project for the front fuselage and the middle and rear fuselage panels of the C919 of Jiangxi Hongdu Commercial Aircraft.

Case Study The first batch of equipment for the Digital Aeronautical Engine Assembly Smart Factory was shipped, contributing to the development of domestic large aircrafts

In December 2024, the shipping ceremony for the first batch of equipment of the Digital Aeronautical Engine Assembly Smart Factory (Phase I) project, undertaken by Shanghai Electric Automation Group Co., Ltd., was held. As the first turnkey project in the field of domestic aero-engines in China, this project includes the component assembly lean unit, transfer assembly pulse line, final assembly pulse line, cleaning unit, warehousing and logistics system, and digital information system, with a benchmark significance.

Case Study **Intelligent Manufacturing Solutions for Nuclear Energy Equipment**

With the increasingly growing market demands, Shanghai No.1 Machine Tool Works has developed a smart manufacturing solution for nuclear energy equipment, which runs through the entire manufacturing activities including design, procurement, production, quality control, service and management. With smart factories as the carrier, the intelligence of key manufacturing links as the core, end-to-end data flow as the foundation, and network interconnection and interoperability as the support, the interconnection of smart equipment such as numerically controlled machine tools, robots, coordinate measuring machines and intelligent vertical warehouses is realized through the advanced technologies such as Internet of Things. This strengthens the process control in planning, production, inspection and warehousing, promotes the efficient collaboration of production units and production organizations, and drives business innovation.



Smart Manufacturing Solution for Nuclear Energy Equipment

This solution can effectively shorten the product development cycle, reduce operating costs, improve production efficiency, enhance product quality, and reduce resource and energy consumption, thus promoting the digital transformation of enterprises.

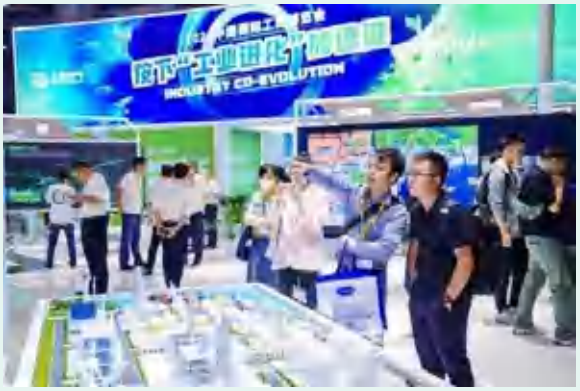
Integrated Services

Shanghai Electric's digital and intelligent integration business can provide comprehensive intelligent and digital solutions, covering multiple fields such as energy engineering, environmental protection engineering, power transmission and distribution engineering, financial services, industrial Internet, and automation engineering. By integrating advanced technologies and innovative solutions, Shanghai Electric's digital and intelligent integration business helps customers achieve efficient, intelligent, and sustainable development.

Case Study **"SEunicloud" Industrial Internet Platform 5.0 Debuted at the 2024 China International Industry Fair**

In September 2024, Shanghai Electric participated in the China International Industry Fair for 24 consecutive sessions. At the fair, Shanghai Electric released the "SEunicloud" Industrial Internet Platform 5.0. It was updated and iterated in four dimensions: smart supply chain, energy and carbon intelligent steward, digital engineer, security, reliability and trust, thus forming the connection of the entire industrial value chain on the platform side.

The"SEunicloud" Industrial Internet Platform 5.0 is a new generation of industrial Internet platform carefully built by Shanghai Electric. It deeply integrates cutting-edge technologies such as cloud computing, big data, artificial intelligence, and the Internet of Things, and provides all-round and full-chain digital transformation solutions to enable enterprises to improve quality and efficiency, and carry out innovation and development.



Exhibition Area of Shanghai Electric at the Industry Fair

Meanwhile, the Group actively responds to the strategic deployment of Shanghai's comprehensive promotion of urban digital transformation, thoroughly implements the development requirements of building a globally influential digital metropolis, and comprehensively empowers urban construction by combining its own industry experience and technical advantages. As an "enabler" of the city, Shanghai Electric focuses on the transformation and upgrading of traditional urban infrastructure, such as intelligent transportation infrastructure and smart energy infrastructure. By integrating multiple businesses such as the industrial Internet, rail transit, sewage treatment, and intelligent elevators, the Group can provide more optimized and efficient intelligent infrastructure solutions.

Case Study **Shanghai Electric Facilitated the commencement and Operation of the Northeast Section of Phase I Zhengzhou Metro Line 6**

In December 2024, the northeast section of Phase I Zhengzhou Metro Line 6, equipped with the TSTCBTC®2.0 signaling system of Shanghai Electric Thales Transportation Automation System Co., Ltd., was officially launched for operation. The total length of the northeast section of Phase I is approximately 26.4 kilometers, with 18 stations. The operation of the northeast section and the west section has enabled Zhengzhou Metro Line 6 to be officially integrated into the network. It can achieve the transfer of multiple existing and under-construction lines. After its opening and operation, it will become a backbone urban rail transit line covering the southwest-northeast axis of Zhengzhou, providing more convenience for the travel of citizens in the southwest area of Zhengzhou. The TSTCBTC®2.0 signaling system will, as always, ensure the safe and efficient travel of Zhengzhou citizens.

Industry Standards

Shanghai Electric actively participates in the formulation of industry standards to promote the technological progress and standardized development of the industry, and enhance the Group's right to speak and market influence. In 2024, we applied for 3 national standards and 5 group standards, and issued 1 national standard and 4 group standards.

The issued standards are shown in the table below.

Standard	Category	Status
Smart Service Predictive Maintenance Performance Evaluation Method	National standard	Released
Guide to the Grading of the Development Stages of Embodied Intelligence	Group Standard	Released
Application Guidelines for Classification and Grading of Humanoid Robots	Group Standard	Released
Carbon Emission Reduction Accounting Method for Recycling and Utilization of Decommissioned Power Grid Materials	Group Standard	Released
Electrostatic Safety Test Specification for Industrial Robots	Group Standard	Released

Intellectual Property Management

The possession of core technologies with independent intellectual property rights is the key for Shanghai Electric to maintain its core competitiveness. We have set up the full-time intellectual property positions, built a team of intellectual property professionals, and enhanced the professional management level to ensure the orderly implementation of intellectual property work.

We strictly abide by relevant laws and regulations such as the Patent Law of the People's Republic of China and the Copyright Law of the People's Republic of China, formulate and implement institutional documents such as Intellectual Property Management and Intellectual Property Disposal Management, and actively promote industrial groups to formulate normative systems, to realize the full-chain protection in the creation, utilization, protection, and management of intellectual property rights. In particular, we have formulated and released the White Paper on Shanghai Electric's Intellectual Property Service Solutions, which systematically describes the intellectual property service solutions throughout the entire process of scientific research projects, providing comprehensive support for the Group's intellectual property work and better fueling and safeguarding scientific and technological innovation.

In 2024, we improved the patent application mechanism and established a pre-application review mechanism for patents. The patent department or patent management personnel conduct a preliminary review of the technical solutions before the application to determine the completeness of the technical solution description, estimate the prospects of patent authorization, and check whether the format of the technical disclosure document is complete and accurate. Later, the patent review organization conducts a review to determine whether to apply for a patent and the form of protection, etc. These measures facilitate to improve the quality of patent applications and increase the likelihood for patent granting. It has been effectively implemented in Shanghai Electric's key industrial groups and affiliated companies.

To standardize and systematize intellectual property work, Shanghai Electric has established an intellectual property service platform and a professional database, which can provide professional intellectual property retrieval and analysis, management consulting, litigation support, training, trading and other services throughout the entire cycle of scientific and technological innovation projects.

Cultivation of High-Value Patents

The cultivation of high-value patents is an important foundation and support for promoting the construction of a globally influential scientific and technological innovation center in Shanghai. We have formulated the Guidelines for the Cultivation of High-Value Patents, aiming to lay a solid foundation, form a number of high-value patents with a high level of innovation, a reasonable scope of protection, and a stable right status. We strived to create technical barriers in several key fields and directions to form an intellectual property highland. Combining our project practice experiences, we have formed the Work Plan for the Cultivation of High-Value Patents, actively exploring the cultivation of high-value patents from multiple aspects including establishing relevant research and analysis for the R&D direction, conducting patent mining, improving the patent layout, and improving the quality of patent applications. These measures can guide R&D personnel to identify the core technical points in a systematic, timely, and comprehensive manner during research and development, improve the quality of patents, and achieve higher-value innovation protection.

Shanghai Electric was selected as a responsible unit of "Shanghai High-Value Patent Cultivation Center" in 2023. Taking the construction of the high-value patent cultivation center as the starting point, we continuously improve the quality of patents and realize the value of patents.

On 24 April 2024, Shanghai Electric held an intellectual property seminar with the theme of "Creation and Transformation Application of High-Value Patents". More than 80 people from the Group, various industrial groups, corporate legal affairs, and intellectual property departments participated in the study and exchanges regarding the two themes of "Creation of High-Value Patents" and "Transformation and Application of Scientific and Technological Achievements of State-Owned Enterprises" in the "online + offline" forms. The participants have deep understanding of the importance of creating high-value patents and transforming and applying scientific and technological achievements to facilitate the high-quality development of Group's intellectual property.

Protection of Intellectual Property Rights

The Intellectual Property Rights Protection Assistance Workstation of Shanghai Electric was established in 2022. By combining with the characteristics of large state-owned enterprise groups, we further explored to establish an intellectual property rights protection assistance working mechanism featuring resource sharing, information intercommunication, and work interconnection, continuously strengthened the business guidance, promptly summarized experiences and practices, to better optimize the business environment in Shanghai and promote the high-quality development of intellectual property work in state-owned assets and state-owned enterprises.

In 2024, we carried out intellectual property rights protection assistance work in a normalized manner, revised systems and regulations such as Management of Pre-reviewers of Shanghai Electric's Rights Protection Assistance Workstation and Management of Special Commissioners of Shanghai Electric's Rights Protection Assistance Workstation, further clarified the work responsibilities and processes, effectively integrated expert resources, and established a complete and effective operation mechanism for the workstation. The workstation provided guidance and assistance for enterprises to handle their intellectual property disputes, including international arbitration, disputes over the confirmation of patent rights and trademark rights, and the use of software copyrights, etc., and offered comprehensive analysis and consulting opinions for intellectual property. Meanwhile, the workstation deeply explored the transformation and application of the intellectual assets of state-owned enterprises. By sorting out policy trends, investigating the transformation status, summarizing and studying the excellent working models of peers, etc., a response strategy for the transformation and application work of Shanghai Electric's Rights Protection Assistance Workstation was formed, which can promote a virtuous cycle of technological R&D and the transformation and application of achievements, and provide strong support for industrial development.

Intellectual Property Training

Shanghai Electric conducts publicity and training on intellectual property protection and rights protection regularly to enhance the right protection awareness of the entire group. During the Reporting Period, we carried out special training and discussion on the topics such as "Cultivation of High-Value Patents and Rights Protection" and "Knowledge of Patent Asset Management and Capital Operation in Modern Enterprises", which further enhanced employees' understanding of intellectual property rights and improved the enterprise's capabilities in the creation, utilization, protection, and management of intellectual property rights, and provided a solid legal guarantee for building an innovation-driven development model.

Intellectual Property Training

2024		As of the end of 2024	
Number of patents applied	Number of patents granted	Number of valid patents	Accumulated number of invention patents
1,300	671	6,823	3,276

Supreme Quality and Pursuit of Perfection

Governance

Shanghai Electric regards quality as the foundation of its development and pursues excellence with a focus on continuous improvement. The Group's quality management follows the principle of hierarchical management at the Group level, the industrial group level, and the enterprise level. The Group's Economic Operation Department is the centralized management department for quality management at the Group level. It is responsible for the daily collection, coordination, supervision and management of information on major quality incidents at the Group level, coordinates the Group's quality resources, promotes the quality culture, plans quality-related activities, and centrally handles work requirements related to standards, etc. The industrial group is responsible for supervising and implementing the reporting and follow-up of major quality incidents internally or industrial sector, and assisting in handling major quality incidents of enterprises. An enterprise shall assume the primary responsibility for major quality incidents that occur and formulate the systems and measures for handling major quality incidents.

Note: For details about quality management for the industrial groups and enterprises, please refer to their ESG reports.

Strategy

We strictly abide by the Product Quality Law of the People's Republic of China and the Regulations on Administration of Industrial Product Production Licenses of the People's Republic of China and relevant laws and regulations. Over the years of practice, we have established a complete set of quality work specifications, including the general outline of quality management, guidelines for quality work, and trial measures for major quality incidents, etc. We have also formulated the Trial Measures for Management of Major Quality Incidents of Shanghai Electric Group to strengthen the supervision and management of major quality incidents by the Group, industrial groups, and subsidiaries, and ensure that major quality incidents can be effectively controlled after they occur.

General Principles for Quality Management of Shanghai Electric

Once a major quality incident is confirmed, the enterprise or industrial group involved should handle it immediately, report it verbally to the Group's Economic Operation Department within 24 hours, and submit a written Report on Major Quality Incidents within 5 working days. After a major quality incident occurs, the enterprise or industrial group involved should summarize and update the Management Ledger of Major Quality Incidents monthly and feed back it to the Group's Economic Operation Department. After the major quality incident is closed, the enterprise or industrial group involved should update and improve the Report on Major Quality Incidents and the Management Ledger of Major Quality Incidents and submit them to the Group's Economic Operation Department. The Group's Economic Operation Department may, depending on the specific circumstances of the major quality incident, organize a special team when necessary to conduct on-site supervision of the handling of the major quality incidents.

Process for Handling Major Quality Incidents

Event Handling	event reporting	Event tracing
•The enterprise or industry group involved should handle it as soon as possible	•Orally report it to the Group within 24 hours •Form a written Report on Major Quality Incidents within 5 working days	•Summarize and update the Management Ledger of Major Quality Incidents every month and feed back it to the Group •If necessary, the Group organizes a special team to conduct on-site supervision of the handling of major quality incidents

Risk Management

To ensure that major quality incidents can be effectively controlled after they occur, prevent the spread of quality incidents, reduce quality losses, minimize the negative impact of quality, and avoid the recurrence of quality incidents, Shanghai Electric incorporates quality risks into the Group's risk management process, and carries out risk identification, assessment, and management, laying a foundation for the prevention and resolution of quality risks.

The Group attaches great importance to the construction of quality culture and continuously promotes quality training and cultural promotion. During the Reporting Period, we have continuously increased our efforts in "Quality Month", quality management improvement, quality capability training, activities, and quality brand building, etc., to effectively improve the employees' quality management capability and steadily enhance the product reliability.

Case Study Quality Month Activities of Shanghai Electric

Promotional Video of Quality Theme Practice Activities

Quality Thematic Activities

In 2024, the Group carried out Quality Month activities with the theme of "Seizing the Momentum of the Times and Understanding the Principles of Quality". All industrial sectors actively responded and carried out a series of Quality Month activities and special quality improvement actions in combination with the actual industry situations. Through diversified forms such as sharing of the Outline for Building a Quality Power, inviting external experts to conduct quality capability improvement training, Quality Month knowledge competitions, and skills competitions, relevant personnel are encouraged to strengthen their professional and technical learning, enhance employees' quality awareness and quality, create a strong quality atmosphere of universal concern and participation, and lay a foundation for the high-quality development of the Group.

Employee Skills Competition

With excellent organization and achievements, the Group was rated as an Excellent Organization Unit of the National "Quality Month" Activities in 2024 by the Office of the Shanghai Quality Work Leading Group.

Goals and Indicators

We have been rigorously focusing on the assessment of product quality. We conduct assessments and set goals with respect to the rate of high-grade products, the rate of quality losses, major quality incidents, and quality tackling, etc., to ensure product quality, create products with outstanding performance, and fully meet the market expectations and demands. In 2024, in accordance with the general requirements of "serving national strategies, closely following national needs, developing new quality productive forces, forming core competitiveness, and achieving high-quality development", the Group successfully achieved the annual quality goals. During the Reporting Period, there were no product recall incidents due to safety problems among the products sold or delivered.

Shanghai Electric has continuously promoted the quality system certification work. As of the end of the Reporting Period, all manufacturing enterprises within the Group have completed the ISO 9001:2015 Quality Management System Certification, indicating that they have reached a mature level of quality management.

In addition, Shanghai Electric actively organizes various business sectors to participate in the application for relevant quality awards at the national, Shanghai municipal, and association levels. In 2024, the various industrial segments within the Group won more than 30 major quality honors, including the Quality Technology Award of the China Quality Association, Excellent Quality Management Achievements in the National Machinery Industry, Quality Breakthrough of Key Products in Shanghai, Achievement Awards of the Common Quality Technology Breakthrough Projects in Shanghai in 2024, and the Quality Technology Progress Award of the Shanghai Quality Association. These honors fully demonstrate the Group's outstanding achievements in quality management, technological innovation, and continuous improvement.

First-class Service with Customer First

Customer Services

Shanghai Electric follows the concept of "customer focus", continuously improves customer service management, aiming to provide high-quality and efficient services to customers. In 2024, in accordance with the Group's development policy of "grasping both technological innovation and market development firmly", we established the Key Account Director System, vigorously carried out cross-enterprise collaboration in terms of technology, market, manufacturing, etc., and did a good job in business reception, customer relationship maintenance, user service, etc., so as to quickly respond to market dynamics and customer needs and accelerate the formation of new economic growth points.

To improve the promotion efficiency of market work, we accelerated the digital construction of market work, built a market collaboration system, and focused on the comprehensive management of key account information, the analysis of business segments of key enterprises, and the exploration of procurement and sales relationships between group subsidiaries and key accounts. Currently, the Phase I platform has been launched and is in use.

We ensure the long-term stable and safe operation of products, and always focus on customers' needs and feedback, actively respond to customer complaints, and promptly handle quality objections. We have established a complete customer file management system, a customer feedback mechanism, a rapid response mechanism and a complaint handling mechanism to achieve a closed loop of customer services. Meanwhile, the Group requires units at all levels to assign special personnel to record the complaints, organize investigations, analyses, and handling of the complaint issues, properly solve them and give a satisfactory reply within the specified time limit.

Shanghai Electric entrusts a third-party evaluation center to conduct customer satisfaction surveys on yearly basis on the manufacturing, engineering, and new industry sectors, aiming to obtain customer feedback in an objective manner, improve product quality and service levels in a targeted manner, and continuously enhance the customer experiences. In 2024, the Group's customer satisfaction index score reached 93.37 points.

Case Study Shanghai Generator Factory Successfully Completed the First Inspection and Overhaul of the Rotary Condensers at Jingneng Dahulun Wind Farm

In October 2024, Shanghai Generator Factory successfully completed the first Class A overhaul of the No. 1 and No. 2 rotary condensers at Jingneng Dahulun Wind Farm. The planned duration of this overhaul was 22 days, and the overhaul scope included the bearing bush of the rotary condensers, extraction and mounting of rotors, overhauling of stators and rotors, electrical tests, and overhauling of the lubricating oil and circulating water systems. A total of 24 defects were eliminated. With the joint efforts of the relevant project teams, the actual period for the overhaul of the two rotary condensers only lasted 20 days (ahead of schedule), winning praise from customers.

The First Inspection and Overhaul of the Rotary Condensers at Jingneng Dahulun Wind Farm was Completed Successfully

Case Study Shanghai Electric Power Station Engineering Co., Ltd. Ensures the Smooth Startup of the First-phase Power Station Units of the WASSIT Overhaul Project

In May 2024, with the temperature in Iraq exceeding 40 degrees Celsius, all the employees of the WASSIT Overhaul Project of Shanghai Electric Power Station Engineering Company were fighting on the front line, going all out to ensure the smooth startup of the power station units. From dawn to late at night, regardless whether it was in the steam turbine workshop with the roar of machinery, the interior of the furnace with welding sparks flying, or the brightly lit dispatching room, there were busy figures everywhere. Under the harsh climatic conditions and the complex and changeable equipment status, even though sweat soaked their clothes under the scorching sun, everyone still focused on checking every detail to ensure the normal operation of the units. When a sudden startup order is given from the owner, all the technicians quickly gathered together, patrolled the equipment, investigated problems, and debugged the system day and night. Through the joint efforts of the entire team, in July 2024, all of the overhauling of the four 330-megawatt units was completed, providing sufficient power supply for the local area.

Overhauling of Four Units in the First Phase of the WASSIT project was successfully completed

Value Increment

We actively explore domestic and international markets and give full play to our technical advantages to provide the best solutions for customers. In addition, we strengthen strategic cooperation with customers, empower customers to jointly move towards the green, low-carbon, economical, and efficient, high-quality development path and bring greater values for customers.

Case Study Shanghai Electric Won the Orders of Main Engine Air Cooling Units for Two Projects in Saudi Arabia

In October 2024, Shanghai Electric-SPX Engineering & Technologies Co., Ltd. won the bids of the air cooling product orders for four bid sections of the Taiba and Qassim combined cycle gas power station projects in Saudi Arabia, with a total contract value of more than RMB one billion. Each of the two power stations is planned to have a power generation capacity of 1,800 megawatts and is scheduled to be completed in 2027. This project is the first application of the W-type air cooling technology in a large-scale global power generation project. After completion, it will become a benchmark project in the Middle East, which will further improve the differential competitiveness of Shanghai Electric in international projects.

Case Study Shanghai Electric Joins Hands with Industry Giants to Draw a Blueprint for Cooperation

During the holding of the 7th China International Import Expo, Shanghai Electric successively joined hands with industry giants such as Carrier Group and SKF Group for a strategic cooperation.

In November 2024, Shanghai Electric and Carrier Group signed a comprehensive strategic cooperation memorandum. The two sides will closely follow the "dual carbon" goal, focus on indoor environmental control of buildings, application of industrial heat pumps, low-carbon emission reduction, and sustainable development, etc. By seizing the current important strategic opportunity period, the two parties will give full play to their respective advantages and jointly promote the cooperation to expand the cooperation more extensively.

On the same day, Shanghai Electric signed a strategic cooperation agreement with SKF (China) Sales Company. SKF has the globally leading technologies in the fields of bearings, seals, and lubrication systems; Shanghai Electric will work with it to jointly optimize the product structure and enhance market competitiveness. Meanwhile, the two parties will keep up with the market trend, strengthen the awareness of crisis and innovation, make full use of Internet technology to launch more high-end support services and lead the innovation of the industry service models.

Signing a Comprehensive Strategic Cooperation Memorandum

Shanghai Electric deeply implements Xi Jinping's Thought on Ecological Civilization and the new development philosophy, closely follows the national "Dual Carbon Goals" (carbon peaking and carbon neutrality) strategy, and adheres to the profound integration of pollution control with green and low-carbon development, to explore new pathways for green development, accelerate the low-carbon transformation and upgrading of industries, promote the construction of ecological civilization, and foster harmonious coexistence between humanity and nature.

Green Layout for Future Development

03

- Driving Changes to Address Climate Challenges
- System Improvement and Environmental Friendliness
- Respecting Nature for Prioritized Protection
- Resource Utilization for Circular Development
- Green Governance and Clean Production

Driving Changes to Address Climate Challenges

In 2024, the international community has accelerated its actions in addressing climate change. The 29th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP29) reached consensus on climate financing, the establishment and operation of the Loss and Damage Fund, and international carbon market mechanisms. The G7 countries reached an agreement to phase out coal by 2035, and the United Kingdom closed its last coal-fired power plant. Meanwhile, China has passed the Energy Law of the People's Republic of China and the Interim Regulations on the Administration of Carbon Emissions Trading, which are of great significance for ensuring energy security, accelerating the green transformation of energy, and planning and constructing a new energy system. These developments also mark a milestone in the development of the world's largest carbon market.

Shanghai Electric pays close attention to the international community's policies and guidelines on addressing climate change, proactively responds to global climate challenges, and strives to be at the forefront of the green energy transition and sustainable development. In 2024, Shanghai Electric further refined its climate information disclosure and enhanced its transparency based on the International Financial Reporting Standard S2 – Climate-Related Disclosures and the recommended framework in Environmental, Social and Governance Reporting Guide Part D: Climate-related Disclosures issued by Hong Kong Stock Exchange Limited.

Governance

Shanghai Electric has established a governance structure for climate change and incorporated climate-related matters into strategic assessment and review. The highest decision-making body for climate change matters within the Group is the Board of Directors, while the management body for climate change matters is the ESG Management Committee. Members of the ESG Management Committee report directly to the Board of Directors on the implementation results of climate change work annually. For detailed information on Shanghai Electric's governance structure for climate change, please refer to "Chapter I: Enhancing Trust through Transparent Information".

Several directors on the Board of Directors have backgrounds in the new energy industry and are competent in managing climate-related risks and opportunities. They continuously learn about the latest laws, regulations, and policies on climate change, providing professional advice to the Board in fulfilling its climate management-related responsibilities.

The ESG Management Committee convenes meetings at least once a year to analyze and assess Shanghai Electric's management performance in ESG matters (including climate change), and to deploy decision-making guidelines and action plans to ensure the smooth implementation of the Group's ESG-related strategic objectives. In 2024, the ESG Management Committee of Shanghai Electric discussed issues related to climate change and carbon emissions management, clarifying that the Economic Operation Department is the competent authority for the Group's energy conservation and carbon reduction management and is responsible for comprehensive coordination, organization, implementation, and supervision of such energy conservation and carbon reduction management work.

Risk Management

Shanghai Electric integrates climate-related risks into the Group's risk management process, and conducts risk identification, assessment, and management to lay the foundation for preventing and resolving major climate risks. Through scientific methods and tools, we conduct multi-dimensional analysis of climate risks to ensure that potential climate impacts are fully considered in strategic planning and daily operations.

Shanghai Electric's Climate Risk Management Process

Risk Identification

- Focus on climate-related laws, regulations, and policies, benchmark against international and domestic excellent practices in climate information disclosure, and take into account the Group's business characteristics to identify 10 ky climate risks and 4 climate opportunities.

Risk Assessment

- Conduct on-site interviews and questionnaire surveys with key functional departments, and use expert judgment and other methods to analyze, measure, and assess the current and expected impact of climate-related risks and opportunities on the Group's business model and value chain from three dimensions: time frame, likelihood of occurrence, and impact level.

Risk Prioritization

- Prioritize the identified 10 key climate risks and 4 climate opportunities, determine risk levels, reveal the likelihood and impact of risks, and form a list of climate risk assessment results, distinguishing among major risks, important risks, and general risks.

Risk Management

- Weigh risks against benefits, select appropriate risk response strategies, and develop plans based on the list of climate risk assessment results, and taking into account the risk tolerance.
- Continuously conduct daily monitoring and early warning of climate risks, and do a good job in risk prevention and resolution.

Climate-related Risks and Opportunities

Shanghai Electric continues to focus on the management of climate risks and opportunities, and clarifies effective response strategies after identifying, assessing, and managing climate-related risks and opportunities and conducting impact analysis, to enhance corporate resilience, and seize market opportunities brought about by climate change.

Climate-related risks are divided into two main categories: transition risks and physical risks. On the one hand, transition risks affect the external environment in which Shanghai Electric operates, with significant changes in policies, laws, technologies, and markets impacting Shanghai Electric's business models, value chains, and financial positions. On the other hand, physical risks may lead to extreme weather events such as typhoons and floods, or long-term chronic risks such as persistent high temperatures and rising sea levels, which may cause asset damage, reduced resource supply, or disruptions in operations and supply chains, resulting in financial impacts.

Climate change also creates opportunities for Shanghai Electric. Through our strategic positioning and operational model, we believe that we have the capability to help the world mitigate and adapt to climate change while creating economic value. The table below outlines Shanghai Electric's climate risk and opportunity repository:

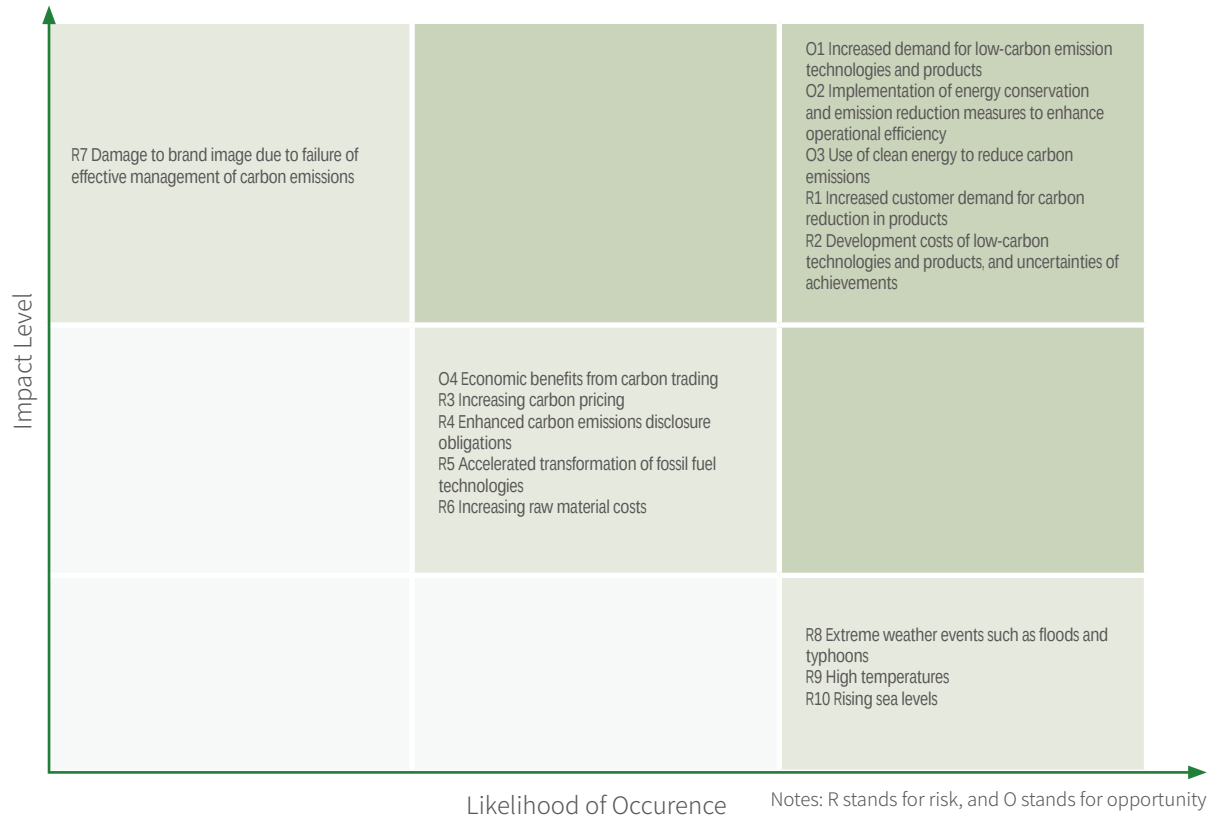
Risk/Opportunity Type	Main Category	Specific Risks/Opportunities
Transition risk	Policy and law risk	•Increasing carbon pricing •Enhanced carbon emissions disclosure obligations
	Market risk	•Increased customer demand for carbon reduction in products •Increasing raw material costs
	Reputation risk	•Damage to brand image due to failure of effective management of carbon emissions
	Technical risk	•Development costs of low-carbon technologies and products, and uncertainties of achievements •Accelerated transformation of fossil fuel technologies
Physical risk	Acute physical risk	•Extreme weather events such as floods and typhoons
	Chronic physical risk	•High temperatures •Rising sea levels
Opportunities	Product and service opportunity/ Adaptation opportunity	•Increased demand for low-carbon emission technologies and products
	Resource efficiency opportunity	•Implementation of energy conservation and emission reduction measures to enhance operational efficiency
	Energy source opportunity/Adaptation opportunity	•Use of clean energy to reduce carbon emissions
	Market opportunity	•Economic benefits from carbon trading

Analysis Results of Climate-related Risks and Opportunities

In 2024, Shanghai Electric, in reference to the International Financial Reporting Standard (IFRS) S2 - Climate-related Disclosures, and the Environmental, Social and Governance Reporting Guide Part D: Climate-related Disclosures issued by Hong Kong Stock Exchange Limited, and in consideration of the external environment, industry characteristics, and the business characteristics of Shanghai Electric, identified, assessed, and prioritized climate-related risks and opportunities from three dimensions (time frame, likelihood of occurrence, and impact level) through functional department interviews, questionnaire surveys, and expert judgments. This approach aimed at identifying priorities, and formulating targeted response strategies, to ensure competitiveness in a complex climate environment.

Through these steps, Shanghai Electric has developed a matrix of the importance of climate-related risks and opportunities. In response to the identified key climate-related risks and opportunities, Shanghai Electric has deployed effective measures to minimize impacts while seizing development opportunities.

Shanghai Electric's Climate-related Risks and Opportunities Importance Matrix



Notes: R stands for risk, and O stands for opportunity

Strategy

Shanghai Electric continues to promote the development of new quality productive forces, committed to building a green development chapter. We have constructed a robust climate transition plan through four pathways: industrial green transformation, system benchmark demonstration, substitution by clean energy, and construction of green supply chain. The table below outlines Shanghai Electric's major risks and opportunities, their impacts on the business model/value chain and their financial impacts over different time frames, as well as our response measures:

No.	High-grade Risk/ Opportunity	Risk Category	Impact on Business Model/Value Chain	Time Frame*
R1	Increased customer demand for low carbon	Market risk	Global market demand for products is changing due to climate change responses; the products with high energy consumption and high carbon emissions may not meet customer expectations, leading to reduced sales or even elimination in the market. More and more customers require enterprises to provide carbon footprint data for products and high-efficiency products, which will become a key factor in selecting partners.	Medium-term Long-term
R2	Development costs of low-carbon technologies and products, and uncertainties of achievements	Technical risk	Development of low-carbon technologies and products typically requires substantial R&D funding, special equipment and materials, resulting in high costs before these technologies and products are applied on a large scale. Meanwhile, low-carbon technologies and products still in the R&D or demonstration phase would face uncertainties regarding practical applications.	Medium-term Long-term
O1	Increased demand for low-carbon emission technologies and products	Product and service opportunity/ Adaptation	There is a significant increase in customer demand for low-carbon emission technologies and products, such as the growing demand for renewable energy technologies like solar, wind, energy storage, and hydrogen energy, as well as the growing demand for digital systems to mitigate climate change.	Short-term Medium-term Long-term
O2	Implementation of energy conservation and emission reduction measures to enhance operational efficiency	Resource efficiency	Significantly enhance our operational efficiency through equipment retrofitting and upgrading, smart energy management systems, recycling waste heat, wastewater, and waste materials, and conducting employee awareness education.	Short-term Medium-term Long-term
O3	Use of clean energy to reduce carbon emissions	Energy source	Expand the use of clean energy to reduce carbon emissions from corporate operations and potential carbon expenditures in production.	Short-term Medium-term Long-term

Financial Impact	Response Pathways	Response Measures
• Increased operational costs due to product carbon footprint accounting. • Reduced revenue due to failure to develop low-carbon products that meet customer requirements.	• Industrial green transformation • System benchmarking demonstration • Substitution by clean energy • Construction of green supply chain	• Adhere to sci-tech innovation as the primary driving force, contributing competitive, efficient, safe, green, and low-carbon energy equipment products and solutions to the industry, and enhancing the industrial cluster advantages of core energy equipment; Seize the opportunities for digital intelligence, greening, and service-oriented development, and continue to promote the dual-wheel drive strategy of "industrial intelligence and service industrialization" to provide industrial-grade green intelligent equipment and system solutions for customers in industries such as automobiles, ships, rail transit, aviation, buildings, power, and petrochemicals. • Conduct carbon footprint accounting and carbon emission inventories to map out the carbon emissions throughout the product life cycle.
• Increased R&D costs due to the development of low-carbon technologies and products. • Increased operational costs due to the promotion of low-carbon technologies and products.	• Industrial green transformation	• Explore innovative industry-university-research collaboration models, jointly build high-level innovation platforms, strengthen joint research on key and core technologies, conduct high-level talent exchange and training, and promote deep integration of industry, university, and research, to improve the level of transformation and industrialization of scientific and technological achievements.
• Increased operating income from new business opportunities. • Reduced production costs through large-scale production.	• Industrial green transformation • System benchmarking demonstration • Substitution by clean energy • Construction of green supply chain	• Leverage the advantages in new energy project development, construction, and high-quality equipment supply for layout around emerging energies such as "wind, light, storage, and hydrogen", coordinate the new energy strategy, and accelerate the R&D and application of low-carbon technologies. Improve the comprehensive layout of energy services, enhance the capacity for renewable energy consumption, and provide support for the promotion of a zero-carbon economy and the construction of a new power system.
• Reduced operating costs from improved energy efficiency.	• Industrial green transformation • System benchmarking demonstration	• Upgrade to energy-efficient equipment and introduce smart monitoring systems to achieve more efficient energy use. Leverage our strengths in power generation, transmission, and distribution, and accelerate R&D and deployment of technologies and products in related fields to enhance energy efficiency.
• Reduced operating costs from the reduced carbon emissions with use of clean energy	• System benchmarking demonstration • Substitution by clean energy	• Expand the scope of clean energy use to replace traditional energy sources.

*Note: The time frames involved in the impacts of climate-related risks and opportunities include short-term (0-1 year), medium-term (2-5 years), and long-term (6+ years).

Climate Action Plan

In 2023, Shanghai Electric issued Shanghai Electric Group's "Dual Carbon Goals" Action Plan, which clarified its strategic goals for "carbon peaking and carbon neutrality. In 2024, Shanghai Electric updated its "Group Dual Carbon Implementation Plan" in line with the Group's development, focusing on "four major pathways" and relying on "five pillars" to comprehensively promote green transformation and sustainable development.

Ensure the achievement of the carbon peaking target by 2030

Planning

Group's "Dual Carbon Goals" Implementation Plan (2025)

Target

Carbon Peaking Milestone

- Reduce carbon emission intensity by 18% by 2025 during the 14th Five-Year Plan period
- Carbon peaking in its operations by 2030

Long-term Carbon Neutrality Target

- Carbon neutrality in its own operations by 2035
- Carbon neutrality across the whole value chain by 2055

Four Pathways

Industrial Green Transformation

Industrial contributions:
Focus on developing green and low-carbon industries, accelerating green transformation, and empowering society to reduce carbon emissions.

Green responsibility:
Implement low-carbon production processes, apply green and low-carbon technology innovations during capacity upgrades, and promote resource recycling.

System Benchmark Demonstration

System certifications:
Energy management system, carbon management system

Creation of benchmarking and demonstration:
Green factories, zero-carbon factories, green/zero-carbon parks

Substitution by Clean Energy

Clean energy:
Application of technologies such as wind, photovoltaic storage, and hydrogen

Green electricity and green certificates:
Purchase paths, application ratios, and internal consumption within the Group

Construction of Green Supply Chain

Product carbon footprint:
Standards, models, accounting, certification, and mutual recognition

Green supply chain:
Empowerment, disclosure, evaluation, application, transportation, and design

Support

- **Technical Support**: Green and low-carbon technologies, products, solutions
- **Standard Support**: PCR, zero-carbon parks, green supply chain evaluation
- **Digital Support**: Carbon management service platforms, energy and carbon management centers
- **Financial Support**: Green loans, supply chain finance, carbon assets
- **Talent Support**: Energy management, technical design, supply chain management

Selection of Climate Scenarios

Climate-related risks and opportunities are characterized by long time frames, complexity, and uncertainty. We use scenario analysis to assess the potential impacts of high-level risks on corporate operations, strategic planning, and sustainable development under different global temperature increase scenarios in the future. Shanghai Electric considered the impacts of climate risks on the Group under different emission pathways with the temperature increase below 2° C and over 4° C.

Scenario Name	Low-emission Scenario	High-emission Scenario
Scenario definition	Global average temperature increases by less than 2 ° C by the end of this century	Global average temperature increases by more than 4° C by the end of this century
Scenario description	Based on the ideal path to achieve the goals of the Paris Agreement, countries worldwide take rapid and far-reaching emission reduction measures to drive comprehensive transformations in energy, industry, transportation, and construction sectors to achieve carbon neutrality goals; the share of renewable energy in the energy structure significantly increases, and clean energy technologies play a crucial role; customers actively choose green and low-carbon products, further promoting the green transformation of enterprises. We have selected this scenario to assess the impacts of strict climate strategies and actions implemented to achieve the temperature control target of below 2° C in the Paris Agreement.	It shows failure to achieve the targets specified in the Paris Agreement, continued growth in greenhouse gas emissions, and insufficient climate action efforts. Fossil fuels continue to dominate, and greenhouse gas emissions increase sharply; extreme weather events become more frequent, posing threats to infrastructure and human health; ecosystems collapse, and biodiversity declines significantly. We have selected this scenario to assess the impacts of a significant increase in climate-related physical risks due to a lack of effective climate actions.
Source of references	•IPCC SSP 1-2.6 Scenario: A sustainable society primarily based on clean energy, with effective climate actions to control global warming temperature far below 2° C.	•IPCC SSP 5-8.5 Scenario: Economic development highly dependent on fossil fuels, with continued increases in greenhouse gas emissions and intensifying climate change.

Analysis of Climate Risk Scenarios

Under the low-emission scenario, the societal demand for reducing greenhouse gas emissions is expected to increase significantly, driving rapid development in clean technology sectors such as new energy equipment and technology. With the expanding market demand for clean technologies, Shanghai Electric's revenue in this field is expected to become an important financial growth point in the future.

Global regulations on carbon emissions are gradually being strengthened. In China, due to stable policy expectations and tightened quotas, the average price reached RMB 91.8 per ton in 2024, with a significant increase from RMB 48 per ton at the start of the market in 2021. Currently, four production companies of the Group, including Shanghai Mitsubishi Elevator, Shanghai Electric Machinery, Power Generating Equipment Company, and SHMP Casting & Forging, have been included in the Shanghai Pilot Carbon Trading Market. As China continues to escalate its emission reduction requirements, regulatory constraints on emission reduction may be further intensified, including the introduction of a paid allocation system. Future carbon prices may continue to rise, further exacerbating the pressure on enterprises in carbon emission management. Shanghai Electric needs to improve its layout, strengthen carbon asset management, and optimize emission reduction measures to address the challenges of increasingly stringent carbon constraints and rising costs, ensuring competitiveness in the low-carbon transition. In case of failure to take effective measures to reduce carbon emissions, the carbon emission costs may become part of future operating costs.

Under the high-emission scenario, as global average temperatures continue to rise, the frequency and intensity of extreme weather events such as heavy rainfall and floods are expected to increase significantly, leading to a significant increase in physical risks such as business interruptions and supply chain disruptions. Meanwhile, fossil fuels will continue to dominate under the high-emission scenario, potentially increasing the demand for the transformation and upgrading of fossil fuel-related facilities. Shanghai Electric can not only fully leverage its technological strengths in traditional energy but also utilize its comprehensive advantages in both clean energy and fossil fuel sectors to provide integrated solutions to customers.

Scenario analysis results show that Shanghai Electric will face varying degrees of transition and physical risks in the future, including challenges posed by policy changes, technological upgrades, and extreme weather events. From past experiences, physical risks such as extreme weather events have never had a significant impact on Shanghai Electric in terms of production shutdowns or supply chain disruptions, and Shanghai Electric also has never experienced major violations related to climate or environment. From the perspective of future trends, Shanghai Electric has developed strong climate resilience through a comprehensive assessment of climate-related risks and opportunities, as well as our continuous efforts in responding to climate policies, R&D of clean technologies, and optimization of the energy structure. We can not only effectively withstand the risks relate to climate changes, but also seize opportunities to provide a variety of solutions to address climate change by leveraging our comprehensive advantages. In the future, Shanghai Electric will continue to deepen climate risk management, strengthen cooperation with various stakeholders, and contribute more solutions to global low-carbon transition and climate adaptation.

Indicators and Targets

As a global leader in energy equipment manufacturing and clean energy solutions, Shanghai Electric recognizes its significant responsibility in addressing climate change. We actively establish climate-related strategic targets and continuously monitor key indicators such as greenhouse gas emissions to ensure steady progress towards these targets, facilitating the Company's green transformation plan and enhancing the climate resilience of both the Company and its supply chain.

The targets of Shanghai Electric are to "ensure carbon peaking by 2030, strive to achieve carbon neutrality in its own operations by 2035, and achieve carbon neutrality across the whole value chain by 2055". To fully implement carbon target management and enhance the effectiveness of climate change management, Shanghai Electric continuously monitors relevant indicators.

Shanghai Electric's greenhouse gas emissions in 2024 are presented in the table below:

Greenhouse Gas Emissions and Density	2023	2024	Unit
Scope 1 greenhouse gas emissions 1	80,450.61	86,106.17	tons of carbon dioxide
Scope 2 greenhouse gas emissions 2	249,622.53	250,411.78	tons of carbon dioxide
Total greenhouse gas emissions	330,073.14	336,517.95	tons of carbon dioxide
Greenhouse gas emission intensity	287.53	289.64	tons of carbon dioxide/RMB'00000000 of operating revenue

Notes:

1. Greenhouse gas emissions are primarily generated from energy consumption (including electricity, steam (thermal), natural gas, diesel, and gasoline, etc.) during production and operations. Greenhouse gas emissions are calculated with the method outlined in the Guidelines for Accounting and Reporting of Greenhouse Gas Emissions from Industrial Enterprises in Other Industries (Trial) published by the National Development and Reform Commission in 2015, and operational control serves as the consolidation method.

2. The default emission factor for electricity in Shanghai, the primary production location in 2024, was in accordance with the Notice of the Shanghai Municipal Ecology and Environment Bureau on Adjusting the Emission Factor Values in the City's Greenhouse Gas Emission Accounting Guidelines. For other production locations, the default emission factors were in accordance with the provincial factors in the Announcement on the Release of the 2022 CO2 Emission Factors in Power Sector.

Resource utilization for circular development

Energy Conservation and Carbon Reduction

Energy conservation and carbon reduction are crucial measures for addressing climate change and promoting sustainable development, with an aim to protect the environment by reducing energy consumption and lowering CO2 emissions. We strictly adhere to energy management laws, regulations, and standards, such as the Energy Law of the People's Republic of China, the Energy Conservation Law of the People's Republic of China, and the Measures for the Administration of Industrial Energy Conservation.

Planning Guidance

Shanghai Electric strengthens the leadership of strategic planning by deeply integrating carbon peaking and carbon neutrality goals into its medium- and long-term development plans, ensuring that the concept of energy conservation and carbon reduction permeates all aspects of development. Through goal-setting, system support, meeting mechanisms, assessment mechanisms, as well as training and education, we ensure systematic and orderly progress in energy conservation and carbon reduction management, providing strong support for achieving our objectives.

Goal Setting

- Promote the industrial groups to formulate carbon peak action plans in a layered and categorized manner, issue assessment tasks for carbon peak action plans, disseminate carbon peak planning, and initially form the Group's carbon peak planning.
- Issue the industrial groups' assessment task letters for the "dual control" of energy consumption, including total energy consumption and energy consumption intensity, and break down the energy-saving assessment indicators for their major industrial sectors and key energy-consuming enterprises, to incentivize and supervise subordinate enterprises in carrying out energy conservation and carbon-reduction work.

System Support

- Establish a three-level working system (Group headquarters - industrial groups – enterprises) to steadily promote the Group's energy conservation and efficiency-enhancing work. The Group is responsible for coordinating energy management work, establishing enterprise energy management centers in various industrial groups and key enterprises to supervise and manage the enterprise energy consumption and energy consumption intensity.
- Supervise the industrial groups and enterprises under the Group's jurisdiction to establish energy management work networks level by level, organize enterprises to establish and improve energy conservation and carbon-reduction management systems, guide the implementation of energy conservation and emission-reduction work, and promote the achievement of annual energy conservation and emission-reduction targets.

Meeting Mechanism

- Regularly convene special meetings on energy management to convey policy requirements, issue warnings on significant energy consumption deviations, and deploy and promote the implementation of energy efficiency work.

Assessment Mechanism

- Strengthen the assessment of "dual control" targets for energy consumption, proactively collect data on total energy consumption and energy consumption intensity of key energy-consuming enterprises under their jurisdiction, and supervise the energy utilization status of key energy-consuming units.
- Conduct energy conservation diagnosis and energy audits for key energy-consuming units, urge enterprises to improve their energy conservation management frameworks, and promote self-regulatory mechanisms for energy conservation in the enterprises.

Training and Education

- Organize the activities of energy conservation publicity week, energy education, etc., to enhance awareness of energy conservation and emission reduction.
- Conduct special training on product carbon footprints.
- Organize qualification training for carbon management positions in enterprises, covering more than 50 industrial enterprises, and issue certificates jointly with the municipal energy conservation center to improve the professional level of carbon management.

Case Study Learn the "Dual Carbon Goals" Strategy and Cultivate Carbon Management Talents

On 19 November 2024, Shanghai Electric held an expanded study session of the Party Committee's Theoretical Learning Center Group, focusing on the "Dual Carbon Goals" theme for collective learning. On the same day, the Group's Economic Operation Department, in collaboration with the Shanghai Energy Conservation Center, conducted the Group's first qualification training for carbon management personnel, cultivating "Dual Carbon Goals" management talents for over 50 subsidiary enterprises.

The Group's "Dual Carbon Goals" training and learning activities aim to enhance the "Dual Carbon Goals" awareness of employees at all levels within the Group, strengthen the concept of energy conservation and carbon reduction in enterprises, and cultivate a team of carbon management talents who possess both professional knowledge and practical experience to comprehensively promote the Group's "Dual Carbon Goals" work.

"Dual Carbon Goals" Themed Training

Qualification Training for Shanghai Electric's Carbon Management Personnel

Energy and Carbon Management System

Greenhouse gas emissions from energy consumption are a significant emission source within the Group. We are committed to effectively reducing greenhouse gas emissions through energy conservation and the application of renewable energy. Energy management system certifications (such as ISO 50001) provide a systematic framework and methodology for enterprises to implement dual control of energy and carbon, fully reflecting the maturity and standardization level of energy management for enterprises. Shanghai Electric encourages qualified energy-consuming and emission-generating units to pursue energy management system certifications. As of the end of the reporting period, four subsidiaries of Shanghai Electric had obtained ISO 50001 energy management system certification.

In 2024, to strengthen the Group's energy conservation and carbon reduction management, the Group formulated the Group Carbon Management Guidelines (hereinafter referred to as the "Carbon Management Guidelines"), aiming to systematically standardize the Group's energy conservation and carbon emission management work. In the Carbon Management Guidelines, we have clarified the requirements for carbon emission statistics and accounting, such as accounting boundaries, accounting methods, and carbon emission reporting systems. Meanwhile, we encourage the construction of carbon management systems, encourage enterprises to select key and typical products for lifecycle carbon footprint accounting and certification, and establish low-carbon procurement management systems to continuously drive the Group's carbon emission management to deeper levels.

Case Study **Launch of Shanghai Electric's Energy and Carbon Management Cockpit and Carbon Management Service Platform**

In 2024, Shanghai Electric's Energy and Carbon Management Cockpit and Carbon Management Service Platform were officially launched. The Carbon Management Service Platform provides enterprises with one-stop carbon emission calculation services by pre-setting carbon emission factors and accounting formulas that match the Group's enterprises, enabling rapid generation of annual carbon emission reports and providing data support for formulating precise emission reduction strategies. Among them, the Energy and Carbon Management Cockpit clearly displays the Group's total carbon emissions and distribution, helping carbon management personnel comprehensively control the carbon emission situations, regularly monitor the carbon inventory data of the enterprises, identify emission reduction capabilities, and assist in continuous improvement.

The launch of the Carbon Management Service Platform effectively promotes information sharing and collaboration across departments and enterprises within the Group, to ensure that energy conservation and emission reduction plans and carbon management strategies are uniformly implemented and effectively monitored across the entire Group, providing a solid guarantee for the realization of the "Dual Carbon" goals.

Shanghai Electric's Energy and Carbon Management Cockpit and Carbon Management Service Platform

Green Production and Operations

To meet the overall requirements of Shanghai's energy conservation and emission reduction initiatives, we are promoting green operations through the establishment of green factories, the development of green products, the creation of green supply chains, and the implementation of green office practices, with aims to reduce carbon emissions, enhance resource utilization efficiency, and foster sustainable development.

Green Factories

Creating green factories is of great significance for enhancing green manufacturing capabilities and demonstrating green leadership. We are continuously tapping into energy-saving potential and improving energy efficiency to advance energy conservation and emission reduction through projects such as the elimination of outdated electromechanical equipment, the renovation of old furnaces, the optimization of process technologies, and the construction of energy management systems. At the same time, we are committed to optimizing the energy structure and promoting the use of green electricity. In 2024, we added 12MW of rooftop photovoltaic capacity, bringing the total installed capacity to 70MW, with a total power generation of 40.93 million kWh.

Case Study Shanghai Electric Property "Creating" Green on Rooftops

The green low-carbon park project of Xiu709 Media Park of Shanghai Electric Group Property Company Limited (hereinafter referred to as "Shanghai Electric Property") has installed a distributed photovoltaic power generation system on the roofs of 7,400 square meters through the transformation of the "fifth facade" of seven buildings and structures in the park, with a capacity of 1,188.32kWp, and supplemented with 360kW energy storage batteries, achieving efficient utilization of photovoltaic energy. At the same time, the park has introduced the energy digital management platform self-developed by the Power Transmission and Distribution Group, whose hierarchical distributed network structure can meet the reliability and real-time requirements of energy management, enabling precise statistical analysis and management control of all aspects of the power source, grid, storage, and load. This could continuously improve the overall energy utilization efficiency, and help the park achieve its dual carbon goals.

Installation of Distributed Photovoltaic Power Generation Systems on Rooftops

According to calculations, the Xiu 709 Media Park can generate 1.2 million kWh of photovoltaic power annually, accounting for 10.5% of the total power generation within the park, with a reduced coal usage by 394 tons, and reduced carbon dioxide emissions by nearly 1,091 tons, equivalent to planting nearly 60,000 trees.

In the 2024 Green Manufacturing List announced by the General Office of the Ministry of Industry and Information Technology, two subsidiaries of Shanghai Electric, Renmin Electrical Apparatus Works and Shanghai Huapu Cable Co., Ltd., were upgraded to the national-level "Green Factory" title, and the Shanghai Minhang Economic and Technological Development Zone, a project involving Shanghai Electric, was awarded the "Green Park" title. As of the end of the reporting period, Shanghai Electric had accumulated 23 green factories, including 17 at the national level. In the future, Shanghai Electric will continue to promote the construction of green manufacturing demonstration projects as a carrier to continuously enhance green manufacturing capabilities, fully leverage green leadership, and contribute to new achievements in the realization of the dual carbon goals of the industry and the region.

Green Products

We encourage enterprises to integrate the concept of green and low-carbon throughout the entire lifecycle of product design, procurement, production, sales, recycling, and reuse, with aims to reduce carbon emissions and enhance the green and low-carbon competitiveness of products. At the same time, we recommend our subsidiaries to select key and typical products for lifecycle carbon footprint accounting and certification. In addition, we promote collaboration and exchange between enterprises and research institutions, industry associations, and standard-setting organizations to jointly drive the development of product carbon footprint accounting standards.

As of 2024, a total of four product series had been selected in the "2024 Green and Low-Carbon Technology Products" list by the Shanghai Municipal Commission of Economy and Information Technology.

No.	Enterprise	Green Product Series
1	Shanghai Electric Machinery	Three-phase asynchronous motor YX2-KK series
2		Three-phase asynchronous motor YE4 series (IP55)
3		YE5 series high-efficiency three-phase asynchronous motor (YE5 H80~355)
4		YBX5 series high-efficiency explosion-proof three-phase asynchronous motor (YBX5 H80~355)

Case Study **Shanghai Electric Received Domestic First Full-process ISCC EU Certification for Green Methanol**

On 23 December 2024, the Taonan Wind Power Coupled with Biomass Green Methanol Integrated Demonstration Project, whose construction was invested by Shanghai Electric, simultaneously obtained ISCC EU certification for biomass collection and storage, biomass processing, and biomass gasification coupled with green hydrogen to produce biomethanol. It became the first domestic green methanol supplier to obtain full-process ISCC EU certification from biomass field collection and storage to green methanol production.

The ISCC certification (International Sustainability & Carbon Certification) is currently an internationally recognized and widely used certification system. Among them, the ISCC EU certification is a mandatory certification for green energy products to enter the EU energy market, applicable to the sustainability standard requirements for biofuels, bioliquids, and biomass fuels stipulated by the EU in RED II.

Pass full-process ISCC EU Certification

The successful acquisition of the green methanol ISCC certificate has achieved full-process certification for domestic green methanol from the raw material end to the production end, and also means that the large-scale green methanol synthesis technology solution provided by Shanghai Electric with a complete set of core technical equipment has obtained technical compliance recognition from the International Sustainability & Carbon Certification system.

Green Supply Chain

We encourage our subsidiaries to establish low-carbon procurement management systems, form green and low-carbon supplier directories, promote green supplier evaluations, conduct green scoring for tenders, and encourage the implementation of green procurement. Where conditions permit, our subsidiaries shall actively work on the creation of "Green Supply Chain Enterprises" and continuously promote the construction of green and low-carbon supply chains. In addition, we recommend our subsidiaries to develop digital systems for product carbon footprint accounting and green and low-carbon supply chain construction, to continuously convey green and low-carbon concepts to suppliers.

In the 2024 Green Manufacturing List announced by the General Office of the Ministry of Industry and Information Technology, Shanghai Electric Machinery was upgraded to the national-level "Green Supply Chain Management Enterprise" title.

Case Study **Shanghai Electric Joined CN100 Alliance of Leading Enterprises in Green and Low-Carbon Supply Chains**

In August 2024, the first salon event for leading enterprises in the CN100 Alliance was successfully held at the Shanghai International Chamber of Commerce. CN stands for China and Carbon Neutrality, while 100 represents 100 leading enterprises in the supply chain and 100% carbon neutrality across the entire supply chain. Relying on leading enterprises in the supply chain, the Alliance members collaborate to promote the green and low-carbon transition of supply chains in key sectors, effectively assisting key industries in achieving carbon neutrality goals. Shanghai Electric has joined the CN100 Alliance of Leading Enterprises in Green and Low-Carbon Supply Chains and has been invited to join the Alliance's Decision-Making Advisory Committee.

Shanghai Electric Joined CN100 Alliance of Leading Enterprises in Green and Low-Carbon Supply Chains

Case Study **Shanghai Electric's First Supply Chain Collaborative Product Received Carbon Footprint Certification**

In 2024, Shanghai Electric's first supply chain collaborative product, "HEA-25(D)NR Elevator Air Conditioner" based on advantageous manufacturing scenarios, received a carbon footprint service certification, and became the 20th product from Shanghai Electric to complete carbon footprint certification. As a demonstration project for implementation of supply chain carbon management in Shanghai Electric, this certified elevator air conditioner product is manufactured by a supplier for Shanghai Mitsubishi Elevator's elevator products with a load capacity of less than 1,350 kg. It adopts an energy-efficient air conditioning compressor and integrates the "Energy and Carbon Intelligence Steward" service from Shanghai Electric Group Digital Technology Co., Ltd. to explore a new model of productive services in the new industrial system, laying a solid foundation for promoting the construction of Shanghai Electric's green and low-carbon supply chain.

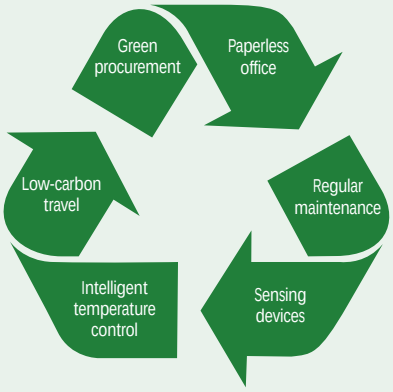
HEA-25(D)NR Elevator Air Conditioner Carbon Footprint Certificate

Green Office

Shanghai Electric actively responds to the national call for sustainable development and vigorously advocates and practices the concept of green office. Through efficient and pragmatic management measures and subtle concept transmission, we guide all employees to form an energy-saving and environment-friendly office and lifestyle awareness, and build an environment-friendly enterprise.

Shanghai Electric encourages employees to:

- Reduce the frequency of driving and take public transportation or riding as much as possible;
- Preferentially purchase and use environment-friendly office products to reduce pollutant emissions and energy consumption;
- Implement automatic induction lighting systems in public areas within the Company;
- Reasonably renovate, update, and regularly maintain office equipment to extend their service life;
- Adopt double-glazed windows and energy-saving curtains in office areas, control the temperature of central air conditioning, and appropriately lower indoor temperatures in winter or raise them in summer to reduce energy consumption;
- Promote the use of paperless office models and develop an automated lifecycle management system covering the meeting notifications, reception plans, receipt feedback, sign-in, meeting minutes, and reviews, etc.



Shanghai Electric's energy consumption in 2024 is shown in the table below:

Energy Consumption and Density	2023	2024	Unit
Purchased electricity	54,503.76	54,939.88	'0000 KWh
Natural gas	3,550.01	3,935.92	'0000 m^3
Diesel	995.95	292.93	tons
Gasoline	230,170.36	34,048.00	liters
Direct energy consumption[1]	48,911.91	52,810.87	tons of standard coal
Indirect energy consumption[2]	66,985.13	67,521.11	tons of standard coal
Comprehensive energy consumption	115,897.04	120,331.98	tons of standard coal
Energy consumption per unit of output value	0.0101	0.0104	tons of standard coal/RMB '0000 of operating revenue

[1]Direct energy consumption includes natural gas, gasoline, and diesel consumption.

[2] Indirect energy consumption refers to the consumption of purchased electricity.

Water Conservation

Shanghai Electric places great importance on water resource management, protecting and conserving water resources. We have implemented various management measures to enhance water use efficiency and reduce water waste.

Management Measures

- The Group conducts overall planning and management, with designated personnel responsible for water conservation management in major industrial sectors and key enterprises.
- A statistical reporting system for water conservation has been established to continuously strengthen the statistics, analysis, and assessment of water consumption.
- A mechanism for pure water use applications has been formulated to implement quantitative use of pure water and eliminate waste.
- Cyclic water use is encouraged to promote water recycling, with 1,256,761 tons of reclaimed water reused in 2024.
- We master the core technologies of thermal distillation (MED) and membrane reverse osmosis (RO), focusing on seawater desalination, reclaimed water reuse, and industrial wastewater treatment, providing strong support for addressing water scarcity issues.
- We develop, promote, and apply new water conservation technologies and processes, and disseminate water conservation knowledge through multiple channels, continuously improving water use efficiency.

In 2024, subsidiaries of Shanghai Electric continued to carry out water conservation work, formulating water conservation measures from both the supply and demand sides, achieving remarkable results. On the supply side, measures such as water pipeline renovation projects and intelligent monitoring of factory water networks were undertaken to reduce water loss and improve efficiency. On the demand side, measures like water balance testing, monthly water usage statistics, converting direct cooling water to circulating cooling water, and upgrading mechanical water meters to smart meters integrated into the energy management platform were implemented to analyze and rectify unreasonable water usage promptly, enhancing the refined management level of water resources.

Case Study Shanghai Boiler Works Conducted Water Balance Testing

In 2024, Shanghai Boiler Works carried out water balance testing in accordance with the Regulations on the Administration of Water Balance Testing in Shanghai and the national standards General Principles of Water Balance Test (GB/T12452) and Evaluating Guide for Water-Saving Enterprises (GB/T7119). The testing results indicated that all types of water usage met the water quota standards in Shanghai, with a water reuse rate of 87.32% and an indirect cooling water recycling rate of 98.99%.

Water balance testing helps Shanghai Boiler Works understand its current water usage status, identify existing water usage issues, further explore water-saving potential, and provide a basis for subsequent water use planning and water-saving rectification measures, thereby continuously improving its water resource management level.

Case Study Demonstration Project for Improving Quality and Efficiency of Reclaimed Water Utilization

In 2024, Shanghai Electric Environmental Protection Group launched a demonstration project for improving quality and efficiency of reclaimed water utilization, where the advanced water treatment technologies of "enhanced pre-treatment + ultrafiltration + reverse osmosis" were employed to produce high-quality reclaimed water and achieve water resource recycling.

The technical implementation pathways in this project include intensified source pre-treatment for turbidity reduction and overall water supply scheme optimization. By optimizing the core process parameters of heavy media coagulation treatment technology, the coagulation and flocculation effects are enhanced, and the reaction residence time of the entire process is shortened. The pre-treatment facilities that have been implemented occupy 40% less area compared to conventional design schemes, meeting the plant's land conservation requirements while improving the removal efficiency of water intake turbidity. Through overall water supply scheme optimization, under the premise of meeting water demand, innovative production management modes have been adopted to reduce process operating pressure.

Demonstration Project for Improving Quality and Efficiency of Reclaimed Water Utilization

The demonstration project has hit the predetermined targets of water quality purification, efficiency improvement and land area savings. At the same time, energy consumption and chemical consumption per ton of water decreased by more than 10% compared to the same period in the previous year (based on data from the uses' normal water consumption months), which was of great significance for the efficient utilization of water resources and environmental protection.

Shanghai Electric's water resource consumption in 2024 is shown in the table below:

Water resource Consumption and Density	2023	2024	Unit
Water resource consumption	3,701,273.11	3,298,263.72	tons
Water consumption per unit of production value	0.3224	0.2839	tons/RMB '0000 of operating revenue

Packaging Material Management

Effective packaging material management could not only reduce costs and improve production efficiency, but also minimize the environmental impact of packaging material usage. Shanghai Electric continues to strengthen packaging material management and explore possibilities in terms of usage performance, consumption reduction, recyclability, biodegradability, and recycling of packaging materials to enhance resource utilization.

Shanghai Electric's packaging material management measures

Usage Reduction

Reduce the amount of packaging materials through optimized design and the use of lightweight materials

Improved Recyclability

Select recyclable or biodegradable materials, such as paper and plant-based plastics

Recycling

Encourage the use of reusable packages such as returnable containers

In 2024, Shanghai Siemens Switchgear replaced disposable packaging materials such as wooden boxes, foam, and plastics with reusable packages through collaboration with suppliers, resulting in an annual reduction of 25.74 tons of packaging waste.

Case Study **Nedschroef Fasteners (Kunshan) Co., Ltd. introduced reusable containers**

To address the waste issues caused by the traditional cardboard box circulation process within the plant, Nedschroef Fasteners (Kunshan) Co., Ltd., a subsidiary of the Group, has introduced reusable containers. These containers can be reused for up to 4 years, significantly reducing costs by 72% compared to cardboard boxes. While reducing waste generation, they could greatly enhance resource utilization efficiency, fully demonstrating the environmental and economic advantages of the circular economy.

Reusable containers

The main packaging materials consumed by Shanghai Electric in 2024 are shown in the table below, with a packaging material consumption density of 135.58 tons/RMB 100 million of operating income.

Consumption of Packaging Materials[1]	2023	2024	Unit
Timber	116,670.26	104,255.94	tons
Iron support	4,674.95	4,523.65	tons
Iron leather suitcase	31.92	41.27	tons
Cardboard box	3,830.82	18,635.99	tons
Plastics	696.93	1,871.53	tons
Others	28,898.37	28,197.65	tons

[1] In 2024, the demand for packaging materials increased in some subsidiaries due to product adjustments.

System Improvement and Environmental Friendliness

Safety and Environmental Management System

Management Model

Since the initial launch of the SEC-LOVE safety and environmental management model in 2011, Shanghai Electric has consistently updated and iterated the model in response to the new development paradigm, high-quality development, and evolving trends in the global economic structure, as well as the requirements for the Group's development, safety and environmental protection work.

SEC-LOVE Safety and Environment Management Model

S	E	C	L	O	V	E
Sharing core values - Emphasize the practice of corporate social responsibility.	Group-level management and control - Focus on strengthening occupational health, environmental protection, and fire safety management and control at the group level, with emphasis on improving emergency response capabilities.	Comprehensive standardization - Strengthen the requirements for information, intelligence, and digital aspects, and incorporate non-productive enterprises into standardization.	Leadership improvement - Improve the safety quality of leaders, and promote the overall improvement of safety and environmental protection levels through leadership development and safety culture.	Overall goals and responsibilities - Focus on general responsibilities, optimize the full-staff responsibility system, and strengthen horizontal collaboration.	Vertical supervision and inspection - Establish a multi-type and multi-mode supervision mechanism to implement more effective supervision and inspection based on responsibility requirements and risk characteristics.	Expectable vision - Optimize and improve performance assessment and incentive mechanisms, and promote the construction of a vision centered on development goals.

The SEC-LOVE safety and environmental management model in the new era of Shanghai Electric is an inclusive, human-centered, and self-evolving management model. It embodies Shanghai Electric's modern corporate management philosophy in the field of safety and environmental protection and serves as the foundational guideline for the establishment, operation, and optimization of Shanghai Electric's EHS management system.

Management System

With the list of occupational health, safety and environmental protection responsibilities as the starting point and the vertical function allocation of occupational health, safety and environmental protection as the core, Shanghai Electric has formed a multi-lateral, multi-dimensional and ecological management and supervision work pattern for occupational health, safety and environmental protection work.

Based on the environmental management system, occupational health and safety management system, and the basic norms for enterprise production safety standard, Shanghai Electric has established an environmental protection, occupational health, and production safety management system (hereinafter referred to as the "safety and environmental management system"), and formed a system supported by standardized management, including management manuals, management systems, implementation rules, enterprise standards, and negative lists.

We have formulated the Shanghai Electric Occupational Health, Safety and Environmental Protection Management Manual, which clarifies that "human life is paramount, and we strive for safe and green manufacturing to jointly create a better future" as Shanghai Electric Group's occupational health, safety and environmental protection policy. To further enhance the systematicness, standardization, and effectiveness of the safety and environmental management system, we have adopted the PDCA management process and conducted annual reviews, summaries, and analyses through internal audits, management reviews, and external audits to continuously optimize the safety and environmental management system.

Organizational Structure

Shanghai Electric implements an all-staff responsibility system for safety production and environmental protection, with the Group's primary leader serving as the first responsible person for safety and environmental management and bearing the primary leadership responsibility for the Group's safety and environmental management work. We have also established a Safety and Environmental Affairs Committee as the highest decision-making body for safety and environmental affairs. All functional departments are required to jointly fulfill their safety and environmental responsibilities to ensure the effective implementation of the all-staff responsibility system for safety production and environmental protection.

Safety and Environmental Management Targets

Shanghai Electric prepares the Work Safety and Environmental Protection Responsibility Letter annually and sets annual safety and environmental protection management objectives. At the beginning of each year, the Group's primary leader signs the annual Occupational Health, Safety, and Environmental Protection Target Responsibility Letter with the heads of functional departments and the Party and government administration leaders of industrial groups to ensure comprehensive coverage both horizontally and vertically without omission.

Shanghai Electric's Environmental Management Targets in "14th Five-Year Plan"

compliance rate for pollutant discharges
100%

compliance rate for hazardous waste disposal
100%

completion rate for clean production audits of enterprises on government lists
100%

Shanghai Electric's 2024 Safety and Environmental Protection Targets

- More compact and efficient operation of safety and environmental systems and mechanisms
- More complete and meticulous safety and environmental compliance management
- Comprehensive improvement in the internal control quality of standardized operations
- Significant enhancement in safety and environmental risk control capabilities and emergency response capabilities

We have also formulated systems such as the Performance Evaluation and Assessment Methods for Safety Production and Environmental Protection and the Reward and Punishment Management for Safety Production and Environmental Protection to conduct performance assessments on the completion of environmental protection, occupational health, and safety objectives and indicators, and urge to improve the management of environmental protection, occupational health, and safety. The office of Shanghai Electric Safety and Environmental Affairs Committee is responsible for conducting annual performance assessments on the fulfillment of environmental protection, occupational health, and safety responsibilities by industrial groups and subsidiaries, with the assessment results incorporated into the Group's overall performance assessment factors.

Safety and Environmental Supervision and Inspection

Shanghai Electric has always regarded safety production and environmental protection as the cornerstone of enterprise development, and strictly implemented the safety and environmental supervision and inspection mechanism to ensure that all measures are effectively implemented. Through a combination of regular patrol inspections, special inspections, and internal and external audits, we achieve full coverage of all aspects in production and operation, with 100% coverage of production-oriented enterprises. This helps to promptly identify and rectify potential risks.

Supervision and Inspection

- The Group continuously enriches its inspection methods. In accordance with the supervision goals of full coverage of supervised enterprises and risk elements, we have established a hierarchical supervision and vertical inspection mechanism consisting of 10 methods, including leadership-led inspections, routine inspections, key special inspections, "four nos and two straights" inspections (i.e., no advance notice, no reception, no report, no accompanied visit; straight to the grassroots, and straight to the site), cross-inspections, follow-up reviews of rectifications, third-party on-site assessments, daily patrols, trade union supervision, and the "Woodpecker" initiative involving all employees. This mechanism is designed to strengthen risk control and oversight of safety hazards management. During the reporting period, the Group's headquarters achieved 100% vertical supervision, inspection, and coverage of production-oriented enterprises within Shanghai.

Special Inspection

- In 2024, the Group conducted special inspections on the safety and environmental management and control of key environmental protection facilities in operation at 12 randomly selected enterprises, helping them improve their operational management levels and effectively prevent and curb various safety and environmental incidents.

Internal and External Audits

- We have established a mechanism for reviewing the environmental management system. In accordance with the ISO 14000 environmental management system requirements, our subsidiary enterprises are required to conduct internal and external audits annually to assess the completeness, compliance, suitability, adequacy, and effectiveness of system operations. Issues identified are promptly addressed and improved. As of the end of 2024, a total of 111 subsidiaries of Shanghai Electric had obtained ISO 14001 environmental management system certification.

Safety and Environmental Risk Prevention

Shanghai Electric regards safety and environmental risk prevention as a core aspect of enterprise operations. By establishing a robust risk identification, assessment, and control system, we comprehensively investigate potential safety hazards and environmental risks in production and operation, and develop targeted prevention and control measures. At the same time, we continuously strengthen employee training on safety and environmental protection awareness, to promote all-staff participation in risk prevention and ensure safe production and green operations, thereby laying a solid foundation for the sustainable development of the enterprise.

Risk Identification and Rating

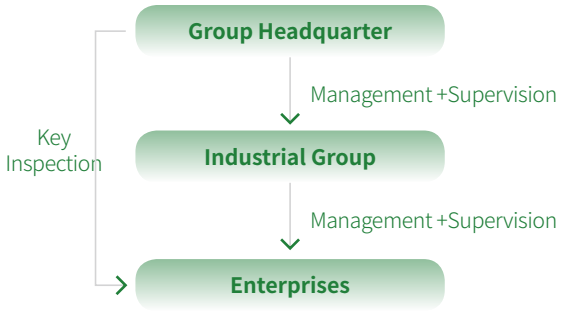
The Group requires all units to conduct annual safety and environmental factor identification and risk assessment, determine the risk levels of the safety and environmental factors, and inform relevant employees accordingly. In the identification of safety and environmental factors, the entire process from design and development to procurement and sales, production and processing, storage and transportation, and services should be considered, covering issues such as exhaust gas emissions, wastewater discharge, solid waste disposal, noise emissions, ionizing radiation, use of raw and auxiliary materials, rational utilization of resources and energy, and concerns of relevant parties. For identified safety and environmental factors, each unit shall conduct a safety and environmental risk assessment and develop management measures and emergency response plans.

Risk Control

We have established a safety and environmental risk control mechanism that combines centralization and decentralization, forming a three-level regulatory network structure (Group headquarters, industrial groups, and enterprises). We continuously promote the dual prevention mechanism of safety and environmental risk identification and safety hazards investigation and governance, gradually building a Group-level environmental risk prevention system.

Shanghai Electric has formulated the Control of Environmental Factor Identification and Risk Assessment to strengthen the management and supervision of the Group's environmental factor identification and risk assessment, preventing environmental pollution incidents. At the same time, Shanghai Electric continues to increase investments in environmental protection technologies, equipment, processes, and training to maximize the prevention of environmental pollution risks. In 2024, Shanghai Electric had a total investment of RMB 84,214,600 in environmental protection.

Shanghai Electric's Three-level Risk Control Structure



To better prevent environmental governance risks, in 2024, we focused on the operational risk control of key environmental protection facilities in enterprises to further optimize and improve the coordinated environmental emergency management at all levels. We completed the construction of the Standards for Inspection of Environmental Protection Facility and Equipment Operation Risks and the Emergency Response Plan for Sudden Environmental Incidents, as well as 28 key environmental governance tasks. We have organized and implemented special inspections on the operational risks of key governance equipment, and fully urged subsidiaries of Shanghai Electric to fulfill their safety and environmental protection responsibilities for key environmental protection facilities in accordance with the principles of "three musts" (i.e., safety must be managed in business, safety must be managed in industry, and safety must be managed in production and operation) and "whoever is in charge shall take responsibility", thereby preventing and resolving operational risks of environmental governance facilities.

Green Governance and Clean Production

Shanghai Electric has thoroughly implemented laws, regulations, and standards such as the 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. It has formulated relevant management systems, including Environmental Monitoring Management, Clean Production and Clean Production Audit Management, and Solid Waste Management, to actively promote clean production, standardize pollutant management, and ensure the compliant and standard discharge of pollutants.

Shanghai Electric is committed to the deep integration of pollution control with green and low-carbon development, and implementing synchronized special deep-level governance, to gradually build a Group-wide environmental risk prevention system, and actively promote the transformation and upgrading of enterprise environmental protection towards "high-end, intelligent, and green" development. Through source control, process substitution, ultra-low emission transformation, clean production, and the creation of waste-free factories, the Group has comprehensively enhanced its environmental protection efforts. In 2024, we completed 28 key environmental governance projects across our enterprises, with 5 enterprises passing the inspections for clean production acceptance. This has effectively driven the green transformation and sustainable development of our enterprises.

Wastewater Management

Shanghai Electric continues to promote enterprises to reduce wastewater discharge and pollutants in wastewater through optimizing production processes, conducting water balance work, and improving wastewater treatment technologies.

Wastewater Treatment Measures:

- Discharge the wastewater after treatment to meet discharge standards.
- Establish an online wastewater discharge monitoring system to enable real-time early warning.
- Adopt advanced wastewater treatment technologies to reduce the concentration of wastewater pollutants.
- Promote the water balance assessment work to identify the sources and compositions of wastewater discharge, enabling targeted measures to reduce pollutant discharge.

Case Study **Phosphating Line Wastewater Treatment System**

Shanghai United Bearing Co., Ltd. employs biodegradation technology to accelerate the decontamination of pollutants and applies distillation and filtration technologies to concentrate salts in wastewater, reducing wastewater discharge and pollutant concentration, and effectively reducing environmental pollution. Additionally, evaporation treatment has enabled the recycling and reuse of water resources, improving the efficiency of water resource utilization.

Phosphating Line Wastewater Zero-Discharge Device

Exhaust Gas Management

Shanghai Electric continues to promote enterprises to effectively implement the emission reduction of exhaust gas pollutants through source control and process substitution.

Exhaust Gas Treatment Measures:

- Discharge exhaust gas at high altitudes after collection and treatment up to standard. Actively promote the application of ultra - low emission technologies to achieve ultra - low emission of exhaust gas.
- Install exhaust gas online monitoring equipment and adopt other measures to achieve real - time monitoring and management.
- Retrofit some enterprises and workshops from unorganized to organized emissions through technological transformation.
- Reduce VOCs emissions through raw and auxiliary material source substitution and application of low - temperature distillation and concentration technologies.

Case Study **Shanghai Boiler Works Reduces VOCs Emissions from the Source**

Shanghai Boiler Works has implemented emission reduction of VOCs from the source, and began the use of low-volatile epoxy paint (VOCs content 206 g/L) to replace some alkyd paints (VOCs content 340 g/L) in coating processes from November 2024 by strictly adhering to the Technical Requirement for Low-Volatile-Organic-Compound-Content Coatings Product (GB-T38597-2020), with plans to continue advancing the substitution plan based on the actual effects of large-scale use.

Waste Management

Circular Economy

Shanghai Electric actively practices the concept of green development, and regards the circular economy as an important path to achieving sustainable development. Through technological innovation and process optimization, we promote efficient resource utilization and waste reduction, and build a lifecycle green management system from design, production, to recycling. We incorporate eco-design concepts into product R&D to enhance equipment energy efficiency and recyclability; advance clean production in production processes to reduce energy consumption and emissions; and seize the strategic opportunities presented by the national large-scale equipment renewal initiative to vigorously develop the circular economy around waste and old equipment, accelerating the R&D, manufacturing and industrialization of lithium battery recycling equipment and wind-solar recycling equipment. In addition, the Group has steadily developed the biomass energy industry through projects such as municipal solid waste power generation, agricultural and livestock waste power generation, biogas power generation, and the production of bio-organic fertilizer from biogas residues, to achieve an overall closed-loop for the resource utilization of agricultural waste.

Case Study **Shanghai Electric Wind Power Explores Circular Economy in Wind Turbine Blades**

Shanghai Electric Wind Power always implements the concept of green management throughout the entire product life cycle during the product development process. Following the principles of minimizing energy and resource consumption, minimizing ecological and environmental impact, and maximizing recyclability, it actively explores green design for products. In view of the limited recovery of wind turbine units and the noise disturbance to residents, environmental protection and green design considerations have been incorporated into the innovation and R&D of wind turbine blade products. Green blades are created from three perspectives: blade materials, blade design, and blade recycling.

In terms of material selection and design,Shanghai Electric Wind Power has developed recyclable infusion resins and optimized green core materials without altering the original blade design and manufacturing processes, and adopted water-based paint instead of coatings, with the goal of achieving over 95% blade material recycling. During the recycling process, Shanghai Electric Wind Power optimizes equipment and technologies based on the principles of low energy consumption, low cost, and high efficiency to promote waste recycling.

Solid Waste Management

Shanghai Electric continues to promote the reduction of solid waste at the source and the utilization of resources, thereby reducing waste emissions.

Waste Management Measures:

- Establish a Group-wide solid waste disposal sharing service platform to ensure that qualified environmental protection companies are entrusted for the compliant treatment of waste. General industrial solid waste that can be reused is recycled by enterprises, and the rest is disposed of by third-party agencies.
- Reduce solid waste through measures such as upgrading and renovating treatment facilities and improving fuel combustion efficiency.
- Actively promote the substitution of hazardous waste products, such as using special cleaning fluids instead of gasoline and acetone to clean machine surfaces, to minimize the generation of hazardous waste.
- Conduct independent R&D of fly ash washing treatment technology to remove harmful substances from fly ash, making it usable as a construction material for garden path paving, etc., to achieve resource utilization.

Garden Paths Paved with Fly Ash Bricks

- Focus on the resource utilization research of retired lithium batteries, discarded wind turbine blades, and retired photovoltaic modules, transforming waste energy products into raw materials for production to achieve resource recycling.

Case Study **Shanghai Electric Has Been Approved to Establish the "Shanghai Key Laboratory of Resource Thermoelectric Conversation and Recycling"**

In 2024, led by Shanghai Electric and in collaboration with Fudan University and Zhejiang University, the "Shanghai Key Laboratory of Resource Thermoelectric Conversion and Recycling" was successfully approved for construction. The laboratory closely aligns with the national dual-carbon goals, comprehensive conservation strategies, and Shanghai's green shipping and waste-free city strategies, focusing on the electrothermal chemical conversion and recycling technology of waste resources. It has assembled a fixed team of over 140 personnel to conduct the R&D of revolutionary next-generation technology that differs from existing engineering solutions, addressing current challenges such as low conversion efficiency, poor product quality, and unsatisfactory technical economy in electrothermal chemical conversion and recycling technologies for waste resources. By fully leveraging Shanghai's resources and industrial advantages, the laboratory delves deeply into electrochemical and thermochemical technology routes, and actively expands the new R&D paradigm of "data + mechanism" in AI for Science. It is committed to directionally converting end-of-life wastes from daily life and production into green fuels and green materials, to form a large-scale green refining industry, and provide technical support for the construction of a green, low-carbon, and circular economy system.

Case Study Shanghai Siemens Switchgear Constructed a "Waste-free Factory"

Shanghai Siemens Switchgear Co., Ltd. (hereinafter referred to as "Shanghai Siemens Switchgear") has always regarded environmental protection, pollution reduction, and carbon reduction as an important responsibility of the enterprise. It actively responds to the national concept of waste-free city construction, and adopts various measures such as green process design, selection of more environment-friendly production materials, and reduction in material usage to reduce the environmental impact of its products, and continuously promote the reduction of solid waste at the source and the utilization of resources. In 2023, it established a zero-landfill waste management system and obtained international certification. For example, the Company recycles the steel scraps generated in the parts processing workshop for further manufacturing, reducing steel waste by 12 tons annually. It also seals and stores the replaced oil, filters and tests it before equipment replacement in maintenance, and uses it as new oil after filtration, reducing hazardous waste from the waste hydraulic oil by nearly 1 ton annually.

Shanghai Siemens Switchgear Been Awarded "Waste-free Factory" at both the Municipal and District Levels

To better achieve full-process and full-system management of hazardous waste, Shanghai Siemens Switchgear has piloted electronic label QR codes and entrusted professional waste management terminal product and solution providers to customize a system management platform suitable for its waste management characteristics, enabling refined management of hazardous waste and general industrial solid waste. With a series of remarkable achievements in waste management, Shanghai Siemens Switchgear was awarded the title of "Waste-Free Factory" at both the municipal and district levels in 2024.

Shanghai Electric's pollutant and waste discharges in 2024 are shown in the table below:

Pollutant Discharges	2023	2024	Unit
Wastewater discharge	1,707,169.41	1,766,930.63	m^3
Chemical oxygen demand (COD)	52.91	43.12	tons
Ammonia nitrogen	7.71	6.17	tons
Exhaust gas emissions[1]	887,268.42	1,132,527.76	'0000 m^3
Nitrogen oxides	50.61	51.06	tons
Sulfur oxides	0.71	0.92	tons
Particulate matter	26.36	39.31	tons
VOCs	55.75	28.82	tons
Hazardous waste	3,377.10	3,761.78	tons
Non-hazardous waste	68,863.53	69,229.40	tons
Hazardous waste density	2.9	3.2	tons/RMB'00000000 operating revenue
Non-hazardous waste density	59.99	59.58	tons/RMB'00000000 operating revenue
Hazardous waste disposal	3,377.10	3,761.78	tons
Non-hazardous waste disposal	68,863.53	69,229.40	tons

[1] In 2024, the calculation methods for some subsidiaries involved in environmental data changed to calculation based on test report data, so there is an increase in exhaust gas emissions.

Respecting Nature for Prioritized Protection

As a global enterprise with operations spanning multiple regions worldwide, Shanghai Electric has always been an advocate for biodiversity protection. We have formulated a special system for biodiversity protection, assessed local sensitive species and implemented a series of measures to minimize impacts on the natural environment during project execution. We continuously promote ecological balance and biodiversity protection work in our operational areas and project regions, regularly track and evaluate the effectiveness of our biodiversity protection efforts.

Case Study Shanghai Electric Dubai Solar Thermal Project Was Committed to Biodiversity Protection

Before the construction of Shanghai Electric Dubai Solar Thermal Project, a special system for biodiversity protection was established to identify environmentally sensitive receptors surrounding the project and assess the critical habitats of sensitive species. During project construction, the construction and operational scopes were restricted through site fencing and path management, and environmental activities such as desert litter cleanup were conducted to raise awareness among all employees about the importance of the project site and surrounding biological habitats.

In 2024, the Dubai Solar Thermal Project Department collaborated with local municipal government officials to clean up the white litter in desert nature reserves.

Inspecting the Precious Plants Transferred

Cleaning Up White Litter in Desert Nature Reserves

Case Study Shanghai Electric Scurtu Photovoltaic Project Was Committed to Biodiversity Protection

The Scurtu Photovoltaic Project is located in an agricultural area in Scurtu County, Romania. During the project design phase, with the aim of protecting local forests and the natural environment, the connecting cables between the northern and southern blocks were intentionally routed to avoid a small forest situated between them, minimizing the impacts on the local original ecological environment. During the construction of the cable trench, excavation was carried out along roads to ensure that local farmland was not affected.

上海电气斯库尔图光伏项目

Case Study Selangor Renewable Energy Power Plant Protect Department Participated in Malaysia Litter Cleanup Event

In October 2024, to enhance public awareness on environmental protection, reduce coastal litter pollution, and protect marine biodiversity, the Selangor Renewable Energy Power Plant Project Department of Shanghai Electric Power Station Engineering Company was invited to participate in a litter cleanup event organized by the Selangor Environmental Protection Department on the beaches surrounding Mukim Jeram, Negeri Selangor, Malaysia. It was the first Chinese-funded enterprise to be invited to participate in this routine activity of the Selangor Environmental Protection Department. During the event, the Project Department not only actively participated in the litter cleanup task but also fully utilized this platform to promote the Company's advanced environmental and occupational health and safety policy - fostering a positive and healthy human environment, developing green and intelligent energy; controlling environmental and safety risks, and jointly building a harmonious ecological environment. The Project Department also received several environmental protection certificates for the year 2024 from Negeri Selangor, gaining full recognition for its environmental protection efforts from local authorities.

Certificate of Outstanding Environmental Management Enterprise

Case Study Shanghai Electric's "Co-building the Beauty of Biodiversity" Special Series of Posters Won the 2024 Shanghai "Silver Pigeon Award"

In 2024, on the 24th "International Day for Biodiversity", Shanghai Electric planned and released the "Co-building the Beauty of Biodiversity" special series of posters, aiming to emphasize the concept of harmonious coexistence between human industrial development and natural ecological protection. This series of posters combined Shanghai Electric's engineering projects implemented domestically and internationally with natural scenes, vividly depicting warm scenes of modern industry and natural organisms coexisting in mutual respect and promotion through delicate and vibrant hand-drawn elements. The special series of posters stood out from 751 entries and won the 2024 Shanghai "Silver Pigeon Award", interpreting Shanghai Electric's brand philosophy committed to green, low-carbon, and environment-friendly sustainable development.

Wind

Where the breeze wanders

Our offshore wind turbines create a beautiful sight

And establish a vibrant marine ranch

Coexisting harmoniously with marine life

Offering a green ode to the Earth

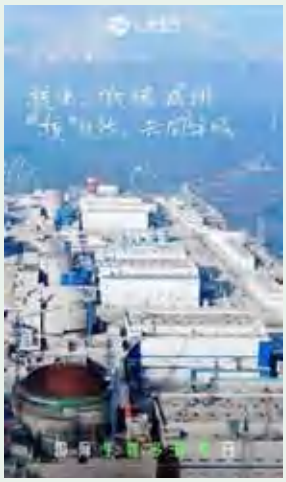
Light

Our photovoltaic panels capture every ray of sunlight

Illuminating the safe return for migrating animals

We borrow light from the sun to generate clean electricity

Allowing nature and humanity to share inexhaustible green resources



Nuclear

Nuclear power is a pioneer in low-carbon emissions

We utilize nuclear energy technology

To coexist harmoniously with nature

Jointly safeguard this blue sky

And protect our planetary home

Solar Storage

Our solar storage projects not only collect sunlight

But also gather our hopes and expectations for a green future

Waste Incineration

Harvests are sweet

But the waste after harvest

We make it "burn bright"

Through advanced waste incineration technology

We achieve waste resource utilization

Making environmental protection "burn bright" as well

Smart Energy Projects

Storing wind, storing light

Storing some beautiful scenery

Our Shantou Smart Energy Project and other zero-carbon parks

Gathering comprehensive clean energy sources like wind and photovoltaics

Leading with technology

Creating a green future together

Adhering to the principle of "open collaboration and mutual benefit," we collaborate with governments, universities, research institutions, and upstream/downstream industry chains to fulfill multi-level, cross-disciplinary, and diversified exchanges, build pragmatic collaborations and expand our network of mutually beneficial partnerships, thereby unlocking new business growth opportunities. Simultaneously, we continuously optimize supply chain management, accelerate its digital transformation, and drive high-quality, sustainable development.

Jointly Mapping a Blueprint for Prosperous Development

04

- Deepening Cooperation for Mutual Benefits
- Responsible Procurement for Stabilized Supply

Deepening Cooperation for Mutual Benefits

Government-enterprise Cooperation

Aligned with the guiding principles of the Third Plenary Session of the 20th CPC Central Committee, Shanghai Electric leverages its strengths in innovation and manufacturing to support regional socioeconomic development. Through deepened cooperation with governments at all levels, we contribute to national and municipal strategic initiatives, creating shared value.

Case Study: Shanghai Electric and Yangpu District are Joining Hands to Create a New Model of Cooperation between Government and Enterprises

In August 2024, Wu Lei, Secretary of the Party Committee and Chairman of Shanghai Electric, met with the Secretary of Yangpu District's Party Committee to explore further collaboration in innovation-driven development. Shanghai Electric pledged to align with Yangpu's priorities, particularly in green/low-carbon initiatives and industrial transformation, to deliver impactful demonstration projects. Meanwhile, Shanghai Electric will also rely on its own advantageous resources to infuse the district's high-quality development with technological innovation, accelerating industrial upgrading and economic growth. Together, the two parties aim to redefine riverside development and establish a benchmark for government-enterprise cooperation.

Shanghai Electric and Yangpu District are Joining Hands to Create a New Model of Cooperation between Government and Enterprises

Case Study: Shanghai Electric Wind Power and CGN Wind Energy Jointly Draw a Blueprint for Cooperation in Jiujiang's Emerging Industries

In September 2024, Shanghai Electric Wind Power entered into a strategic cooperation agreement with the Jiujiang Municipal Government and CGN Wind Energy Limited. Leveraging Jiujiang's abundant natural resources, the partners will jointly build the first green methanol project in the Yangtze River Basin, and promote investment and construction in zero-carbon parks, green wind power and and other sectors including hydrogen energy, energy storage, and solar power. Through these concrete actions, the partnership aims to accelerate Jiujiang's industrial green transformation, foster future-oriented and emerging industries, and develop new quality productive forces in the region.

Shanghai Electric Wind Power Entered into a Strategic Cooperation Agreement with Jiujiang Municipal Government and CGN Wind Energy Limited.

Cooperation between Schools and Enterprises

Shanghai Electric actively implements national strategies for science, education, and talent development. Through enhanced collaboration between academia and industry and focus on areas including advanced equipment manufacturing, low-carbon energy, and digital-intelligent integration, we drive the integration of production, research, and education and enhance transformation of scientific achievements to cultivate talent and foster innovation in these strategic sectors.

Case Study Shanghai Electric and Tsinghua University Signed a Strategic Cooperation Agreement

In July 2024, Shanghai Electric and Tsinghua University signed a strategic cooperation agreement, marking a significant step in their collaboration on major scientific research projects, innovative talent development, and deeper industry-academia-research integration. The agreement establishes a framework for both parties to concentrate their efforts in advanced manufacturing, digital-intelligent integration, and low-carbon energy solutions. Together, they will pioneer new models for school-enterprise collaboration by jointly building a high-level scientific and technological innovation platform, strengthening joint research on key core technologies, developing exchange programs for top-tier talent cultivation, enhancing the integration of academic research with industrial applications, academia and research, and improving the conversion and commercialization of technological achievements, so as to make new and greater contributions to accelerating the implementation of the innovation-driven development strategy and achieving high-level scientific and technological self-reliance.

Shanghai Electric and Tsinghua University Signed a Strategic Cooperation Agreement

Case Study **Shanghai Electric and Shanghai Jiao Tong University Signed a Strategic Cooperation Agreement**

In April 2024, Shanghai Electric signed a strategic cooperation framework agreement with Shanghai Jiao Tong University and jointly established the Green Intelligent Equipment Joint Research Center. The partnership will focus on key areas including green energy, intelligent hardware, and high-end equipment manufacturing, deepening collaborative R&D projects to achieve mutual success and innovative development. Under the agreement, both parties shall establish a long-term, stable, and sustainable partnership, building a long-lasting cooperation mechanism. By jointly establishing a Green & Intelligent Equipment Joint Research Center, they will align with the strategic industrial development needs of China and Shanghai, deepening collaboration in technological innovation, talent cultivation, and other fields. This collaboration aims to enhance scientific innovation capabilities and industrial transformation, achieving mutual benefit and win-win outcomes, while jointly contributing to Chinese modernization.

Shanghai Electric and Shanghai Jiao Tong University Signed a Strategic Cooperation Agreement

Joint Innovation of Technology

Shanghai Electric is actively exploring the in-depth development of advanced technologies in the fields of renewable energy and the upgrading of traditional energy. Upholding an open and cooperative mindset, the Group promotes resource sharing and technological exchange while continuously enhancing its own competitiveness, aiming to become an innovative source and driving engine for advancing technological development.

Case Study **Shanghai Electric and Shanghai Academy of Science &Technology Signed a Strategic Cooperation Agreement**

In December 2024, the "2024 China High-End Bearing Application and Development Symposium" co-organized by Shanghai Academy of Science &Technology and Shanghai Electric was held in Shanghai. The two parties signed a strategic cooperation agreement to comprehensively expand collaborative dimensions. By strengthening innovation engines, they will actively cultivate new development drivers and establish Shanghai as a strategic hub for high-end bearing industry innovation, injecting powerful momentum into high-quality economic development.

During the Symposium, the "High-End Bearing Industry-Academia-Research Innovation Consortium" and the "High-End Bearing Technology Innovation Center" were officially launched and unveiled. This milestone signifies that Shanghai has established a complete innovation ecosystem integrating industry, academia, research, and application in the high-end bearing sector, which will accelerate the transformation of technological innovations into tangible productivity.

Shanghai Electric and Shanghai Academy of Science &Technology Signed a Strategic Cooperation Agreement

Case Study Shanghai Electric and More Than 50 Nuclear Power Equipment Industry Chain Units Jointly Seek High-quality Development

In October 2024, the Annual Conference of CGN Joint R&D Center for the Domestication of Nuclear Power Equipment and the Nuclear Safety Culture Knowledge Competition of HPR 1000 Nuclear Power Equipment Industrial Chain was successfully held in Shanghai. The event was organized by China Nuclear Power Engineering Co., Ltd. and hosted by Shanghai Electric. The event brought together approximately 180 representatives from over 50 organizations across the nuclear power equipment supply chain, including regulatory authorities, the China Nuclear Energy Association, and Shanghai Electric.

A highlight of the event was the Nuclear Safety Culture Knowledge Competition of HPR 1000 Nuclear Power Equipment Industrial Chain, with a total of 26 teams participating. After two rounds of intense competition, Shanghai Electric Power Station Group (referred to as "Power Station Group") claimed the first prize in the team category, while the First Machine Tool Company from Shanghai Electric Nuclear Power secured second place in the team category.

Annual Conference of CGN Joint R&D Center for the Domestication of Nuclear Power Equipment

Case Study "Future Tech Workshop" Launches to Explore a Green Future

In June 2024, Shanghai Electric Central Academe and Carrier China R&D Center jointly inaugurated the Future Tech Workshop. This innovative platform, built on the core philosophy of "Collaborative Co-Creation," brings together industry expertise to advance green technologies and chart a shared vision for a sustainable future.

The inaugural session focused on dynamic simulation technology and advanced heat pump systems. Distinguished scholars from Shanghai Jiao Tong University presented cutting-edge research, bridging theory and practice. Carrier, leveraging its global leadership in dynamic simulation and extensive heat pump applications, contributed international perspectives and deep technical insights. Shanghai Electric and its subsidiaries demonstrated their full-chain innovation capabilities from theory to practice, from single technology to system solutions through a series of creative projects and practical case sharing, especially in the application and expansion of heat pump technology. Notably, their exploration of heat pump technology extended beyond traditional uses, investigating applications in green factories and district energy hubs, collectively mapping a technological pathway toward a greener future.

Shanghai Electric-Carrier Established "Future Tech Workshop"

Cooperation with Industry Partners

As an industry leader, Shanghai Electric drives sector-wide progress by facilitating top-tier corporate exchanges, sharing innovative practices, and pioneering new cooperation models. These initiatives consolidate expertise across the ecosystem, sustaining technological advancement and industry growth.

Case Study Shanghai Electric Leadership Visited Hyosung Group to Explore New Energy Synergies

In December 2024, Wu Lei, secretary of the Party Committee and Chairman of Shanghai Electric, met with Hyosung Group's leadership in South Korea to deepen collaboration in renewable energy. Both sides explored collaboration opportunities in hydrogen energy and grid equipment, focusing on R&D synergy, project investment, and market expansion to address global energy transition challenges.

Shanghai Electric Executives Visited Hyosung Group

Case Study Shanghai Electric and Mitsubishi Electric Initiated Joint Venture Renewal Talks to Advance Elevator Business

Also in December 2024, Wu Lei, secretary of the Party Committee and Chairman of Shanghai Electric, visited Mitsubishi Electric Corporation in Japan, signing an MoU to renew the joint venture agreement for Shanghai Mitsubishi Elevator. During the talks, the two sides had in-depth discussions and reached consensus on the specific directions and plans for future cooperation. Both parties jointly stated that China has the world's largest elevator market, fueled by urbanization. The continuous increase in the number of elevators in use will further promote the vigorous development of maintenance and renewal business. In the future, Shanghai Electric and Mitsubishi Electric will continue to deepen technological innovation and market development to bolster long-term growth for Shanghai Mitsubishi Elevator and Mitsubishi Air Conditioning.

Group Leaders Visited Mitsubishi Electric

Case Study Shanghai Electric Showcases Multi-sector Solutions at Beijing International Wind Energy Expo

At the October 2024 Beijing International Wind Energy Exhibition, Shanghai Electric exhibited its integrated capabilities across wind, solar, and hydrogen storage, motors, and power transmission. During the exhibition, Shanghai Electric Wind Power signed strategic cooperation agreements with Sinopec Lubricant Co., Ltd., CGN's Xinneng Mukong, and Dalian Heavy Industry Equipment Group Co., Ltd., respectively.

In addition, many technical experts in the fields of wind power, power transmission and distribution gave special lectures on topics such as new technologies, products and solutions in the field of new energy, presenting a wonderful feast of cutting-edge technology to the exhibitors.

Shanghai Electric Debuted at Beijing International Wind Energy Exhibition

Overseas Expansion

Shanghai Electric is aligning with the national strategy of high-level opening-up by unswervingly implementing the execution of its "Go Global" strategy. It deepens global business layout and resource integration, coordinates the joint construction of overseas projects and expands new energy businesses represented by photovoltaics and wind power, to contribute to sustainable socioeconomic development while supporting high-quality Belt and Road cooperation.

Shanghai Electric has established more than 140 overseas branches in 35 countries and regions around the world, and has undertaken more than 100 projects in total, including solar thermal, photovoltaic, nuclear power, energy storage waste power generation, gas turbines, coal-fired power and other fields. It has generated a total of 1.2 trillion kWh of electricity and reduced carbon emissions by 35 million tons.

Case Study The Group Actively Promotes the Progress of the Thar Project

In April 2024, Wu Lei, Secretary of the Party Committee and Chairman of Shanghai Electric, and his delegation conducted an on-site investigation of the Shanghai Electric Thar Project in Pakistan, and inspected the main production sites and equipment facilities such as the open-pit mine, coal storage yard, and coal transportation system of the Thar Coal Mine Project.

The Thar project is an exploratory project for Shanghai Electric to implement its international development strategy of "Go Global". It is also a key cooperation project in the energy field of the "China-Pakistan Economic Corridor", which will help accumulate experience for more overseas projects and become an important platform for the group's international talent training. Shanghai Electric will continue to optimize resource allocation, improve project management efficiency and dedicate all efforts to promote project construction to ensure project quality and progress. We will strengthen coordination with Pakistani government authorities, and promote the project to achieve a self-reinforcing cycle of investment, income, and sustainable development.

Group Leaders Conducted an On-site Investigation of Pakistan Thar Project

Case Study The power Supply Project of Shanghai Electric Drives Africa's Industrialization

For 17 years since 2007, Shanghai Electric has established deep roots in Africa, successfully completing 28 power supply projects across the continent. Our infrastructure development includes 1,457.16 kilometers of transmission lines, 51 power plants and substations, including:

- Djibouti Railway Electrification: A 230kV substation was constructed and 83.85 km of transmission lines were laid to supply electricity to the Addis Ababa-Djibouti Railway.
- Ethiopia Transmission Network: Four major EPC projects were delivered, including the BBDA 400kV Transmission Line Project, the Grand Ethiopian Renaissance Dam Transmission System and the Ethiopia-Djibouti Railway Power Supply. The cumulative construction includes 1,115 kilometers of high-voltage transmission lines and 11 substations.
- Urban Renewal in Angola: Modernization of the medium and low voltage power grids in Huambo and Caála has benefited one million residents and hundreds of businesses with stable electricity access.
- Nigeria Grid Modernization: Upgrading ten aging substations in Lagos has significantly improved power reliability for residential and commercial customers. In addition, two key 330/132kV and 132/33kV substations (Egbin Substation and Makogi Substation) in northern Nigeria were built, benefiting more than 500,000 residents.

These projects have provided reliable electricity to millions of people, advanced industrial development and improved people's livelihood in Africa, and contributed to the industrialization and development of power infrastructure in the African region.

Djibouti Railway Electrification Project

Ethiopia Power Transmission Project

Three Transformation Stations in the First Phase of the World Bank Project in Nigeria Have Successfully Delivered Electricity

Case Study Serbia Kostolac Project Officially Handed Over

In December 2024, the second phase of the Kostolac Power Plant in Serbia, for which Shanghai Electric provided steam turbines, generators, condensers, low-pressure heaters, deaerators and high-pressure heaters, was officially handed over. This project is the first large-scale coal-fired power plant project in Serbia in which China has participated, fully demonstrating the outstanding achievements of China-Serbia cooperation in the energy field. The project is not only of great significance to enhancing Serbia's energy security, but also injects new impetus into local industrial development and improvement of people's livelihood. Since the units were connected to the grid, the power station has contributed more than 900 million kilowatt-hours of electricity to Serbia, effectively alleviating Serbia's electricity pressure.

Case Study The First Batch of Wind Turbines for Vietnam Haiying Wind Power Project Was Successfully Shipped

In September 2024, the first batch of wind turbines for the Haiying 40MW wind power project in Vietnam, undertaken by Shanghai Electric Wind Power, was shipped, marking Shanghai Electric's entry into the Southeast Asian offshore wind power market. The Company customizes solutions for Vietnam by integrating cutting-edge technologies with local market characteristics and demands. The systems are specifically adapted to Vietnam's dynamic natural environment, delivering reliable and efficient clean energy. This supports Vietnam in further optimizing its energy mix and advancing sustainable economic development.

Responsible Procurement for Stabilized Supply

Supplier Management

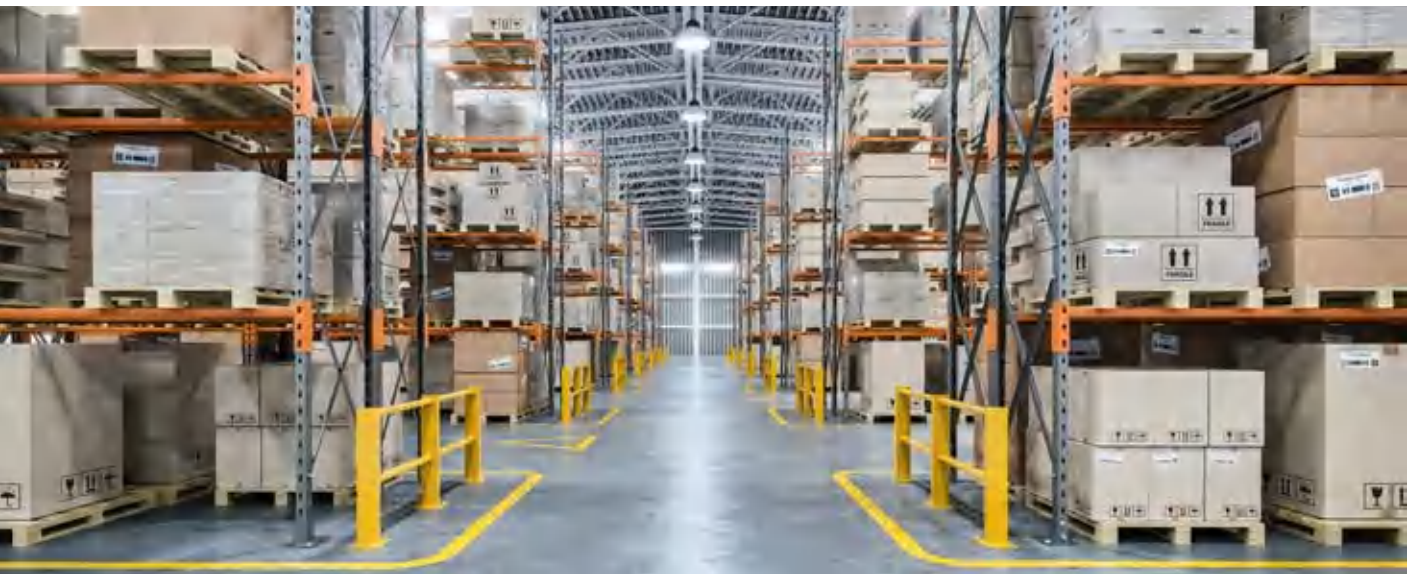
In accordance with national laws and regulations including the Contract Law of the People's Republic of China, the Law of the People's Republic of China on Tenders and Bids, the Law of the People's Republic of China on Product Quality, and the Pricing Law of the People's Republic of China, Shanghai Electric has formulated 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 build and keep optimizing its supply chain management system and build a responsible supply chain.

Supplier Admission

According to the Supplier Management system, supplier admission must comply with the Group's development requirements, and encourages cooperation with suppliers who can promote the Group's comprehensive capabilities in R&D, quality, cost, delivery, green and low-carbon.

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. We collect basic information about potential suppliers, verify their corporate qualifications and credit status, and determine supplier admission requirements such as technology, manufacturing, quality control, qualification certificates, and performance based on the characteristics of the materials, projects, and services to be purchased. We also conduct document review and on-site review on suppliers. Routine purchases require document review, while purchases of key materials or important projects require on-site review, and key materials also require product verification.

During the supplier admission process, we utilize an automatic registration system integrated with risk radar and third-party risk systems to promptly obtain risk information, and achieve proactive, efficient and consistent risk management. Suppliers with negative records, such as dishonesty and breach of contract, environmental penalties, major quality problems, etc., will be included in the supplier blacklist and are strictly prohibited from cooperation.



Supplier Performance Evaluation

As a critical component of our closed-loop supplier management system, supplier performance evaluation serves as a key mechanism to optimize our supply chain and foster healthy competition. Supplier performance evaluation includes annual on-site audits, unannounced inspections, and renewal assessments to monitor supplier compliance. Suppliers are assessed across key metrics: quality, cost, delivery, and service. A performance feedback mechanism enforces corrective actions—issuing notices, warnings, suspension, or termination—to strengthen accountability for non-compliant suppliers. Suppliers intended for retention must undergo re-qualification before contract expiration. Key subsidiaries of Shanghai Electric will also extend supplier management to second-tier suppliers based on actual conditions.

During the reporting period, we completed a total of 6,371 supplier audits.

Supplier Communication

The Group establishes 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 and achieve mutual benefit and win-win outcomes. In addition, we also actively empower suppliers and work with them to carry out relevant improvement projects to continuously strengthen them. For example, Shanghai Electric Wind Power has carried out collaborative improvement initiatives with Dalian Huarui Heavy Industries Group Co., Ltd. to help it improve the drive chain shaft assembly capabilities of its onshore products, while reducing the drive chain material transportation costs, improving production efficiency and product quality, and enhancing market competitiveness.

Shanghai Electric's Supplier Communication Channels

Supplier Conference

- At the supplier conference, we disseminate information on technology development plans and procurement management requirements while enhancing communication and feedback with suppliers.

Supplier Seminars/Symposiums

- We regularly convene strategic dialogues with our supplier network to explore competitive supply chain strategies for quality, cost, and delivery optimization.

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 direction of improvement.

Coaching and Training

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

Case Study Global Partners Conference of Yinghe Technology was successfully held

In March 2024, the Global Partners Conference of Yinghe Technology was successfully held, with representatives from 267 partners around the world, company management representatives, and outstanding employee representatives gathered together. At the conference, Yinghe Technology conducted in-depth analysis and sharing on key topics including development trends in the new energy lithium battery industry, partner quality management, ethical collaboration, procurement objectives, and partner relationship management. The Company articulated a clear pathway for building a global supply chain characterized by mutual benefit and sustainable development. This initiative provides strong momentum for establishing more equitable, inclusive, and constructive supply chain partnerships. The event also recognized outstanding partners who demonstrated exceptional collaboration and support for Yinghe's growth through annual awards.

Global Partners Conference of Yinghe Technology

Case Study SAEC holds 2024 Supplier Conference

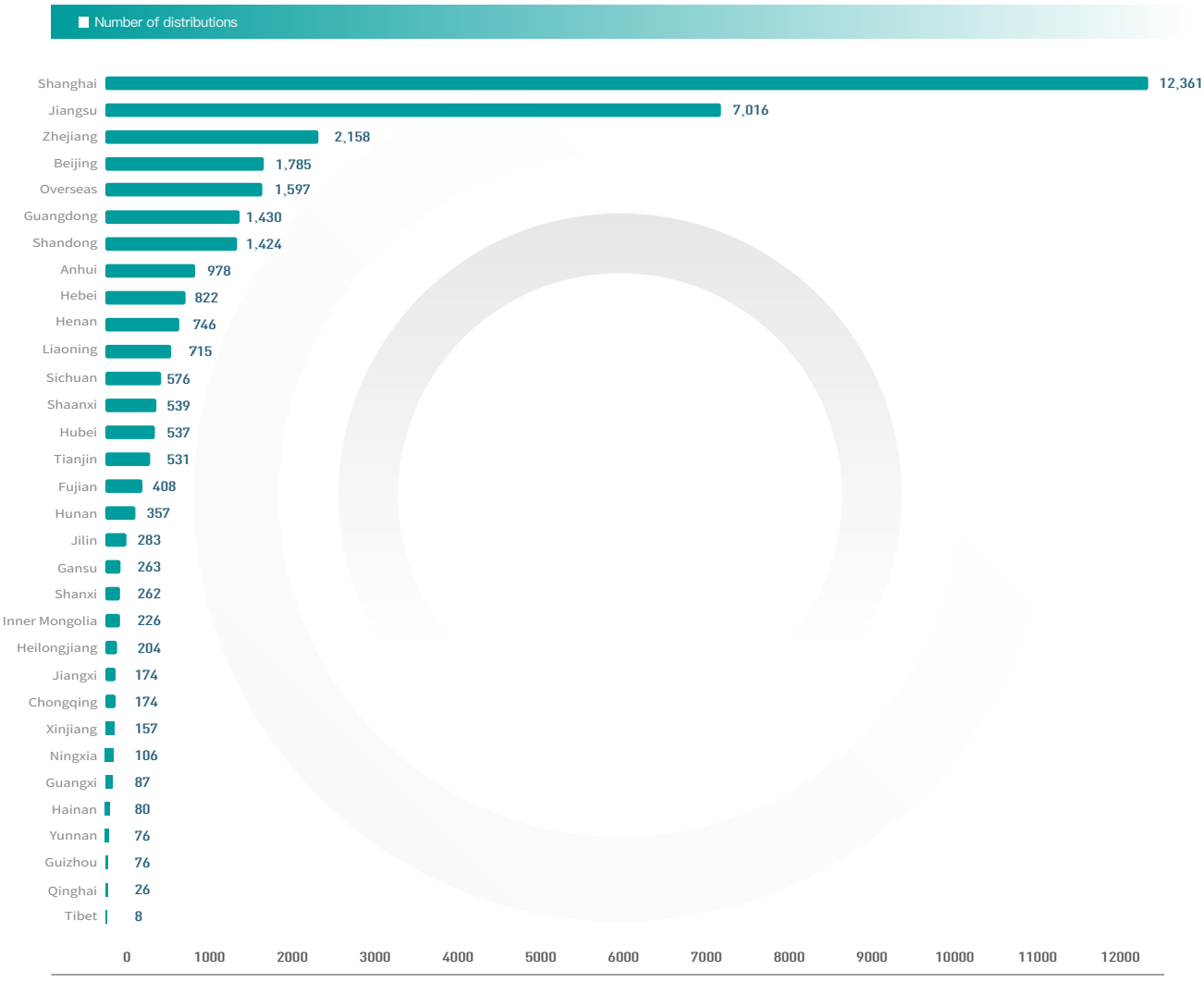
In December 2024, SAEC successfully held the 2024 Supplier Conference. The conference was convened to collectively address market changes, strengthen collaboration across the industrial supply chain, integrate resources through close coordination, and work hand-in-hand with partners to share development opportunities and co-create the future. SAEC expressed its sincere gratitude to all partners for their long-term support and contribution, while sharing insights on air conditioning market trends, along with the company's environmental projections and strategic development plans. During the event, outstanding suppliers and sales representatives were recognized and honored with the Supplier Gold Award, Appreciation Award, and Proposal Contribution Award.

SAEC holds 2024 Supplier Conference

Supplier Distribution

Our suppliers are categorized into centralized procurement suppliers and decentralized procurement suppliers. Each business unit implements tiered supplier management based on material types and supply reliability requirements. In order to achieve efficient sharing of suppliers, suppliers of superior units can directly cover subordinate units.

The Distribution of Core Business Suppliers of Shanghai Electric



Smart Supply Chain Construction

Aligned with digital transformation trends, Shanghai Electric continues to optimize its Supplier Relationship Management (SRM) platform, promoting advanced management methodologies and standardized procurement processes. Through iterative upgrades to procurement and supplier management mechanisms, we facilitate the integration and sharing of resources, technologies, and information, achieving cost reduction and efficiency gains across procurement operations.

Shanghai Electric's SRM platform includes supplier lifecycle management, bidding and sourcing module, order coordination module and E-marketplace module. This integrated platform bridges upstream and downstream supply chains, enhances supplier management precision, and enables data-driven decision-making. In 2024, the SRM platform expanded its service coverage to support 125 enterprises in efficiently managing over 35,000 suppliers - an increase of 6,000 suppliers compared to the previous year.

We continued to optimize the functions of the SRM platform, and iteratively optimize key functions such as the review process, green supply chain, industrial chain extension, and visual dashboard; we continued to introduce cutting-edge technologies in the sourcing and bidding module to expand to more business scenarios. Substantial optimizations were implemented in core operational areas such as procurement planning, compliance risk management, and framework share management. These advancements significantly improved end-to-end precision and efficiency across corporate procurement and quotation processes.

Case Study **Innovative Supply Chain Finance to Help Small and Medium-sized Enterprises**

In 2024, Shanghai Electric leveraged its "ShangHe" Smart Supply Chain Platform to support small and medium-sized enterprises (SMEs). Among them, the "Shang E Loan" module has opened online services, with nine suppliers approved for admission and a total credit line of RMB 6 million granted. Meanwhile, "Shang E Finance" utilizes authentic transaction data between core enterprises and SMEs to establish data-driven credit assessments. Operating without increasing financial burdens on core enterprises (non-recourse model), the platform connects SMEs across the industrial chain with low-interest, high-efficiency online supply chain financing solutions. Through its integrated online-offline financial services, "ShangE Finance" provides SMEs with convenient and efficient financing channels, delivering robust financial support to more small and medium-sized businesses.

Supplier Risk Management

Supply chain risk management is a key link for Shanghai Electric to ensure business continuity and competitiveness. In response to complex global supply chain challenges, Shanghai Electric has implemented diversified supplier networks, digital supply chain management, supply risk assessment and early warning mechanisms. These measures collectively build an efficient, agile, and risk-resistant supply chain ecosystem, providing robust support for the Group's sustainable development.

At the institutional level, the Group has established a systematic supplier risk management mechanism, encompassing pre-qualification assessments, dynamic approved supplier database maintenance, unannounced audits, performance evaluations, and blacklist exit mechanisms. This full lifecycle risk management approach ensures supply chain compliance and operational stability.

In terms of digital platforms, the Group relies on the smart supply chain SRM platform and combines it with big data credit analysis technology to realize intelligent supplier qualification review, risk list early warning, and automatic investigation of bid rigging. It has covered 36,000 suppliers in the Group's 17 major industrial sectors, significantly improving the accuracy of supplier risk control.

Sustainable Supply Chain

Building a sustainable supply chain plays a vital role in effectively alleviating supply chain risks and ensuring the quality development of enterprises. The Group is committed to building a sustainable supply chain, integrating the concept of sustainable development into all aspects of supply chain management, and working with suppliers to achieve win-win development.

Safety and Environmental Requirements

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.

Green and Low-Carbon Requirements

In 2024, the Group revised the Procurement Management and Supplier Management to clarify that on the premise of meeting procurement needs, green and low-carbon suppliers will be given priority, and in the access and evaluation links, "green and low-carbon related capabilities" will be considered, such as green factories, green supply chains, energy system certification, product carbon footprint certification and other qualifications, to promote the development of the supply chain towards green and low-carbon.

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. In 2024, the Group conducted random inspections on its green and low-carbon pilot enterprises to examine their implementation of sustainable procurement policies.

Social Responsibility Requirements

The social responsibility of the supply chain is also an important part of Shanghai Electric's efforts to build a sustainable supply chain. We have set clear requirements on corporate social responsibility in our Supplier Code of Conduct, including corruption and bribery, human rights, prohibition of child labor, health and safety, environmental protection, etc. Meanwhile, we require suppliers to make every effort to encourage their suppliers, subcontractors and agents to comply with the Group's code of conduct and abide by the principle of non-discrimination when selecting partners.

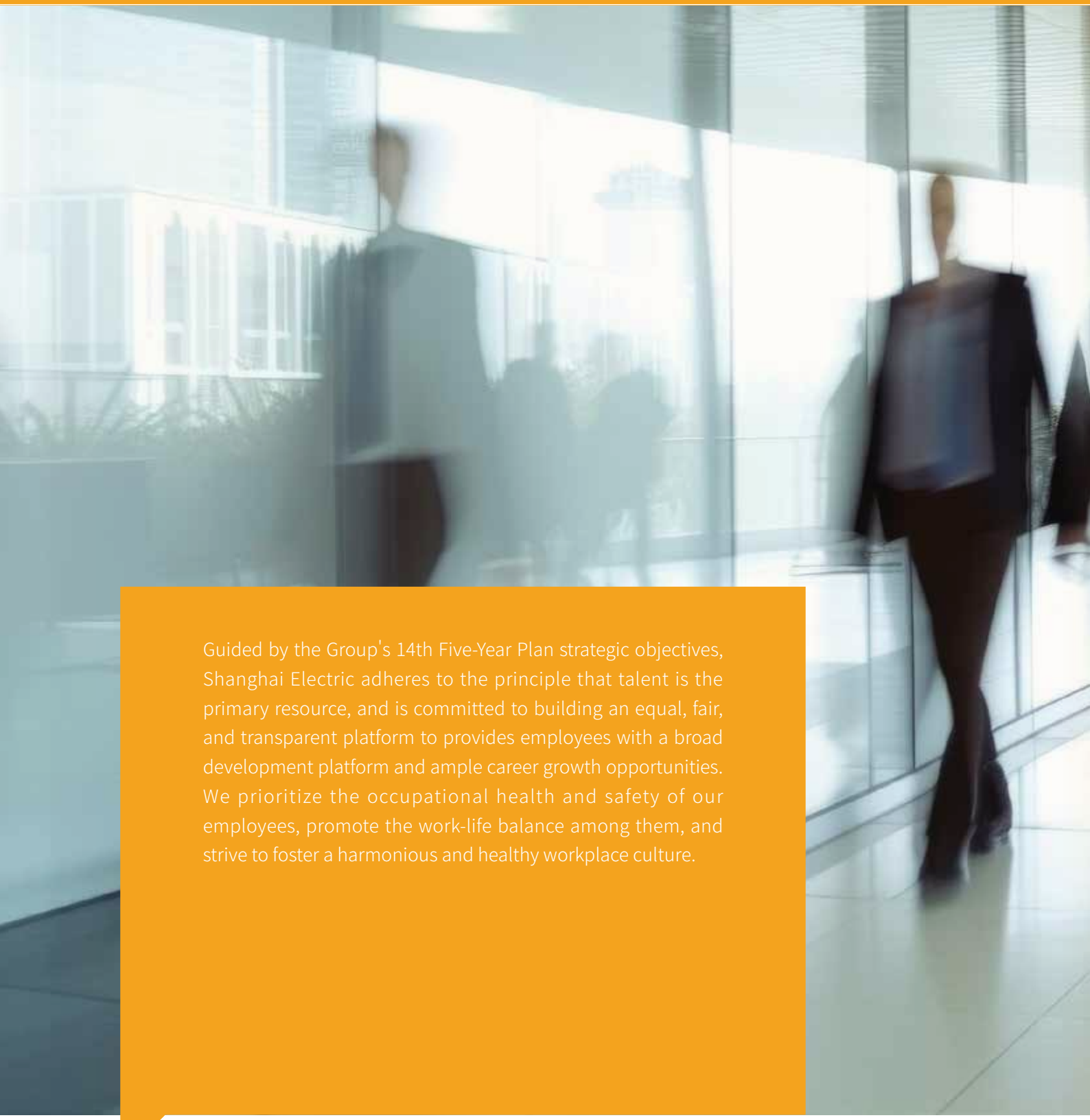
Integrity Requirements

Shanghai Electric actively guides suppliers to strengthen their legal operations and adhere to business ethics. It requires suppliers to comply with anti-commercial bribery policies and conducts necessary due diligence on them. To strengthen integrity in the procurement sector, 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 2024.

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.



Guided by the Group's 14th Five-Year Plan strategic objectives, Shanghai Electric adheres to the principle that talent is the primary resource, and is committed to building an equal, fair, and transparent platform to provides employees with a broad development platform and ample career growth opportunities. We prioritize the occupational health and safety of our employees, promote the work-life balance among them, and strive to foster a harmonious and healthy workplace culture.

Cultivating and Retaining High Quality Talent Teams

05

- Respecting Rights and Interests, Implementing Democratic Management
- Talent to Drive Shared Growth
- Care for Health and Safety Protection

Respecting Rights and Interests, Implementing Democratic Management

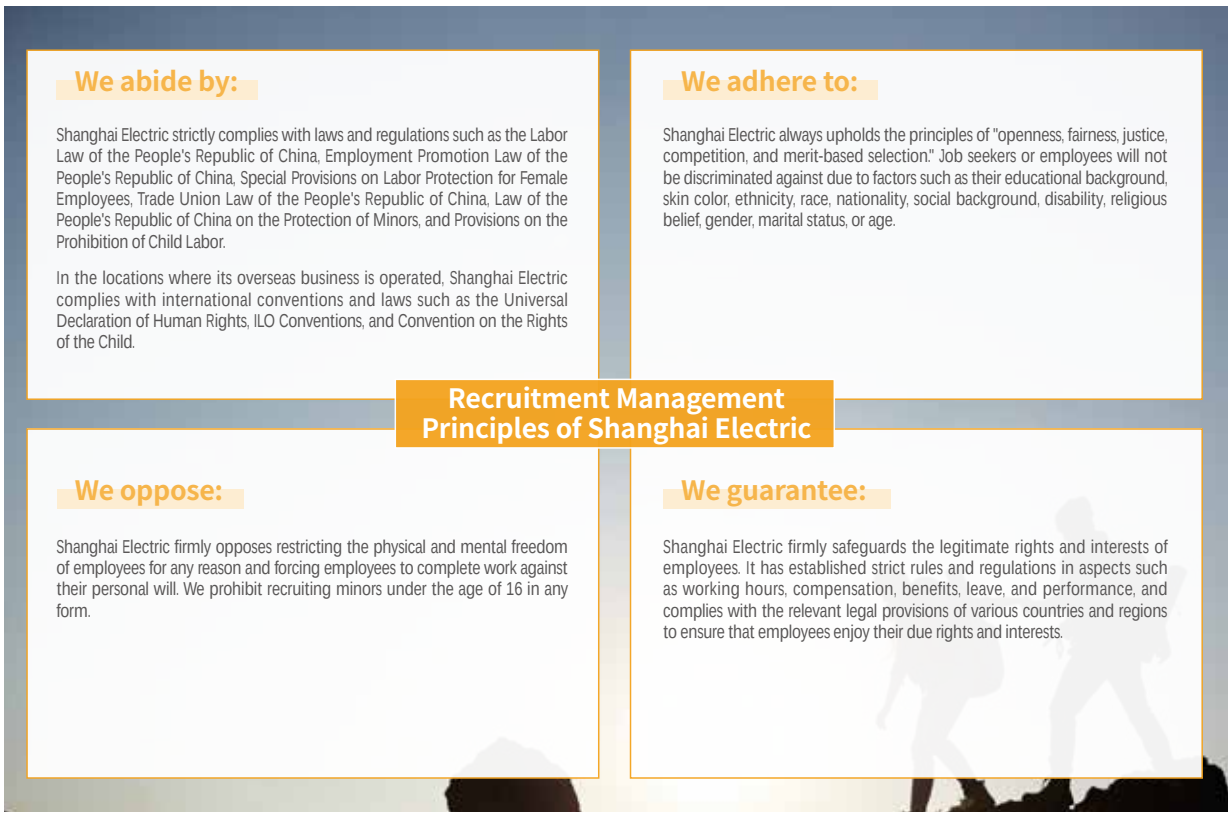
Shanghai Electric adopts an employee-centric approach, committed to safeguarding the rights and interests of employees, while valuing each employee's unique experiences and diverse backgrounds. By establishing smooth and diversified communication channels, a long-term performance-based incentive system, and a comprehensive employee benefits program, we continuously enhance employees' sense of engagement and belonging.

Equal Employment

The Group adheres to the principle of fairness and impartiality in key aspects such as recruitment, promotion, and training. It has formulated internal systems, including the Employee Recruitment Management, Detailed Rules for Employee Recruitment, and Employee Handbook to ensure the standardization and transparency of the recruitment process and employment decisions. The implementation of these systems guarantees equal opportunities for all employees in the career development process, while resolutely prohibiting any form of discrimination based on gender, age, ethnicity, or other factors, thereby laying a solid foundation for building an inclusive and diverse workplace.

We actively fulfill social responsibilities in campus recruitment and contribute to alleviating employment pressure of college graduates by expanding job openings and optimizing the selection criteria. By following the "ability-based" principle and breaking rigid inherent standards (e.g., academic pedigree, GPA, or university rankings), we implement a multi-dimensional evaluation system that assesses professional competence, practical skills, and growth potential, ensuring fair opportunities for candidates of all backgrounds while precisely identifying suitable talents.

As of the end of the reporting period, Shanghai Electric achieved a 100% coverage rate of social insurance contributions for its employees and a 100% signing rate of labor contracts.



Shanghai Electric Employee Data Statistics

As of the end of the reporting period, Shanghai Electric had a total of 40,260 employees. In 2024, the Group newly hired 2,115 new employees, with an employee turnover rate of 3.32%, showing an overall decrease compared to the previous year.

Category	Content	2023	2024
Total	Total number of people	42,190	40,260
Gender	Male	32,688	31,156
	Female	9,502	9,104
Age Segment	<20 years old	0	0
	20-29 years old	11,341	10,467
	30-39 years old	12,950	12,165
	40-49 years old	10,775	10,576
	50 years old and above	7,124	7,052
Area	Inside the province/city (Shanghai)	21,474	21,466
	Outside the province/city (Chinese mainland areas outside of Shanghai)	17,744	15,773
	Overseas (areas out of China)	2,972	3,021
Type	Full-time employees	42,190	40,260
	Part-time employees	0	0
Function	Management	3,859	3,782
	Production	19,054	17,318
	Sales	3,010	2,998
	Technical research	13,419	13,397
	Financial audit	1,134	1,093
	Administration & Logistics	1,714	1,672
Education background	Doctor's degree	215	228
	Master's degree	4,241	4,305
	Bachelor's degree	18,161	18,033
	College degree and below	19,573	17,694

Statistics of employee turnover

CATEGORY	CONTENT	2023	2024
Gender	Male	2.59%	2.57%
	Female	0.78%	0.75%
Age (Years Old)	Below 30	1.16%	1.21%
	30-39	1.76%	1.70%
	40-49	0.35%	0.32%
	50 and above	0.10%	0.09%
Area	Shanghai	2.77%	2.67%
	Outside Shanghai	0.60%	0.64%

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)

Democratic Management

The Group continuously strengthens the practice of democratic management. We have established Shanghai Electrical and Mechanical Trade Union, and 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, and Detailed Rules for the Implementation of Collective Bargaining Work in Shanghai Electric, and signed collective contracts, special collective contracts for the protection of the rights and interests of female employees and special collective contracts for wages with enterprises as representatives to ensure the protection and promotion of employees' rights and interests.

Case Study **Convening of the Fourth Session of the Third Employee Representative Meeting of Shanghai Electric**

Convening of the Fourth Session of the Third Employee Representative Meeting of Shanghai Electric

Shanghai Electric organizes and holds its employee representative meeting annually, as a mechanism for collective bargaining within the Group. In March 2024, Shanghai Electric convened the Fourth Session of the Third Employee Representative Meeting. More than 200 employee representatives from the Group's headquarters, industrial groups, and subsidiaries attended the meeting. At the meeting, we commended the outstanding projects and individuals in the 2023 labor competition, voted on and passed two proposals, namely the 2024 Shanghai Electric Group Co., Ltd. Salary Special Collective Contract (Draft) and the Adjustment Personnel List of Representatives of the Collective Bargaining Side of Shanghai Electric Group Co., Ltd. (Draft), and conducted a democratic evaluation of the Group's leadership team members, employee directors, and employee supervisors. This fully leveraged the role of employees in democratic supervision, promoting the standardization and transparency of the Company's management.

As of 31 December 2024, all incumbent employees of Shanghai Electric were members of labor unions.

Democratic Communication

We actively establish an open, transparent and unimpeded two-way communication environment. Employees can put forward their demands and reasonable suggestions through various communication channels such as the letters and visits channel, symposiums for model workers, symposiums for high-skilled leading talents, face-to-face meetings with the General Manager, and symposiums for young cadres, so as to ensure that the voices of employees can be heard and taken seriously, and promote employees' sense of engagement and belonging.

Case Study **Shanghai Electric High-skilled Leading Talent Exchange Conference**

Shanghai Electric High-skilled Leading Talent Exchange Conference

In February 2024, Shanghai Electric held a high-skilled leading talent exchange conference, where leaders of Shanghai Electrical and Mechanical Trade Union and representatives of high-skilled leading talents had discussions and exchanges. At the conference, they expressed their views on aspects such as skill training, talent echelons, studio construction, and intellectual property rights, and proposed a number of extremely valuable opinions and suggestions. The trade union incorporated the common demands into special research and formulated targeted solutions, demonstrating the Group's people-oriented and innovation-driven development concept, and injecting strong impetus into promoting the high-quality development of the Company and achieving technological breakthroughs in the industry.

Case Study Face-to-Face Activity for Youths

In August 2024, Shanghai Electric Power Generation Group held a face-to-face activity for youths at the Lingang Campus of Shanghai Institute of Mechanical Engineering, conducting exchanges with more than 330 new campus-recruited employees who participated in a large-scale training at the power generation group. During the activity, three youth representatives shared their growth and work experiences with the new employees respectively, encouraging them to root in their positions, be brave to try, and keep learning. In the free-exchange session, new members from various enterprises spoke up enthusiastically and asked questions about the development of new energy business in the power generation group, which were answered one by one by the leaders and youth representatives. This promoted communication and exchanges among employees, and enhanced their sense of belonging and cohesion.

Case Study Shanghai Electric Special Seminar for Trade Unions of Non-local Enterprises

In 2024, Shanghai Electrical and Mechanical Trade Union carried out a labor competition with the theme of "Polishing the 'Gold-plated Brand' and Shouldering the 'National Heavy Equipment'" among all basic-level enterprises in the whole system. The industrial groups and subordinate enterprises of the Group actively participated, and 152 projects attracted more than 10,000 employees to participate in the competition.

In August of the same year, Shanghai Electric held a seminar on the work of trade unions of non-local enterprises, focusing on deepening the effectiveness of the labor competition. The meeting emphasized the need to strengthen organization, combine with reality, benefit employees, and integrate with multiple activities. Several enterprises made keynote speeches for sharing, and the participants deeply discussed the key work of the labor competition, promoting the integration of the labor competition into production and operation, and stimulating the innovative vitality of employees.

Case Study Symposium on Model Workers of Shanghai Electric

Symposium on Model Workers of Shanghai Electric

In August 2024, Shanghai Electrical and Mechanical Trade Union held a symposium for model workers of Shanghai Electric. At the meeting, 21 model workers and craftsman representatives shared their experiences and put forward suggestions and advice on topics such as innovation and efficiency creation, project tackling, talent cultivation, and staff care. Yuan Shengzhou, Executive Vice Chairman of the trade union, affirmed the contributions of model workers and stated that relevant opinions would be implemented to promote the construction of a skilled talent team. In the future, as planned, the trade union will deepen the reform of the industrial workers' team, improve the talent structure, enhance staff exchanges, and amplify the leading role of model workers, letting them contribute wisdom and strength in the process of serving national strategies and promoting the high-quality development of the Group.

Democratic Supervision

We are committed to improving our democratic management system, optimizing democratic systems such as employee representative meeting and factory affairs transparency, expanding the forms and contents of democratic management, effectively safeguarding employees' rights to information, participation, and supervision, strengthening the effectiveness of democratic supervision, and promoting the high-quality development of our democratic management.

Case Study **Inspection of Democratic Management of Shanghai Electric**

Research and Inspection Meeting on Democratic Management, Democratic Supervision and the Construction of Trade Union Organization Systems in Basic-level Units

In October 2024, the Discipline Inspection Commission of the Group, the Human Resources Department, and Shanghai Electrical and Mechanical Trade Union jointly formed an inspection team to inspect the implementation of democratic management systems in some industrial groups, their subordinate enterprises, functional companies, small, medium and micro-sized enterprises, and non-public enterprises. They listened to reports from enterprises on the construction of policies and systems, innovative experience and practices, the construction of harmonious labor relations, and other aspects. They also carefully reviewed relevant materials on the implementation of employee representative meetings, transparency of factory affairs, collective bargaining, and the construction of trade union organization systems. They learned about the operation status and actual needs of enterprises and put forward guiding opinions.

Compensation and Benefits

Shanghai Electric continues to optimize its compensation structure and incentive system. During the reporting period, it optimized systems such as compensation Management for Leaders of the Group's Subordinate Enterprises, compensation Management, and Development, Approval, Implementation, and Tracking of Medium- and Long-term Incentive Plans, further highlighting performance orientation and leveraging the primary responsibility of industrial groups and enterprises in compensation management.

The "Three Capabilities" Mechanism

The "Three Capabilities" mechanism refers to a system where managerial personnel can be both promoted and demoted, employees can be both hired and fired, and income can be both increased and decreased. This mechanism stimulates the vitality and motivation of enterprises and employees, and promotes enterprises to be driven by innovation to achieve high-quality development. During the reporting period, we deepened reforms of the "Three Capabilities" mechanism, adopting multiple measures to enhance corporate vitality. We launched a new round of tenure-based contractual signings, clarifying contractual relationships and tenure objectives, strengthening the application of assessment results, and improving exit channels for cadres, and advancing the mechanism that "managers can be promoted or demoted" to drive the reform. Aligning with the goals of state-owned enterprise reform and labor productivity, we defined reasonable personnel optimization strategies, improved differentiated compensation distribution and the exit mechanism for incompetent personnel. We optimized the assessment index system, highlighted key indicators, and formulated a new mid-to-long-term incentive plan for the upcoming tenure to further motivate executives and employees.

Structure of Compensation and Benefits

Shanghai Electric implements a performance-based floating compensation system for all employees to encourage them to make positive contributions, enhance work efficiency, and drive the achievement of the Company's strategic goals. The Group has established and refined a mechanism for synchronized growth between employee salaries and corporate operating performance and labor productivity, reasonably determining the salary growth level and the salary adjustment range for employees in different positions. For employee compensation, while maintaining internal fairness, we adhere to the performance-oriented principle, using performance targets as the foundation, and strengthening rigid assessment. For employees who fail the annual assessment, their performance-based compensation will be deducted as required to reasonably widen the compensation gap. For those who violate discipline or laws and are subject to disciplinary sanctions for violating Party or government regulations and other restrictive matters, we will strictly implement compensation deductions, and recover compensation, if necessary. At the same time, we continue to uphold the overarching principle of "dual emphasis," prioritizing employees who make outstanding contributions and those holding front-line positions.

Our compensation and non-compensation benefits apply to all employees (including overseas employees). The compensation and benefits provided by the Company for employees include a series of compensation and benefits systems that are adapted to the position value, personal ability, performance assessment results, and market level, emphasizing fairness and transparency to ensure that employees' compensation and benefits match their contributions. The Company's non-compensation benefits for employees mainly focus on aspects such as employees' health and safety, career development, and work-life balance. Specifically, employees' health and safety include various medical insurances, regular health check-ups, housing guarantees, and employee care programs. Career development and training encompass company-wide training, the construction of career development channels, and employee growth planning, etc., while work-life balance includes the flexible working system provided for employees according to actual conditions and various paid leaves and holiday benefits.

Short-term Compensation

Short-term compensation includes salaries, bonuses, allowances and subsidies, employee welfare premiums, medical insurance premiums, work-related injury insurance premiums, maternity insurance premiums, housing provident fund, trade union and education expenses, etc.

Post-employment Benefits

Except for a defined benefit pension plan operated by some overseas companies, the Group's post-employment benefits mainly consist of mandatory contributions to employees' basic pension insurance and unemployment insurance, both of which are defined contribution plans.

The Group contributes pension insurance premiums monthly to the local social basic pension insurance agency based on the local regulations on the contribution base and the proportion of social basic pension insurance. After an employee retires, the local labor and social security departments are responsible for disbursing social basic pensions to retired employees.

Termination Benefits

The Group provides compensation when terminating an employment relationship with an employee before the expiration of his or her labor contract, or when encouraging an employee to voluntarily accept redundancy.

Other Long-term Benefits for Employees

The Group legally provides all employees (including overseas employees) with statutory leave, paid leave, parental leave, maternity/paternity leave, and other statutory benefits such as paid annual leave. Guided by employee needs, we comprehensively strengthen the employee service system, and provide other long-term benefits for all our employees. Such benefits include: compassionate support for employees with critical illnesses, factory high-temperature leave, workshop rest areas, domestic and overseas "Employee Homes", medical accompaniment service for overseas employees' family members, youth talent apartments, rooms for nursing mothers, love-based summer care classes, and employee parent-child activity. These initiatives reflect the Group's strong commitment to employee well-being and its resolve to foster a supportive and high-quality workplace environment.

During the reporting period, we continued to optimize welfare facilities and services with sustained efforts:

Compassionate Support for Employees with Critical Illnesses

We organized employee participation in the B+ Membership Card protection program, providing subsidies, claims processing, and 1:1 compensation for employees with critical illnesses.

Workshop Rest Areas

We completed upgrades to 368 workshop rest areas, with 90 of them included in the Shanghai Municipal Government's Public Welfare Projects, benefiting 11,108 frontline employees.

Youth Talent Apartments

We upgraded two youth activity rooms in Jiangchuan Road Talent Apartments, creating an exclusive activity space to enhance the quality of life for young employees living here.

Love-Based Summer Care Classes

We launched "Love-Based Summer Care Classes" with 170 children enrolled. We established the Shanghai Electric Employee Children's Art Troupe, while forming choir groups and dance groups where 34 children received training and performance opportunities.

Factory High-Temperature Leave

We instituted high-temperature leave policies, enhanced summer labor protection and heatstroke prevention measures, and delivered high-temperature care to over 10,000 employees across 23 enterprises.

Domestic and Overseas Employee Homes

We actively promoted the construction of 362 domestic and overseas employee homes ("small homes"), achieving full coverage for 192 Shanghai Mitsubishi Elevator maintenance stations outside Shanghai and 42 sales offices of Carrier Air-Conditioning and Refrigeration System (Shanghai) Co., Ltd. outside Shanghai.

Medical Accompaniment Service for Overseas Employees' Family Members

We expanded the 24/7 remote video medical consultation service from 194 overseas employees to their family members, offering a "worry-free accompaniment" service to alleviate concerns about family healthcare.

Rooms for Nursing Mothers

We continued digital transformation of 59 rooms for nursing mothers through the National Trade Union Service Platform. Among them, new additions included 5 rooms, 2 upgraded to three-star status, and 1 to four-star status.

Employee Parent-Child Activity

We organized over 30 employee families to participate in the "Visiting Shanghai Electric" parent-child activity. Participants experienced up close application scenarios of distributed photovoltaic and energy storage and had a sense of the harmonious symbiosis between energy and nature.

Case Study 1638 Talent Apartments of Shanghai Electric

"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 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, over 400 employees moved into "1638 Talent Apartments of Shanghai Electric."

1638 Talent Apartments of Shanghai Electric

Case Study "Visiting Shanghai Electric" Parent-Child Study Activity

In the summer of 2024, we held a "Visiting Shanghai Electric" parent-child activity themed "Electric Brightness for a Better Life". The event invited employees and their children to visit Shanghai Electric's Show 709 Media Park, which is a self-invested, self-renovated, and self-operated complex, experience distributed photovoltaic and energy storage scenarios, and explore the transmission and distribution technology center laboratory. We also organized fun science popularization classes to stimulate children's interest in science and electricity knowledge through experiments. This activity sowed green and low-carbon seeds in children's hearts, while enhancing parent-child relationships among employees and helping to build a harmonious corporate atmosphere.

"Visiting Shanghai Electric" Parent-Child Study Activity

Case Study 2024 Shanghai Electric Sports Meeting

In April 2024, Shanghai Electric held a large-scale comprehensive sports meeting, successively carrying out 8 major events including radio calisthenics, tug-of-war, basketball, chess and card game, table tennis, dry-land curling, "Electric Coordination" orienteering competition and dragon boat race. 341 teams and over 2,800 employee athletes from 33 delegations under the Group participated in the competition. This sports meeting was large-scale, with a large number of participants and a long-time span. It not only strengthened the physical fitness of employees, but also enhanced team cohesion, demonstrating the Company's care for employees and sense of social responsibility.

2024 Shanghai Electric Sports Meeting

Serving a Diverse Workforce

We are committed to enhancing our employee benefit system through a variety of benefit programs. We actively support employees in need, place special emphasis on protecting the rights and interests of female employees, and value mental health of our employees. These efforts aim to elevate overall employee well-being and work efficiency, thus fostering a more harmonious and productive workplace.

Supporting Employees in Need

We strive to build a caring and supportive work environment where every employee feels collective warmth during challenging times. In 2024, we organized 66 units to participate in the "One-Day Donation" campaign, raising RMB5.425 million of charitable funds. For over 200 migrant workers who remained on duty during the Spring Festival, we provided communication allowances to help them alleviate their homesickness. Additionally, we distributed 1,470 food basket gift packages to registered employees in need every quarter and provided holiday stipends to 80 children of 66 disadvantaged employees during International Children's Day. Throughout the year, Shanghai Electric visited and assisted 5,403 employees facing difficulties.

We strictly adhere to laws and regulations such as the Law of the People's Republic of China on the Protection of Persons with Disabilities, offering equal employment opportunities and development plans for employees with disabilities. We are committed to creating an equal, friendly, and inclusive workplace to ensure that every employee can achieve personal growth and professional fulfillment amid respect and understanding. We always integrate the concept of "equality, inclusion, and care" throughout the work of disabled employees, creating a favorable employment environment for them. Guided by a "non-discrimination, equal treatment" principle, we offer them positions reasonably according to the physical condition of disabled employees. As of the end of the reporting period, the Group had over 300 employees with disabilities.

Protecting the Rights and Interests of Female Employees

We attach great importance to the needs of female employees, and fully abide by the regulations regarding the protection of women during pregnancy, childbirth, and lactation, stipulated in the Labor Law of the People's Republic of China, and Special Provisions on the Labor Protection of Female Employees. We are committed to enhancing their benefits, rights and interests by optimizing facilities and holding diversified activities. During the reporting period, we used the management and operation system of the national trade union service platform to carry out digital and intelligent transformation on 59 nursing rooms for mothers.

Case Study Gathering the "Female Power" in Science and Technology - Technical Exchange Meeting for Female Science and Technology Experts of the Group

On the eve of the 114th International Working Women's Day, the Advanced Materials Spectrum Research Center of Shanghai Electric and Liu Xia's Innovation Workshop jointly held a technical exchange meeting for female science and technology experts. The meeting invited female experts from Wuxi Turbine Blade Co., Ltd. and the Central Research Institute to participate. During the meeting, Liu Xia's team introduced the scientific research and industrialization situation of relevant technologies. Fan Manjie and Liu Shan respectively gave special reports. The experts discussed technical difficulties and corporate cooperation. After the meeting, they visited the upgraded corporate culture exhibition hall. This activity not only provided a valuable exchange platform for female science and technology talents but also fully stimulated their innovation potential and vitality, injecting new impetus into the Group's innovative development.

Technical Exchange Meeting for Female Science and Technology Experts of Shanghai Electric

Case Study "Perceiving the Great Power of Struggle, Building a Better Life Together" Knitting Class and Women's Rights Protection Law Knowledge Quiz Competition

On 8 March 2024, the trade union of the Shanghai Electric Nuclear Power Group held a knitting class and women's rights protection law knowledge quiz competition themed "Perceiving the Great Power of Struggle, Building a Better Life Together" to celebrate the 8th March Women's Day. During the knitting class, female employee representatives experienced plush handicraft activities, shared and exchanged ideas about product design, and displayed their finished products and process gains. Employees were able to relieve stress while also enriching their leisure time, cultivating their temperament and edifying their sentiments. In addition, everyone also learned about the Law on the Protection of Women's Rights and Interests and Special Provisions on the Labor Protection of Female Employees through online knowledge quizzes, further strengthening their awareness of protecting their own rights and interests.

"Perceiving the Great Power of Struggle, Building a Better Life Together" Knitting Class and Women's Rights Protection Law Knowledge Quiz Competition

Caring for the Mental Health of Employees

Shanghai Electric cares for the mental health of employees through multi-dimensional measures and strengthens humanistic care. Subordinate enterprises leveraged their Party, labor union, and youth league organizations to implement mental health training programs while offering comprehensive support in daily life, work, and recreational activities. The Electrical and Mechanical Trade Union innovatively launched the "Universal Enjoyment - Staff Lecture Hall" initiative, focusing on the theme of adolescent emotional management, and inviting professional lecturers to help employee-parents gain deeper insights into the psychological needs of their children, master scientific communication skills, and alleviate family parenting pressures. Such activity not only promotes the psychological resilience of employees, but also promotes higher work effectiveness through family harmony.

Talent to Drive Shared Growth

Shanghai Electric values the comprehensive development of the employees. Through smooth career development channel and perfect training systems, Shanghai Electric provides support for the long-term development of every employee, to enpower the employees to give full play to their ability in suitable positions and achieve the common growth with the Group.

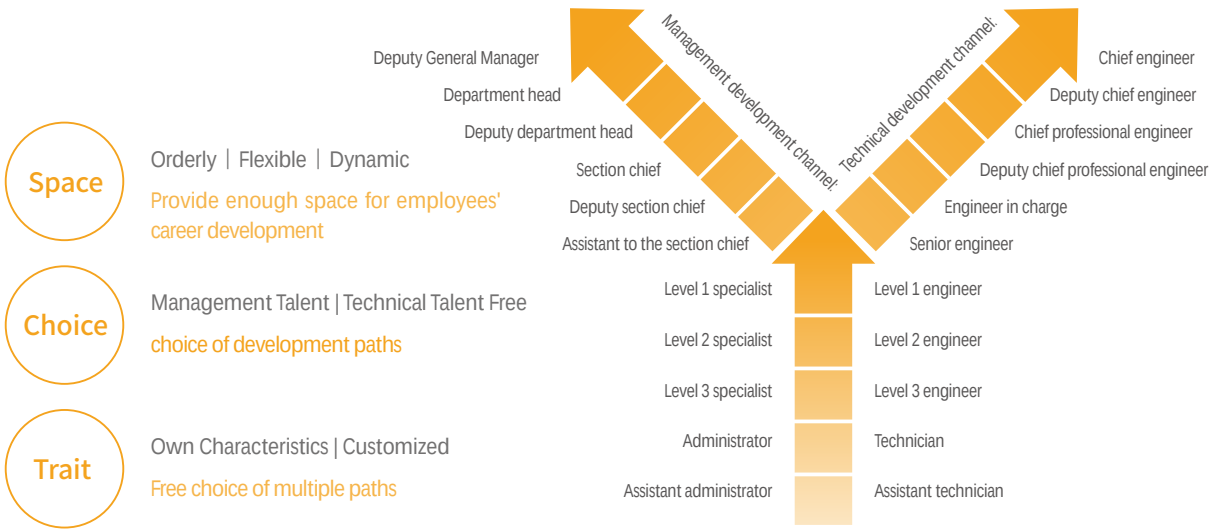
We are committed to building a comprehensive and systematic strategy for human capital development and talent pipeline development, continuously optimizing talent introduction models, broadening career development channels for employees, and promoting talent mobility and re-development by establishing an internal talent market, to support the long-term development of our company.

Talent Introduction Policies

Talent is the foundation of innovation. Shanghai Electric understands the importance of scientific and technological talents for the future development of the Company and thus strengthen the introduction and cultivation of scientific and technological talents by establishing a college for elite engineers and implementing strategies for tiered and categorized talent cultivation. The Group attaches great importance to the cultivation and reserve of strategic scientific and technological talents and is dedicated to improving the allocation rate of leading scientific and technological talents. Additionally, we have redoubled our efforts to boost market-based talent introduction. By scanning top talents in the industry and using market mechanisms to bring in high-end talents, we have improved our management plan that covers "market-based recruitment, contractual management, differentiated compensation, and market-based exit" to support the Company's development in new arenas, and drive the innovation and sustainable development of the Company through our talent strategies.

"Y-shaped" Career Development Channel

Shanghai Electric has built a "Y-shaped" career development dual-channel system to provide the employees with differentiated career development channels where management and technical roles run in parallel. By establishing a scientific and technological talent pool and systematically advancing the professional talent pipeline development, we encouraged our core backbone members to delve deeply into technical fields. At the same time, we improved the supporting incentive mechanisms, effectively unleashed employees' potential, and achieved resonance between personal growth and corporate development.



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 craftsmen.
- Encourage personnel in various auxiliary occupations to participate in cross-disciplinary composite skill training programs.

Improve the skill-oriented usage system

- Improve the job level 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.

Shanghai Electric's talent pool management system

Talent Cultivation System

Shanghai Electric always focuses on employee development and talent empowerment. Our training course system is for all employees, covering three teams of management talents, professional management/technical talents, and skilled talents. From three dimensions of ability, quality, as well as knowledge and skills, we define the capability entries for each level and professional position and match corresponding training programs and courses to form the "AIK" course system of Shanghai Electric. Moreover, we provide tiered and categorized training through such carriers as the group theoretical learning, the leading cadres lecture hall, and the "E - College" online platform. In 2024, for the innovative practices in talent training, the Company was honored with the titles of "2024 Enterprise Benchmark Learning Platform" and "Shanghai Young and Middle-aged Engineer Training Base", as well as the "Annual Human Resources Navigation Practice Award" by GHRlib.

In 2024, Shanghai Electric invested a total of RMB107.84 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 98.61%.

Gender	Female			Male		
Employee category	Senior management	Middle management	General staff	Senior management	Middle management	General staff
Percentage of training	100%	98.76%	97.27%	100%	98.42%	97.23%
Average number of training (hours)	118	69	58	118	69	59

Talent Map

We are committed to building a "1+3" talent pipeline system with characteristics of the electrical industry. This system focuses on the top-notch core talents from the "3" key teams of management talents, elite engineers, and model workers and craftsmen, and unites them into "1" talent team of strategic significance. We guide industrial development by broadening the horizons of talents and lift the height of our endeavors by the caliber of our talents, thereby achieving the shared growth between talents and the Company and boosting the persistent innovation and long-term development of the Enterprise.

Elite Engineer Team

Improve the tiered, categorized and focused training program for scienfitic and technogical talents, devise the science and technology expert lecture hall, youth expert pool and other talent training programs.

Management Talent Team

Adhered to a combination of training and practical experience, continuously improve the development mechanism for management talents, and accelerate cadre training through projects like the "Six-Cross Exchange" (cross-position, cross-enterprise, cross-industry, cross-job level, cross-region, and cross-rights and interests) and the "Spark" Energy Synergy Special Plan.

Model Worker and Craftsman Team

IFormulate the Implementation Opinions of Shanghai Electric on Strengthening the Skiled Talent Pipeline Development in the New Era, and optimize the training, utilization, evaluation, incentives, and protection systems for skilled talents.

Fresh Graduate Training

Shanghai Electric consistently adheres to a "high-quality, diversified, and internationalized" approach to talent recruitment. Under the leadership of the leaders of the Group, we have formed a young promoter team to hold offline publicity meetings in more than 20 well-known universities at home and abroad, including Tsinghua University, Shanghai Jiao Tong University, Tongji University, and the National University of Singapore, to expand recruitment channels and reach.

In addition, we held a summer elite training camp to select students from domestic and foreign universities to visit Shanghai Electric and participate in activities such as corporate visits and topic exchanges. We also formed a young alumni promoter team of the Group and selected a batch of representative young alumni to convey a more concrete and vivid employer brand image. In 2024, Shanghai Electric was honored as one of the "Top Employer Brands Favored by Chinese College Students".

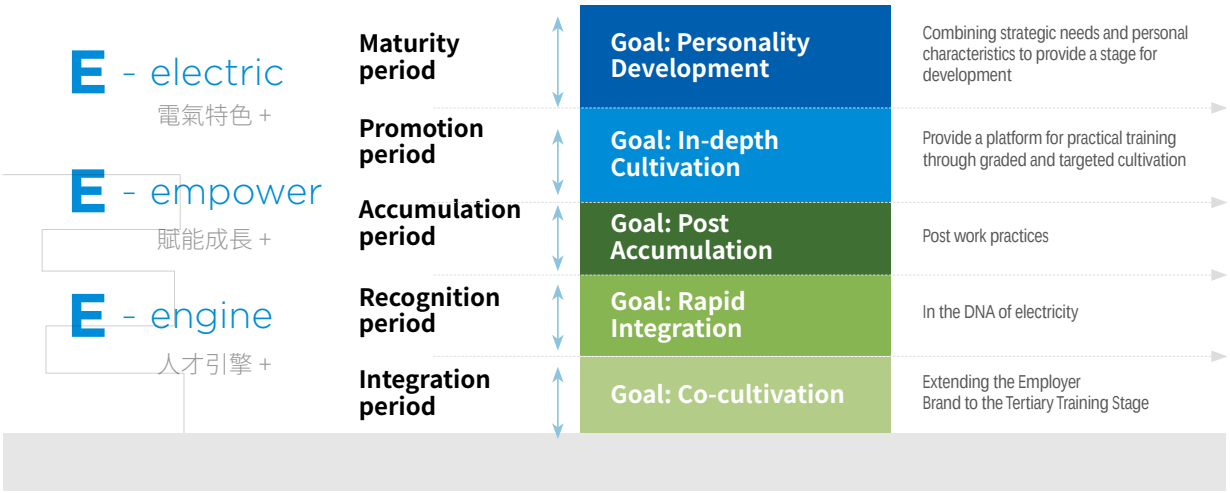
Case Study **"New Electric Energy, Towards the Future" New Employee Induction Ceremony**

In August 2024, Shanghai Electric held the new employee induction ceremony at the Lingang Campus of Shanghai Electromechanical Institute, where more than 700 newly hired college graduates from all over the country began their career journey. The five-day training, themed "New Electric Energy, Towards the Future", helped new employees understand the Company through three major modules, including "Strategy Decoding", "Cultural Cohesion", and "Growth Empowerment". It also included a variety of group activities such as the "Full-energy Departure Towards the Future" themed team-building event, the new employee basketball game, and the cultural performance, to help new employees start a new journey at Shanghai Electric.

"New Electric Energy, Towards the Future" New Employee Induction Ceremony

Young and Middle-added Employee Training

By regarding "Excellence E+" Development Systems as the core, Shanghai Electric has built a systematic talent training mechanism, featuring with synergy from top to bottom and open empowerment. Through a five-stage training path of integration period, cognition period, accumulation period, promotion period and maturity period, and in combination with the special projects such as "Spark" Energy Synergy Special Plan and international talent training programs, this system not only integrated the cultivation of young talents with major strategies, major projects, and the expansion of new industry arenas, but also organized young cadres (backbones) to participate in the front-line practice in a planned way, so as to upgrade their professional capabilities and comprehensive qualities and build a core talent pipeline for the Group's strategic development.



To ensure the effectiveness of talent training, Shanghai Electric has established a long-term mechanism and formulated the Several Measures on Strengthening the Training and Using of Young Scientific and Technological Talents, to clarify the training orientation of young scientific and technological talents to "take the lead" and "be the main players". Shanghai Electric also optimized the appointment mechanism, innovated the evaluation system, and broke traditional shackles such as seniority-based promotion. Shanghai Electric boldly appointed young experts to key positions such as scientific research and project management and created a positive competitive environment where "the competent were elevated, the outstanding were rewarded", to build a full- chain growth platform for young talents, from technological breakthroughs to the transformation of achievements, and thereby to realize the resonance between talent development and corporate strategy.

Case Study **"Star Power"Young Talent Special Training Camp**

Shanghai Electric have carefully planned and launched the "Star Power" special training camp program for over 80 young employees in the "accumulation period". The program focused on providing comprehensive and targeted workplace skills training for young employees at this stage, helping them clarify their career development paths. Through diversified training courses and practical activities, Shanghai Electric not only focused on exploring the growth potential of young employees but also emphasized the inheritance and promotion of the profound and excellent spirit and culture of Shanghai Electric. We encouraged young employees to devote themselves to their work with a positive and striving attitude and achieved steady and continuous growth and improvement in their careers.

"Star Power" young talent special training camp

Technical Worker Exchange and Training

We formulated the Implementation Opinions of Shanghai Electric on Strengthening the Skilled Talent Pipeline Development in the New Era, to optimize the skilled talent system. By conducting development assessments, supply and demand forecasts, and training plans for our skilled talent pool, we ensured that the development of skilled talents was precisely aligned with the Company's actual needs, thus providing a solid talent support for the Company's long-term development.

The Group Continued to deepen the skilled talent training and, through various activities such as "Li Bin Cup" staff skills competition and digital Intelligence competition, we were committed to cultivating skilled talents in the field of intelligent manufacturing and high-end equipment, including model workers, craftsmen and skill masters needed for the future construction of the country. During the reporting period, Li Bin Technician College of SEC made a concerted effort to train the skilled talents and launched 13 types of programs, covering technical worker training, skill competitions, and training for highly skilled talents, with a total of 9,605 participants; and carried out in-depth research on the training of highly-skilled leading talent echelon, and cooperated with the Group to complete a number of tasks such as the selection of national craftsmen and the application for the craftsman college, providing strong support for talent development. In 2024, the Intelligent Manufacturing Craftsman College that was applied for by Shanghai Electric was successfully approved and selected as one of the first 100 craftsmen college construction sites in China.

Case Study **"Li Bin Cup" Staff Skills Competition**

In November 2023, Shanghai Electric held the "Li Bin Cup" staff skills competition. A total of 382 employees from 17 units of the Group participated in the competitions and competed in 4 job categories, including industrial robot system operators and additive manufacturing equipment operators. As a category II industry-specific competition in Shanghai, the competition featured a dual-dimension review of theoretical exams and practical operation assessments. We invited the industry experts and skilled technicians to form a professional panel of judges to ensure fairness and authority. The competition innovatively adopted a model in combination of "competition and training". Before the competition, we provided both online training and offline practical guidance and set up a "master-led training" session synchronously, where national technical experts provided on-site guidance for process optimization.

Since 2004, Shanghai Electric has held the "Li Bin Cup" staff skills competition for 21 consecutive years. By building the "training-competition-promotion" channel, we've promoted an increase in the talent reserve rate of key positions of the Group and injected sustainable development momentum into industrial upgrading.

Shanghai Electric held "Li Bin Cup" Staff Skills Competition

Case Study "3+3+3" Technical Worker Training Programs

Shanghai Electric focused on the talent development and industry upgrading and cooperated with Shanghai DianJi University to create a "3+3+3" technical worker training mode and break a growth path that integrated academic qualifications with skills. By upholding the advanced educational philosophy of "college + factory, academic qualifications + skills" and catering to the actual needs of front-line industrial workers, we have established a comprehensive talent training system. During the teaching process, we provided students with dual tutors, dual courses, dual textbooks, and dual certificates, enabling them to achieve dual development in knowledge and skills.

As of the end of the reporting period, Shanghai Electric has launched 26 sessions of a total of 30 "3+3+3" training classes, including 1 session of model worker and craftsman training classes and covering 14 occupational categories. The number of trainees has reached 860, of which 602 have graduated, 441 have obtained dual certificates, and 404 have earned the diplomas of adult higher education, including 273 graduated with bachelor's degree and 131 graduated with college degree.

Shanghai Electric "3+3+3" Technical Worker Training Graduation Ceremony

Talent Reeducation

We understand that talents are the most valuable assets of an enterprise and attach great importance to the continuing education and personal growth of our employee. By encouraging our employees to actively participate in academic qualification improvement courses, paying the tuition fees of external courses for those who meet the requirements, providing connectivity to external resources, and other measures, we aim to broaden the horizons of our employees and empower their growth in an all-round way. Since 2008, we have successively cooperated with Shanghai Jiao Tong University, Tsinghua University, and Fudan University to offer Part-time Master of Engineering Management (MEM), Part-time Master of Business Administration (MBA), and part-time doctoral programs. These programs are open to eligible employees from various industrial groups and provide partial tuition reimbursement, which played an important role in the training of core technical talents and the retention of the talent pool.

Internal Talent Flow of the Group

By establishing the Group's internal talent market and innovating the talent management mechanism, Shanghai Electric gives priority to meet the needs of internal positions and promote the accurate matching between employees and positions. Through internal recruitment, two-way selection, and dynamic adjustment, Shanghai Electric provides its employees with more career development opportunities, optimize the HR allocation of the corporate, stimulate the potential of its employees, and achieve a win-win situation between personal growth and corporate development.

Care for Health and Safety Protection

By adhering to the policy of "Lives are most important, enjoying safety, green manufacturing and creating a better future", Shanghai Electric insists on preventing and resolving major safety risks and curbing serious and major accidents. Shanghai Electric comprehensively consolidates the production safety responsibilities, strengthens the risk classification management and control and the investigation and management of hidden dangers, and holds the bottom line of production safety, in a bid to create a safe and stable environment for the high-quality development of the Group.

Safety Mechanism

By 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, the Group has formulated the Occupational Health, Safety and Environmental Protection Management Manual, the Emergency Plan for Production Safety Accidents, the Shanghai Electric Occupational Health Management White Paper and other management methods, and revised systems such as the Productive Construction Project "Three Simultaneities" Management and the Labor Protective Equipment Management during the reporting period, to improve the occupational health and safety management system.

We follow the ISO45001: 2018 Occupational Health and Safety Management Systems and GB/T33000-2016 Guideline of China Occupational Safety and Health Management System, to strive to establish a sound health and safety management system to prevent and minimize workplace accidents. As of the end of the reporting period, a total of 102 companies in the Group have obtained the ISO 45001 Occupational Safety and Health Management System (OSHMS) certification and a total of 64 companies have obtained the certification for GB/T33000-2016 Guideline of China Occupational Safety and Health Management System.

We continuously implement the safety and environmental protection committee meeting mechanism. The main administrative leaders at all levels serve as the directors of the safety and environmental protection committees. By regularly studying and resolving major issues related to workplace safety and deploying and promoting all aspects of workplace safety, we have formed a workplace safety system framework of "management manuals + management systems + implementation details + corporate standards + negative lists". During the reporting period, we have formulated the "Three-Year Action Plan for Fundamental and Key Workplace Safety Improvement". By focusing on "improvement", "breakthroughs" and "enhancement", we have developed a detailed implementation plan, including "12 major actions and 60 specific tasks" in field of workplace safety, as well as "7 aspects and 30 specific tasks" in field of fire safety. The plan not only clarified the tasks and annual objectives, but also guided and urged our subordinate industrial groups and enterprises to implement relevant work in accordance with the standards.

The Group has promoted its subordinate enterprises to implement the workplace safety responsibility for all employees in various ways, such as responsibility statements, commitment letters, position descriptions, performance assessment, etc.; and continued to implement the "Dural-signature and Dural-commitment" mechanism. The workplace safety responsibility statements and commitment letters were signed at different levels between the Group and the industrial groups, and between the industrial groups and the main leaders of the Party and the industrial enterprises. The signing rate reached 100% in 2024.

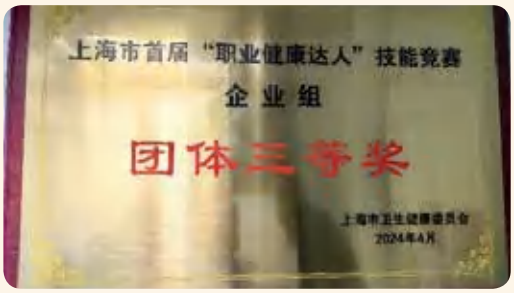
External Participation and Honors

The Group continued to deepen its layout in scientific research and innovation in the field of workplace safety and was deeply involved in key national and local scientific research projects. The Group participated in the "Research on the Construction and Diagnostic Assessment Technology of China's Workplace Safety Management System", a key scientific and technological project for 2024 of the Ministry of Emergency Management. The Group also participated in the "Classification Specification for Workplace Safety Standardization of Enterprises in Shanghai", a project of Shanghai Emergency Management Bureau, to provide important support for industry standardization and technological innovation.

In 2024, Shanghai Electric Power Generation Equipment Co., Ltd. (Auxiliary Equipment Works) was selected as the "2024 Healthy China Action Innovation Practice Typical Case"; Shanghai Schneider Industrial Control Co., Ltd. won the "Third Prize for the Best Practice Case of Accident Hidden Danger Reporting and Reward Mechanism in Production and Operation Units"; Shanghai Yileng Carrier Air-Conditioning Equipment Co., Ltd. won the "Nomination Award for the Best Practice Case of Accident Hidden Danger Reporting and Reward Mechanism in Production and Operation Units" and the third team award of Shanghai's 1st "Vocational Health Expert" skills competition.

"During the reporting period, The number of working days lost due to industrial accidents was 3,570, with no fatalities or serious injuries occurring in production safety incidents.

2024 Healthy China Action Innovation Practice Typical Case



Third Team Award in Enterprise Group of Shanghai's 1st "Vocational Health Expert" Skills Competition

Year	2022	2023	2024
Work-related deaths (person)	0	1	0

Health and Safety Management

To effectively manage the occupational health and safety risks in the manufacturing process, by promoting workplace safety standardization and improving position safety operation specifications, process technology innovation, and health monitoring management measures, we upgraded the level of workplace safety and occupational health management in an all-round manner and guaranteed the health and safety of our employees in an effective way.

Safety Production Measures

Advance the standardization of workplace safety

advance the construction of the workplace safety standardization, guide and urge enterprises to do a good job in periodic re - evaluation; identify the shortcomings and deficiencies in the operation process by examining the organization, current status and continuous improvement status of the enterprise's workplace safety standardization, and promote closed-loop rectification and realize continuous improvement.

Improve job safety operation regulation

by benchmarking the latest national, local, and industry-specific legal requirements and standards and in combination with the characteristics of enterprise risk identification and accident potential in recent years, the Group selected typical positions from its main industrial groups and some productionoriented enterprises, and then compiled and formed the "Safe Operation Instructions", which covered 203 main production occupations.

Infrastructure upgrading

advance the special rectification of forklifts, install technical preventive measures such as area warning lights, buzzers, speed limiters, and anti-collision warning systems; implement technical modifications such as the elevated protection modification of sand-blasting rooms and the replacement of semi-permanent elevated platforms.

Occupational Health Measures

Operation environment optimization

transform the scattered welding operation areas within the workshop into a clean workshop and add the integrated dust collection device to improve the air quality of the workshop.

Technological Innovation

bring in fully automatic beveling machines and grinding robots to reduce the hazards of dust and noise; achieve lead-free processes for printed circuit boards and replace adhesive processes with automatic laser welding to reduce the presence of toxic and harmful substances at the workplace.

Health monitoring and management

continuously carry out the detection and evaluation of occupational hazard factors and occupational health monitoring in compliance with regulations to ensure the continuous improvement of the operating environment and the timely tracking and effective management of employees' health conditions.

Shanghai Electric's Occupational Health and Safety Measures

Special Rectification of Fire Safety

During the reporting period, the Group developed the special rectification of fire safety and promoted enterprises to carry out concentrated rectification of fire safety hazards through a series of measures:

· Enhance fire pump room, fire pipeline and other infrastructure;

· Add, renovate, and upgrade fire alarm devices such as infrared detectors, smoke detectors, and heat sensors;

· Intensify the inspection of fire safety risks and enhance the management and dynamic clearing of existing fire hazards.

In addition, during the workplace safety month, we launched a concentrated "Clearing the Fire Exit" special action, which focused on "six major scenarios" such as evacuation routes, evacuation doors, indicator signs, fire-separation distances, safety exits, and fire-truck operation areas for special rectification, in a bid to comprehensively improve the fire safety management level, safeguard the life and property safety of employees and the stable development of the Enterprise.

Safety Inspection and System Audit

Shanghai Electric strengthened the construction of the workplace safety responsibility system and continuously promoted the establishment of an inspection mechanism led by the main leaders of Party and enterprises at all levels. During important periods such as the Spring Festival, May Day, and National Day, the participation rate of the "top leaders" of the Group and its subsidiaries in pre-festival safety inspections reached 100%, creating a demonstration effect of taking the lead in identifying hidden dangers and promoting rectification.

The Group also organized an element-by-element benchmarking audit on the operation effectiveness of the safety and environmental protection management systems of key industrial groups and key enterprises, with a focus on the implementation of the "three managements and three musts" principle, to systematically sort out the difficulties and pain points of safety management. Through the system audit, we effectively promoted the implementation and sustainable development of the SEC-LOVE safety and environmental protection management model and system within the Group and greatly facilitated the implementation of the concept that "systems ensure safety and promote safety".

Safety Risk Management

To strengthen the management and supervision of risk identification and evaluation control within the Group, and to comprehensively advance the construction of the risk prevention and control system, Shanghai Electric has, in accordance with the Guidelines for the Implementation of the Safety Risk classification Management and Control System for Enterprises in Shanghai, verified the compliance of the management and control measures for key production-oriented enterprises' risk identification and classification and formed the Group's Risk Classification Management and Control Guidance Manual and the Compilation of Grade A Risk Classification Management and Control Measures and Risk Notification Cards, to guide its subsidiaries in continuously improving their risk prevention mechanisms and upgrading their safety management levels and independent management capabilities.

Safety Culture

We promoted the practice of SEC-LOVE safety management model, gave full play to the independent role of employees, and created a safety culture atmosphere of full participation and co-governance. In 2024, the Group headquarters invested a total of RMB189.3177 million in workplace safety and carried out altogether 6,454 safety training sessions, covering 182,915 person-times, with a cumulative duration of 410,237 hours and a training coverage rate of 100%.

Shanghai Electric's Safety Culture Publicity

Party Building Leads to Safe Production	Put workplace safety on the agenda of the Party committee meetings, incorporate General Secretary Xi Jinping's important remarks on workplace safety and relevant laws and regulations into the learning content of the Party committee's theoretical learning center group, and urge grassroots Party organizations to implement them in line with the standards.
Risk Identification and Training	Organize a special training session on "Mechanical Industry Risk Identification and Major Accident Hidden Danger Standard Interpretation". Each unit designs industry-specific major accident hidden danger standards, carries out applicable thematic learning and training, promotes understanding and mastery of standards, and integrates standards into the daily process of hidden danger inspection and management. A total of 312 special training sessions were organized, promoting the re-inspection and correction of 149 hidden dangers
Strengthening Confined Space Operation Safety	Carry out safety education in confined spaces, manage access control and account management, supervise enterprises to learn from accidents and strengthen on-site safety, and organize safety meetings for construction projects. A total of 118 construction projects are planned
Organizing Occupational Health Lectures	Through professional training and first aid knowledge lectures, combine online and offline methods to widely promote knowledge of occupational disease prevention, popularize healthy living concepts, and enhance employees' occupational health awareness and skills

Case Study "Firefighting for All, Life First"Firefighting Day Events

In 2024, focusing on the theme of "Firefighting for All, Life First", the Group organized the "119" Firefighting Day events to strengthen fire safety management in an all-round way and improve the fire safety literacy of all staff:

- Carry out fire safety warning and law popularization for employees, with a total of 71,211 person-times involved.
- Organize employees to participate in emergency evacuation and other drills in different scenarios, totaling 443 events.
- Conduct comprehensive inspections on fire safety responsibilities of relevant parties, totaling 314 times.

During the events, we also sorted out historical hidden dangers and promoted closed-loop rectification to effectively consolidate the Enterprise's fire safety responsibilities and enhance employees' awareness of fire safety and self-prevention and self-rescue abilities.

Case Study Publicity and Education on Clearing the Fire Exit

In 2024, through a variety of methods, including the compiling and printing educational materials, organizing emergency escape training sessions, online video courses, and special trainings for sections (shits), the Group's subordinate enterprises conducted the emergency escape education for all employees to popularize knowledge on emergency response, emergency escape, and emergency rescue, and ensure that all employee were familiar with emergency warning signals, knew the emergency escape routes in their respective locations, knew how to choose the most rational and safe escape routes and methods, and had a grasp of emergency rescue techniques and precautions, so as to prevent panic and disorderly behavior, as well as blind escape and rescue attempts in case of emergency. In 2024, the subordinate enterprises carried out a total of 459 emergency escape training sessions, with 29,652 participants.

An Emergency Escape Training

Case Study **Safety Warning Education and Safety Knowledge Popularization**

In 2024, the Group's subordinate enterprises intensified the safety warning education for all employees and strengthened their safety awareness by organizing them to watch the promotional videos themed on "Safety Production Month" and the learning package of "Safety Warning Education Videos" collected and provided by the Group. We conducted three-tier safety re-education for relevant personnel in response to the new requirements, regulations, risks, and measures in relation to new processes, technologies, materials, equipment, environments, and factory buildings, with an aim to ensure that all employees were well-informed about the new risks around them, had a thorough understanding of the new safety regulations, and could effectively implement new work standards. In 2024, we organized 791 warning video watching sessions, with a total of 42,258 participants, and carried out 357 safety re-education sessions, with a total of 10,830 participants.

In order to standardize the Group's emergency management and emergency response procedures for various types of incidents, we developed the Emergency Response Plan for Production Safety Accidents, which included several special plans such as the Special Emergency Response Plan for Fire Accidents, Special Emergency Response Plan for Dangerous Chemicals Accidents, the Special Emergency Response Plan for Special Equipment Accidents and the Special Emergency Response Plan for Flood and Typhoon Prevention, to ensure rapid and orderly emergency rescue operations. In 2024, we carried out 477 emergency drills, involving a total of 19,245 participants.

Case Study **Emergency drills of "All Caring for Safety, All Capable of Emergency Rescue" 2024 Workplace Safety Month Events**

During 2024 workplace safety month, the Group's subordinate enterprises, in line with the actual situations, conducted emergency drills simulating the "six types of safety accidents", covering electric bicycle fire accidents, fire accidents in places using flammable and explosive materials, electrical fire accidents, fire accidents in storage warehouses, fire accidents in densely populated places, simulated fire accidents in densely populated workshops and multi-level operation workshops, etc. For the above six types of safety accidents, we conducted practical drills from the following aspects, including fire alarm activation, fire situation reporting, use of firefighting equipment and facilities, initial firefighting efforts, emergency escape and evacuation, assistance in firefighting rescue operations, and control of secondary disasters.

"All Caring for Safety, All Capable of Emergency Rescue" 2024 Workplace Safety Month Events

Case Study **"Practical Drills for Enterprise Self-rescue and Disposal of Hazardous Chemical Leakage Accidents" at Shanghai Electric's Lingang A6 Base**

In 2024, we carried out the "Practical drills for enterprise self-rescue and disposal of hazardous chemical leakage accidents" at Shanghai Electric's Lingang A6 Base. Approximately 150 people, including the leaders in charge of safety, safety officers, and employee representatives from the base, participated in the on-site observation. They experienced firsthand the emergency response procedures that the enterprises went through in the face of emergencies and witnessed the coordination and capability of the drill participants from Auxiliary Equipment Works in handling emergencies.

Practical Drills for Enterprise Self-rescue and Disposal of Hazardous Chemical Leakage Accidents

While achieving its robust operation and development, Shanghai Electric remains committed to fulfilling its social responsibilities and supporting public welfare initiatives. We have actively responded to rural revitalization, the Belt and Road Initiative and other national strategies, paid attention to hot issues of social development, and organized charity and public welfare activities by taking advantage of our expertise and resources, contributing to harmonious coexistence in society.

Pursuing A Path of Warm-hearted Public Welfare

06

- Boosting Agricultural Development through Rural Revitalization
- Hosting Public Welfare and Charity Activities for Social Well-Being
- Going Global Under the Belt and Road Initiative
- Inheriting Industrial Civilization as a Source of Technological Development

Boosting Agricultural Development through Rural Revitalization

Under the guidance of the national rural revitalization strategy, Shanghai Electric has dedicated itself to agricultural development with a strong sense of social responsibility. We have integrated consumer assistance with industrial resources to diversify sales channels for agricultural products, injecting vitality into rural economic growth. Besides, we have brought advanced technologies to rural areas through university-enterprise collaboration, empowering industrial upgrades and laying a solid foundation for sustainable development in rural areas.

The Paired Assistance of Urban and Rural Party Organizations is an important experience in the grassroots Party building work in Shanghai. During the Fifth Round of Pairing Assistance of Urban and Rural Party Organizations from 2023 to 2027, Shanghai Electric and its subsidiaries have focused on the Paired Assistance of Urban and Rural Party Organizations in Fengxian District, Shanghai, to enhance the overall effectiveness of grassroots Party building work.

Since the start of the Fifth Round of Pairing Assistance of Urban and Rural Party Organizations, the Group has donated a total of RMB10 million to Fengxian District Government. In 2024, the Group donated RMB50,000 to the Caijiaqiao Village Party Branch in Fengxian Town, Fengxian District; Shanghai Electric and Mechanical donated RMB50,000 to Bazi Village in Fengcheng Town, Fengxian District; Shanghai Prime Machinery Company Limited donated RMB50,000 to Puxiu Village in Zhuanghang Town, Fengxian District; and Nuclear Power Group donated RMB50,000 to Huajiao Village in Qingcun Town, Fengxian District.

Case Study **Caijiaqiao Village Social Practice Base in Fengxian District**

In December 2024, the first secretary and village instructor dispatched by Shanghai Electric to Caijiaqiao Village, Touqiao Subdistrict, Fengxian District, established a social practice base in cooperation with the School of Electronic Information and Electrical Engineering of Shanghai Jiao Tong University. Both parties conducted surveys on greenhouses with high-standard facilities, rice fields and other agricultural projects, and explored technologies to empower rural revitalization, such as the application of agricultural drones and the promotion of smart agricultural techniques, injecting vitality into industrial development of Caijiaqiao Village.

Caijiaqiao Village Social Practice Base in Fengxian District

According to the requirements of the Notification on Taking "Double Hundred" Village-Enterprise Pairing Assistance Action, Power Generation Group, Shanghai Mitsubishi Elevator and Electric Wind Power affiliated to Shanghai Electric established paired assistance with Fuyuan County, Qujing, Yunnan Province, and signed poverty alleviation agreements in 2020. In the fifth year of the "double hundred" village-enterprise pairing assistance action in 2024, Power Generation Group, Shanghai Mitsubishi Elevator and Electric Wind Power donated RMB250,000 to Huangni Village in Dahe Town, Santai Village in Mohong Town and Waihousuo Village in Housuo Town, Fuyuan County, Qujing, Yunnan Province, respectively, which totalled RMB750,000 of donations.

Case Study **Shanghai-Yunnan Consumer Collaboration in "Yunnan Lifestyle Festival"**

In September 2024, Shanghai Electric Machinery, jointly with Shanghai General Federation of Trade Unions and the Cooperation and Exchange Office of Shanghai Municipal People's Government, held the "Yunnan Lifestyle Festival" to introduce Yunnan coffee and characteristic agricultural products to Shanghai market in the model of "consumer assistance + agricultural and cultural tourism", boosting consumer assistance together.

In this activity, Shanghai Electric Machinery subsidized more than RMB100,000, while more than 2,000 employees immersed themselves in Yunnan's customs and actively purchased Yunnan's "local specialties". By means of purchases by the trade union and consumption by employees, the activity built a resource docking platform between Shanghai and Yunnan to expand sales channels for Yunnan's specialties, contributing to the development of Yunnan's agricultural and cultural tourism industry.

Shanghai-Yunnan Consumer Collaboration in "Yunnan Lifestyle Festival"

Hosting Public Welfare and Charity Activities for Social Well-Being

While achieving its robust operation and development, Shanghai Electric remains committed to fulfilling its social responsibilities and supporting public welfare initiatives. We have established the Articles of Association of Volunteers, built and deepened the volunteer service brand of "Little Charge", and organized charity and public welfare activities by taking advantage of our expertise and resources, contributing to harmonious coexistence in society.

"Little Charge" Volunteer Service Brand of Shanghai Electric

"Little Charge" is a volunteer service brand created by the CYLC Shanghai Electric Committee, which practices social responsibilities through diversified public welfare activities to show corporate responsibilities.

As of the end of the reporting period, "Little Charge" volunteer service brand carried out elderly respect and support activities to take care of more than 200 elders, and organized "Golden Sunshine Action" to provide healthcare and daily life assistance services for disabled, senile and empty-nest elders. Meanwhile, it participated in "Loving Care Baby Action" initiated by Shanghai Children's Foundation to raise funds for autistic children through charity bazaars and charity sales, and held the activity of "safe and civilized elevator use on campus" to popularize elevator safety knowledge. In addition, it offered "resume clinics" and "mock interview training" for community residents to enhance their employability, organized young volunteers to clean glasses and mobile phones free of charge for community residents, and donated proceeds from charity sales.

As of the end of the reporting period, all of more than 3,000 CYLC members of Shanghai Electric became "Little Charge" volunteers. "Little Charge" volunteer service brand has served thousands of people, enhancing the employees' sense of social responsibility and teamwork capabilities, while making more contributions to the sustainable development of society.

Case Study Shanghai Mitsubishi Elevator Hosted Community Elevator Safety Training

In June 2024, the youth volunteer service team of Shanghai Mitsubishi Elevator, together with Bailian Group and Shanghai Elevator Industry Association, conducted a public welfare training on "elevator use safety and emergency operation" for nearly 40 property management workers, merchant representatives and home owners at the River Mall, with the aim to popularize elevator operation principle, elevator use safety knowledge and emergency fault handling methods through theoretical explanation and practical exercise. The volunteer team demonstrated the emergency rescue process on the spot, and emphasized the importance of daily maintenance to raise public awareness in safety. The activity covered key public places at the River Mall, and provided technical support for creating a safe elevator use environment, demonstrating the Company's social responsibilities in public safety.

Shanghai Mitsubishi Elevator Hosted Community Elevator Safety Training

Case Study Drawing A Colourful World Together with Children from the Star

In November 2024, Electric Wind Power, jointly with Blue Harbor Autism Youth Development Centre, organized a public welfare activity themed on "drawing a colourful world together with children from the star", which was attended by five groups of "Blue Harbor" families of autistic children and more than 20 Electric Wind Power volunteers and their children. This activity included lacquer bag handcrafting, performance and interactive games, so that autistic children showed themselves, and felt care and warmth of society. Moreover, this activity aroused more people's attention to autistic children, adding bright colours to the children's world.

Public Welfare Activity of "Drawing A Colourful World Together with Children from the Star"

Case Study Donating Student Subsidies for 19 Years

Since 2005, Shanghai Mitsubishi Electric · Shangling Air Conditioning Electrical Appliance Co., Ltd. has been concerned about the development of Wuyang Central School in Shexian County, Anhui Province. Over the past 19 years, Shanghai Mitsubishi Electric · Shangling Air Conditioning Electrical Appliance Co., Ltd. has donated teaching buildings and plastic runways for the school as well as proceeds from charity sales for improving the school's teaching conditions, which totalled millions of yuan.

In 2024, the CPC Committee of Shanghai Mitsubishi Electric · Shangling Air Conditioning Electrical Appliance Co., Ltd. organized a rural revitalization and scholarship activity at Wuyang Central School in Shexian County, donating more than RMB60,000 of student subsidies, two cabinet air conditioners and one digital camera.

Shanghai Mitsubishi Electric · Shangling Air Conditioning Electrical Appliance Co., Ltd. Donated Student Subsidies to Wuyang Central School in Shexian County

Going Global Under the Belt and Road Initiative

Shanghai Electric has taken an active part in the Belt and Road Initiative, continuously advancing innovation in the field of electric power. By virtue of its cutting-edge technologies and a strong sense of responsibility, the Company has provided robust momentum for upgrading energy systems in countries along the Belt and Road, significantly deepening multilateral cooperation and contributing to building a community with a shared future for mankind.

Case Study Shanghai Electric Built a Digital Substation in Uzbekistan's to Upgrade Regional Power Supply

In 2024, Shanghai Electric successfully delivered the Zafarabad 220kV project, Uzbekistan's first digital substation. The project is equipped with the Company's self-develop 250 megavolt-ampere autotransformers, which provides intelligent management for power systems through digital technology, and adds 400 megawatts of power supply to Jizak Prefecture, making power supply much more stable in eastern Uzbekistan. The project not only improves the digitization level of local power grid, but also promotes energy cooperation between China and Uzbekistan through technology export, setting a benchmark for implementing technical standards in countries along the Belt and Road. In the project, the Company boosted energy transformation of Central Asian countries with innovation, injecting green momentum for regional economic development.

Case Study 156MW Senj Wind Farm Project in Croatia Leads Green Transformation

In 2024, Electric Wind Power built the 156MW Senj Wind Farm Project in Croatia, which is the largest onshore wind power project in the Balkan region. The project is equipped with the Company's self-developed intelligent wind turbines, with an annual power generation of 530 million kWh, meeting the power demand of about 100,000 households, and reducing carbon emissions by more than 400,000 tons every year. Electric Wind Power implemented customized designs that adapt to the Mediterranean climate, and innovatively applied the active voltage support technology to stabilize local weak power grid. Furthermore, the project promoted the development of local supply chains, creating more than 200 local jobs. As an exemplary case for China's high-end equipment "going global", the project facilitated the implementation of the EU's energy transition goals, and deepened the green partnership between China and Central and Eastern European countries.

Senj Wind Farm Project in Croatia

Inheriting Industrial Civilization as a Source of Technological Development

Industrial heritage carries a rich history of industrial and technological development, serving as a witness to the past and an important resource for cultural and economic progress. In line with the spirit and requirements of the National Industrial Heritage Management Measures and the Implementation Plan for Promoting Industrial Culture Development (2021-2025), Shanghai Electric has properly managed its industrial heritage to facilitate the inheritance and innovation of industrial civilization and promote the spirit and culture of the industry.

Case Study China's First 6,000kW Power Station Steam Turbine

Shanghai Electric Power Generation Equipment Co., Ltd. had manufactured the cylinder and rotor of China's first 6,000kW power station steam turbine. On 9 April 1955, China's first 6,000kW steam turbine completed a successful test run, and was installed at the Tianjia'an Power Plant in Huainan, Anhui Province. The unit was retired in the early 21st century after safe operation for over half a century.

The birth of China's first domestically-produced 6,000kW power station steam turbine marked the end of China's inability to manufacture steam turbines, with a milestone significance. Shanghai Electric Power Generation Equipment Co., Ltd. summed up experience and lessons from the successful trial production of the first high-quality 6,000kW steam turbine, paving the way for independent specialized production of power station steam turbines.

In 2024, China's first power station steam turbine was included in the second group of Shanghai's industrial heritages.

China's first 6,000kW Power Station Steam Turbine

Case Study Shanghai Electric Participated in Construction of China Industrial Museum

In 2023, CPC Shanghai Municipal Committee and Shanghai Municipal Government decided to initiate the construction of China (Shanghai) Industrial Museum, aiming to build it into "a new landmark for industrial tourism, a carrier of industrial memories and a showroom of industrial cultures".

As a core participant in the construction of the industrial museum, Shanghai Electric planned and designed the Curation Proposal for High-End Equipment Pavilion of China Industrial Museum as required by higher authorities, donated four key "pillar" products, compiled 154 historical clues of first-of-their-kind equipment and 92 quadruple clues for internal and external industries.

Currently, Shanghai Electric is participating in the overall construction and construction support of the main hall (restored 10,000-ton hydraulic press), the story box (industrial workers and industrial spirit) and the high-end equipment pavilion of the industrial museum.

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.	3.1 Driving Changes to Address Climate Challenges 3.4 Green Governance and Clean Production
KPI A1.1	The types of emissions and respective emissions data.	3.4 Green Governance and Clean Production
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	3.4 Green Governance and Clean Production
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	3.1 Driving Changes to Address Climate Challenges
KPI A1.5	Description of emissions target(s) set and steps taken to achieve them.	3.1 Driving Changes to Address Climate Challenges
KPI A1.6	Description of how hazardous and non-hazardous wastes handled, and a description of reduction target(s) set and steps taken to achieve them.	3.1 Driving Changes to Address Climate Challenges
Aspect A2	**Use of Resources**	
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials. Resources can be used for production, storage, transportation, buildings, electronic equipment, etc.	3.2 Resource Utilization for Circular 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 Resource Utilization for Circular Development
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	3.2 Resource Utilization for Circular Development
KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	3.2 Resource Utilization for Circular 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 Resource Utilization for Circular Development
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	3.2 Resource Utilization for Circular 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 Resource utilization for circular development 3.3 System improvement and environmental friendliness 3.4 Green governance and clean production 3.5 Respecting nature for prioritized protection
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	3.2 Resource utilization for circular development 3.3 System improvement and environmental friendliness 3.4 Green governance and clean production 3.5 Respecting nature for prioritized protection
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 Respecting Rights and Interests, Implementing Democratic Management
KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	5.1 Respecting Rights and Interests, Implementing Democratic Management
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	5.1 Respecting Rights and Interests, Implementing Democratic Management
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. Training refers to vocational training, including internal and external courses paid by the employer.	5.2 Talent to Drive Shared Growth
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	5.2 Talent to Drive Shared Growth
KPI B3.2	The average training hours completed per employee by gender and employee category.	5.2 Talent to Drive Shared Growth
Aspect B4	**Labor Standards**	
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 labour.	5.1 Respecting Rights and Interests, Implementing Democratic Management
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	5.1 Respecting Rights and Interests, Implementing Democratic Management
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	5.1 Respecting Rights and Interests, Implementing Democratic Management
Aspect B5	**Supply Chain Management**	
General Disclosure	Policies on managing environmental and social risks of the supply chain.	4.2 Responsible Procurement for Stabilized Supply
KPI B5.1	Number of suppliers by geographical region.	4.2 Responsible Procurement for Stabilized Supply
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 Responsible Procurement for Stabilized Supply
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 Responsible Procurement for Stabilized Supply
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 Responsible Procurement for Stabilized Supply
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, labelling and privacy matters relating to products and services provided and methods of redress.	2.2 Supreme Quality and Pursuit of Perfection 2.3 First-class Service with Customer First
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	2.2 Supreme Quality and Pursuit of Perfection
KPI B6.2	Number of complaints received about products and services and response methods.	2.3 First-class Service with Customer First
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	2.1 Hardcore Technology and Intelligent Transformation
KPI B6.4	Description of quality assurance process and recall procedures.	2.2 Supreme Quality and Pursuit of Perfection
KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	2.3 First-class Service with Customer First

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 Excellent Governance and Standardized Operation
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 Excellent Governance and Standardized Operation
KPI B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	1.2 Excellent Governance and Standardized Operation
KPI B7.3	Description of anti-corruption training provided to directors and staff.	1.2 Excellent Governance and Standardized Operation
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 Boosting Agricultural Development through Rural Revitalization 6.2 Hosting Public Welfare and Charity Activities for Social Well-Being 6.3 Going Global Under the Belt and Road Initiative 6.4 Inheriting Industrial Civilization as a Source of Technological Development
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	6.1 Boosting Agricultural Development through Rural Revitalization 6.2 Hosting Public Welfare and Charity Activities for Social Well-Being 6.3 Going Global Under the Belt and Road Initiative 6.4 Inheriting Industrial Civilization as a Source of Technological Development
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	6.1 Boosting Agricultural Development through Rural Revitalization 6.2 Hosting Public Welfare and Charity Activities for Social Well-Being 6.3 Going Global Under the Belt and Road Initiative 6.4 Inheriting Industrial Civilization as a Source of Technological Development

Aspect D: Climate-Related Disclosure	
Governance	3.1 Driving changes to address climate challenges
Strategy	3.1 Driving changes to address climate challenges
Risk management	3.1 Driving changes to address climate challenges
Indicators and goals	3.1 Driving changes to address climate challenges

Appendix II Guidelines No.14 for the Self-Regulation of Listed Companies - Sustainable Development Report (Trial) of the Shanghai Stock Exchange

Dimension	Issue	Disclosed in
Environment	Response to climate change	3.1 Driving Changes to Address Climate Challenges
	Pollutant discharge	3.4 Green Governance and Clean Production
	Waste disposal	3.4 Green Governance and Clean Production
	Ecosystem and biodiversity conservation	3.5 Respecting Nature for Prioritized Protection
	Environmental compliance management	3.3 System Improvement and Environmental Friendliness
	Energy utilization	3.2 Resource Utilization for Circular Development
	Water utilization	3.2 Resource Utilization for Circular Development
	Circular economy	3.2 Resource Utilization for Circular Development
Society	Rural revitalization	6.1 Boosting Agricultural Development through Rural Revitalization
	Social contribution	6.1 Boosting Agricultural Development through Rural Revitalization 6.2 Hosting Public Welfare and Charity Activities for Social Well-Being 6.3 Going Global Under the Belt and Road Initiative 6.4 Inheriting Industrial Civilization as a Source of Technological Development
	Innovation-driven development	2.1 Hardcore Technology and Intelligent Transformation
	Ethics in science and technology	Not applicable
	Supply chain security	4.2 Responsible Procurement for Stabilized Supply
	Equal treatment of small and medium-sized enterprises	4.2 Responsible Procurement for Stabilized Supply
	Product and service security and quality	2.2 Supreme Quality and Pursuit of Perfection
	Data security and customer privacy protection	2.3 First-class Service with Customer First
	Employee	5.1 Respecting Rights and Interests, Implementing Democratic Management 5.2 Talent to Drive Shared Growth 5.3 Care for Health and Safety Protection
Governance	Due diligence	Not applicable
	Communication with stakeholders	1.3 Information Transparency to Enhance Trust
	Anti-commercial bribery and anti-corruption	1.2 Excellent Governance and Standardized Operation
	Anti-unfair competition	1.2 Excellent Governance and Standardized Operation

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