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Moments

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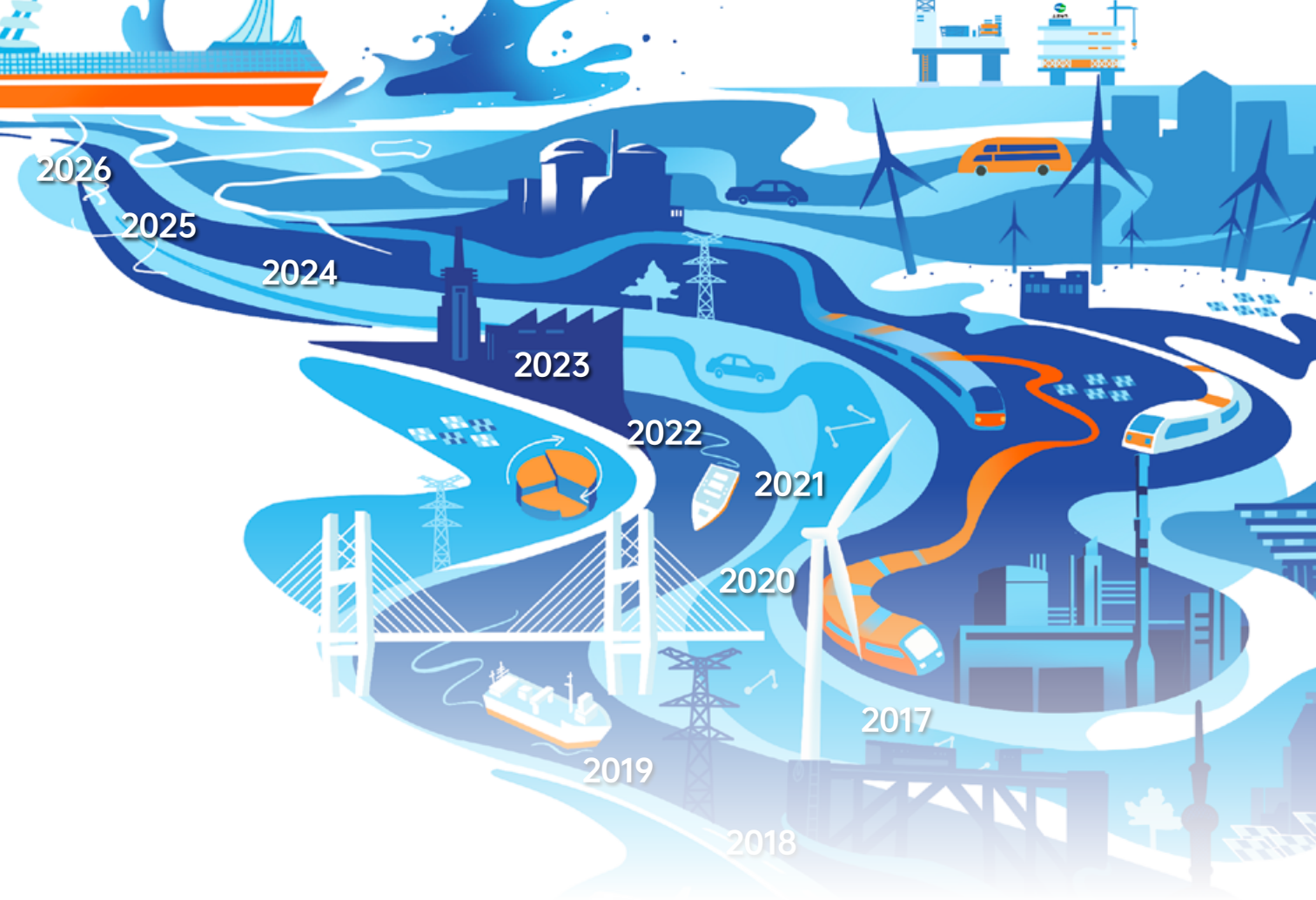

Cover Topics

Moments

A decade is not only a measure of time but also a cycle of innovation and breakthrough. With a "new perspective," we look back at the solid footprints along our path; with a "new domain," we measure the vast expanse of the present; with a "new observation," we gaze toward the limitless possibilities of the future. This issue's cover story takes you on a multidimensional journey to unlock the "code" behind Shanghai Electric's ten years of high-quality development.

EDITOR'S WORDS

A TRIBUTE TO TEN YEARS
WE ARE PRESENT

Time flies — ten springs and autumns have passed. With this ink-scented issue of Shanghai Electric Magazine reaching your hands, we celebrate together the proud milestone of its tenth anniversary. A decade marks both the culmination of a journey and the beginning of a new chapter. At this moment, with our most heartfelt sincerity, we extend our gratitude to every reader and partner who has supported and accompanied the magazine's growth over the past ten years: thank you for being present.

Ten Years of Dedication: Our "Presence" as a Pillar of a Great Nation

The past decade has witnessed dramatic shifts in global dynamics and rapid tides in the world's economy and technology. In this age of uncertainty, one steady and resolute voice has endured: We are present. This is Shanghai Electric's unwavering pledge — a cornerstone of national strength.

We are present at the forefront of innovation and breakthroughs: From beneath the domes of the Hualong One nuclear power units to the vast deserts of the Dubai CSP project; From next-generation, high-efficiency clean coal technologies to the launch of offshore wind power "platforms"; From the intelligent nerve center of smart grids to life-protecting intelligent medical equipment; From the "brain and soul" of industrial automation to the nurturing capital flows of industrial finance. Every powerhouse under Shanghai Electric has remained deeply committed to its field, forging a decade of remarkable achievements with formidable technological strength. This "We are present" signifies a presence that stands firm amid global change, a responsibility for national development and industrial progress, and a duty that drives China's high-end equipment manufacturing onto the world stage while contributing to global advancement.

Ten Years of Chronicle: Our "Presence" as a Witness of the Times

As a companion and chronicler on this extraordinary journey, Shanghai Electric Magazine has likewise upheld the belief of "We are present." We are present at every scene of technological breakthrough, every moment of strategic announcement, and every domestic and overseas project site where teams press forward with determination.

With words as our lens, we document Shanghai Electric's sweeping strategies and transformation. Through images as our window, we reflect the perseverance and spirit of our people. With in-depth cover stories, expansive feature series, bilingual interviews, and richly visual narratives, we strive to build an unimpeded bridge of communication. We are delighted to see both our Chinese and international colleagues at the Dubai project site reading the magazine, gaining insight into the Group's strategic blueprint and the innovations of its member companies. We remain devoted to helping Shanghai Electric employees worldwide, as well as our customers and partners, see through these pages the strength of our power generation sector, the sustainability of our environmental technologies, the intelligence of our transmission and distribution networks, the precision of our medical equipment, the ingenuity of our automation controls, and the synergy of our financial services. We connect these scattered points of light into a brilliant galaxy, enabling everyone to truly experience a Shanghai Electric that is diverse, collaborative, and thriving. This "We are present" is both a commitment to recording our era and sharing value with our clients, and a responsibility to unite our internal strength while communicating the spirit of Shanghai Electric.

We salute these ten years and every moment of "We are present". It is the Group's great responsibility and the magazine's humble dedication that together have composed this decade-long symphony. Looking ahead, the world will continue to change. Yet Shanghai Electric's aspiration to "lead global industrial development with wisdom and strength" remains steadfast, and the mission of Shanghai Electric Magazine to "document our times and connect us all" will endure.

In the next decade, we will still be present. Together with you, we will bear witness to the birth of even more miracles.

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CREATE OUR FUTURE TOGETHER

Shanghai Electric Selected Again for China's ESG Excellence Practice White Paper

On October 24, the ESG China·Innovation Annual Conference (2025) and the inaugural ESG International Expo were held in Beijing. During the event, the 2025 ESG Excellence Practice White Paper was released, and Shanghai Electric stood out once again with its exemplary case, "Green and Intelligent Innovation Leading the Development of Equipment Manufacturing — Driving ESG Upgrades Through Technological Innovation." This marks the second time the company has been recognized as an annual benchmark, offering a replicable and scalable model for advancing ESG practices in China. Since 2016, Shanghai Electric has published ESG reports for nine consecutive years, underscoring its steadfast commitment to sustainable development. This latest recognition reflects the industry's high regard for the company's sustained excellence in ESG performance.

Shanghai Electric Smart City Company Showcases at the 2025 World Cities Day Global Conference

Recently, the thematic session "Inclusive · Intelligent · Sustainable Urban Regeneration" of the 2025 World Cities Day Global Conference was held in Shanghai. As one of the co-organizers, Shanghai Electric Smart City Information Technology Co., Ltd. participated in the session and presented the Fuxing Island Urban Renewal Project, illustrating how the district's "historical burdens" have been transformed into valuable "urban assets" through innovative approaches.

Multiple Shanghai Electric Projects Named Among National First Units (Sets) of Major Technical Equipment

The National Energy Administration recently announced the fifth batch of "first units (sets)" of major technical equipment in the energy sector. Several Shanghai Electric–supported projects made the list, including the 1,000 MW 650°C high-efficiency ultra-supercritical single-reheat coal-fired generator unit, the new wide-load, ultra-efficient, fast-adjusting one-million-kilowatt double-reheat coal-fired unit and the 600 MW ultra-supercritical double-reheat boiler coupled with byproduct coal gas. These technologies represent China's highest level of independent innovation in energy science and advanced manufacturing. Their successful demonstration and industrialization accelerate the conversion of scientific achievements into productive capacity, while driving technological upgrades across the entire value chain.

Shanghai Electric Wins Prestigious Global Branding Award

A leading global accolade in the branding industry—the 2025 Transform Awards Asia Ceremony—was recently held in Shanghai. At the event, Shanghai Electric's "Super Symbol" Visual Identity System stood out for its innovative breakthrough, winning the Bronze Award for Best Visual Identity from the Energy and Utilities Sector. Widely regarded as a benchmark for brand transformation, the Transform Awards uphold rigorous evaluation standards and celebrate the most innovative and influential achievements in brand design and visual renewal across the Asia-Pacific region. The award not only represents international recognition of Shanghai Electric's brand innovation capabilities, but also marks a new milestone in the visual expression of Chinese energy brands. Looking ahead, Shanghai Electric will continue to use visual language as a powerful medium to share the story of the Chinese industry with the world.

Shanghai Electric Receives "Excellence in Branding Award"

At the "Glory of Thirty Years · Set Sail Together Again" 30th Anniversary Celebration of the Shanghai Trademark & Brand Association, Shanghai Electric Group Co., Ltd. was honored with the Excellence in Branding Award. The award acknowledges Shanghai Electric's outstanding achievements and leadership in brand development, reflecting its technological expertise, management innovation, and commitment to social responsibility, setting a benchmark for high-quality growth in the manufacturing sector.

Shanghai Electric Wind Power Wins Three Major Awards at the Wind Power Industry Forum

The 2025 China Wind Power Industry Forum (CWIF) and the Titanium Energy Awards • 2025 Wind Power Awards Ceremony (WPBL) were recently held in Shanghai. Shanghai Electric Wind Power Group Co., Ltd., recognized for its technological strength and market performance in offshore wind, received three prestigious awards: Influential Wind Turbine OEM, Intelligent Wind Farm Service Provider, and Best Wind Turbine Model.

Shanghai Electric Power Transmission & Distribution Engineering Secures EPC Contract for Substation Upgrades in Uzbekistan

Shanghai Electric Transmission & Distribution Engineering Co., Ltd. has recently won an EPC contract to upgrade five substations in Uzbekistan. As the company's breakthrough with a new client, the project sets records in both contract value and the number of substations awarded in a single project in the country. It marks a significant step forward in expanding the company's presence in the Uzbek market.

Part of Uzbekistan's national power development plan, the project encompasses design, dismantling, reconstruction, and commissioning. Once completed, it will significantly enhance grid capacity and power supply reliability, contributing strategically to regional energy stability and economic growth.

Shanghai Electric Power Transmission & Distribution Group Signs Strategic Partnership with Thailand's IMI

Shanghai Electric Power Transmission & Distribution Group has recently signed a strategic cooperation agreement with IMI Industries Co., Ltd. of Thailand. Under the agreement, the two parties will integrate their strengths in high-end power equipment manufacturing, intelligent fluid control technologies, and Asia-Pacific market channels. By seizing opportunities arising from energy transition and smart manufacturing, the partnership aims to achieve complementary advantages, co-create value, and promote sustainable development, jointly advancing technological progress and industrial upgrading in the power and industrial automation sectors.

Hency Solar Signs Sierra Leone Solar Project

On November 10, Hency Solar Technology Co., Ltd. signed a supply contract with French developer InnoVent S.A. for the 33.07 MWp Waterloo Solar Project in Sierra Leone. The project will exclusively use Shanghai Electric's 210R-132 heterojunction high-efficiency modules. This marks the company's first centralized PV project order overseas and a major milestone in bringing heterojunction technology to the international market. It underscores Shanghai Electric's strong momentum in expanding its global photovoltaic footprint.

First Batch of Shanghai Electric Wind Turbine Generators Completed and Shipped for Oman Project

The first batch of wind turbines for the Duqm 57.6 MW Wind Power Project in Oman has been successfully shipped. This achievement marks Shanghai Electric's first completed wind turbine project in Oman and signals deeper cooperation between China and Oman in the new energy sector. The delivered EW9.6-200 high-temperature, sand-resistant turbine is specially designed for the harsh conditions of the Middle Eastern and developed in strict accordance with IEC standards. It operates in ambient temperatures up to 45°C, with upgraded insulation and enhanced materials in key components such as the drive train, converter, and transformer. Certain electrical components can function reliably at even higher temperatures, ensuring stability in extreme desert environments.

Highly Marelli Achieves First Breakthrough with Ford Project

Shanghai Highly (Group) Co., Ltd.'s joint venture, Highly Marelli*, has been nominated to supply the thermal management system for the Ford Mustang program. This marks the company's first entry into the North American market and its first collaboration with a major global automotive OEM.

To meet Ford's demanding requirements in vehicle performance, NVH (noise, vibration, and harshness), and overall quality, Highly Marelli* integrated R&D and sales resources to deliver a customized thermal management solution. The solution passed validation under Ford's global procurement and engineering systems.

Production is planned at Highly Marelli*'s plant in Shelbyville, Tennessee, enabling localized operations that will improve responsiveness to North American customers and strengthen regional coordination capabilities.

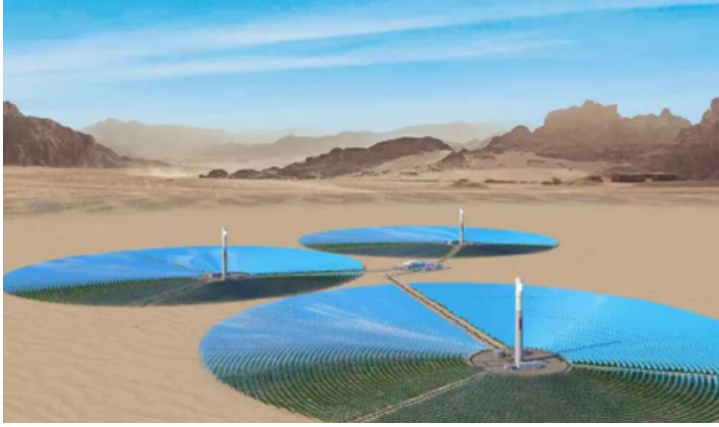
Zhenhua Bearing's First European Factory Enters Commissioning Stage

Shanghai Electric's subsidiary, ZCM (Suzhou) Heavy Equipment Co., Ltd., has secured the contract to supply a core reactor for Zhejiang Petrochemical & Chemical Co., Ltd.'s PX unit expansion under its integrated refining and chemical project. The unit is the world's largest single-set transalkylation facility, with an annual processing capacity of 10 million tons, setting a new global record. As a central piece of equipment in PX production, the reactor's diameter far exceeds that of conventional refining equipment, placing stringent requirements on material performance, structural integrity, and manufacturing precision. The winning design adopts an integral forged-and-welded structure, ensuring safe and reliable long-term operation under high-temperature, high-pressure, and highly corrosive conditions. This milestone represents a major technological breakthrough for China's high-end petrochemical equipment manufacturing capabilities.

World's First 650°C High-Efficiency Ultra-Supercritical Coal-Fired Generator Unit Breaks Ground

Construction has officially begun on the world's first 650°C high-efficiency ultra-supercritical coal-fired generator unit at Huaneng Yuhuan Power Plant in Zhejiang Province. Listed under the fifth batch of national "first units (sets)" of major technical equipment, the project is supported by Shanghai Electric Power Generation Group, which is supplying key components including the turbine, generator, and auxiliary systems. The project targets becoming the most efficient coal-fired unit globally, with a coal consumption rate no higher than 254 g/kWh.

Compared with existing units, the project aims for a 4% improvement in power generation efficiency, a 10% reduction in coal consumption per kWh, and annual CO_2 emissions cut by 450,000 tons. Once commissioned, it will help meet Zhejiang's growing electricity demand and enhance the reliability and stability of the regional power grid.



Shanghai Electric Wins Bid for 350 MW Golmud Tower CSP Project

Shanghai Electric Power Generation Group has secured the turbine–generator equipment contract for Cosin Solar's 350 MW Golmud Tower Concentrated Solar Power (CSP) Project in Qinghai Province, its first breakthrough in the CSP turbine–generator segment.

The project adopts a three-tower, one-turbine design, featuring a 14-hour molten salt thermal storage system and a heliostat field covering more than 3.3 million m^2. Shanghai Electric Power Generation Equipment Co., Ltd. Turbine Plant will provide an advanced 350 MW CSP turbine using a new high-efficiency, three-cylinder, double-exhaust design. The generator, supplied by Shanghai Electric Generator Plant, incorporates the company's proprietary double water inner cooled turbo-generator technology, offering strong adaptability for high-altitude conditions and outstanding operational reliability.

When completed, the project will rank as the world's largest in single-unit capacity, heliostat field area, storage capacity, and annual design power generation. It will significantly enhance peak shaving, frequency regulation, and emergency backup capacity for the regional power grid.

ZCM Heavy Equipment Co., Ltd. Wins Bid for World's Largest PX Transalkylation Reactor

Shanghai Electric's subsidiary, ZCM (Suzhou) Heavy Equipment Co., Ltd., has secured the contract to supply a core reactor for Zhejiang Petrochemical & Chemical Co., Ltd.'s PX unit expansion under its integrated refining and chemical project. The unit is the world's largest single-set transalkylation facility, with an annual processing capacity of 10 million tons, setting a new global record. As a central piece of equipment in PX production, the reactor's diameter far exceeds that of conventional refining equipment, placing stringent requirements on material performance, structural integrity, and manufacturing precision. The winning design adopts an integral forged-and-welded structure, ensuring safe and reliable long-term operation under high-temperature, high-pressure, and highly corrosive conditions. This milestone represents a major technological breakthrough for China's high-end petrochemical equipment manufacturing capabilities.

Shanghai Electric Debuts at China Hi-Tech Fair with Full-Chain Energy Solutions

Shanghai Electric made its first appearance at the 2025 China Hi-Tech Fair Power Equipment "Five Innovations" Exhibition, under the theme "Energize Forward, Evolve Infinitely." The company showcased high-end equipment and full-scenario solutions across key sectors, including intelligent coal power, solar energy, diversified energy storage, and hydrogen-ammonia-methanol pathways. The exhibit demonstrated Shanghai Electric's strong system integration capabilities and leadership across the full energy value chain, from generation, storage, and transmission to end-use, as well as its commitment to driving the energy future through technological innovation.

Shanghai Electric Makes Its Debut at the World Nuclear Exhibition in France

On November 4, the 2025 World Nuclear Exhibition (WNE), one of the largest and most influential events in the global nuclear energy sector, opened in Paris. The exhibition gathered more than 1,000 exhibitors from nearly 80 countries and regions. Marking its first appearance at an overseas nuclear industry exhibition, Shanghai Electric presented its technological breakthroughs and innovative practices in the manufacturing of key nuclear power equipment through digital media displays. The showcase covered the company's capabilities across the full industrial chain, from large-scale nuclear forgings and nuclear island equipment to conventional island systems and I&C instruments, alongside notable examples of its participation in international nuclear power projects.

Visits Tajikistan to Explore New Opportunities in Green Energy

On October 21 (local time), Wu Lei, Chairman of Shanghai Electric Group, led a delegation to Tajikistan. During the visit, the delegation met with Guo Zhijun, Chinese Ambassador to Tajikistan, and Daler Juma, Minister of Energy and Water Resources of Tajikistan, for in-depth discussions on enhancing bilateral energy cooperation and advancing green transformation initiatives.

Ambassador Guo noted that under the strategic guidance of the two heads of state, the China–Tajikistan comprehensive strategic partnership has reached an all-time high. He emphasized Tajikistan's abundant energy resources, significant development potential, and promising market outlook. He expressed hope that Shanghai Electric would leverage its strengths in high-end equipment manufacturing and integrated industrial chain capabilities to actively participate in local energy infrastructure development, providing fresh momentum for high-quality Belt and Road cooperation. He affirmed that the Embassy will continue to offer strong policy support and assistance to enable enterprises to achieve high-quality development.

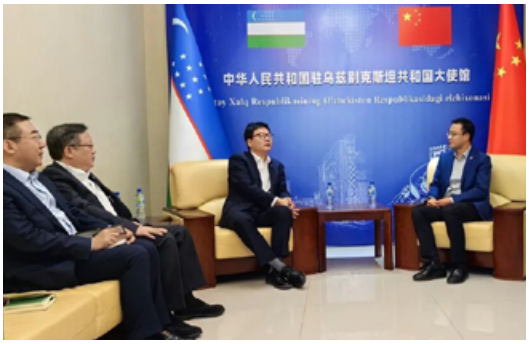
Wu Lei outlined Shanghai Electric's development history, industrial roadmap, and progress in internationalization. He stressed that Tajikistan is one of the company's key markets in Central Asia, and that the company will actively capture opportunities in the green energy transition, building on its full value-chain capabilities in wind and solar power equipment, as well as its technological advantages in emerging green sectors such as green hydrogen, green methanol, and energy storage. He added that Shanghai Electric will further strengthen communication with the Embassy and support Tajikistan in optimizing its energy mix and achieving sustainable development.

In discussions with Minister Daler Juma, the Minister commended Chinese enterprises for their contributions to Tajikistan's energy sector and outlined the country's national energy development plans. He acknowledged Shanghai Electric's internationally recognized capabilities in technological R&D, project management, and engineering construction. He welcomed advanced enterprises like Shanghai Electric to participate in Tajikistan's clean energy initiatives, helping the "land of mountains" accelerate its transition toward a green, low-carbon energy system.

Wu Lei further introduced Shanghai Electric's global industrial chain advantages and international achievements in energy equipment, particularly in high-efficiency clean energy, wind power, and photovoltaic equipment. He emphasized that Central Asia has always been a strategic priority for the company's international operations. Leveraging its comprehensive strengths in technological innovation, equipment manufacturing, and engineering management, Shanghai Electric will actively contribute to Tajikistan's energy infrastructure development, deepening and elevating China–Tajikistan cooperation in the energy sector.

Visits

Uzbekistan to Advance High-Quality China–Uzbekistan Energy Cooperation



On October 20 (local time), Wu Lei, Chairman of Shanghai Electric Group, visited the Chinese Embassy in Uzbekistan and met with Dadajon Isakulov, Chairman of Uzbekistan National Power Networks JSC. The two sides held in-depth discussions on strengthening bilateral cooperation in the energy sector and promoting the high-quality implementation of the Belt and Road Initiative (BRI).

At the Chinese Embassy, Minister Counsellor Wang Jiwei commended Shanghai Electric for its contributions to Uzbekistan's ongoing energy transition. He noted that Uzbekistan is actively pursuing its energy restructuring and a green transition, which aligns closely with China's "dual-carbon" goals. Wang expressed hope that Shanghai Electric would continue to accurately identify market trends and evolving demands in Uzbekistan, fully leverage its end-to-end industry advantages and extensive international project experience, and further strengthen its social responsibility efforts. He encouraged the company to deepen localization, promote cultural exchange, and serve as a bridge fostering mutual understanding and friendship between the peoples of China and Uzbekistan, thereby jointly promoting the building of a China–Uzbekistan community with a shared future. The Minister Counsellor added that the Embassy will continue to act as a bridge to support practical cooperation for Chinese enterprises in Uzbekistan, helping elevate the comprehensive strategic partnership between the two nations to a new level.

Wu Lei expressed appreciation for the Embassy's longstanding guidance and support for Shanghai Electric's projects in Uzbekistan. He outlined the company's business operations and project progress in the country. He emphasized that Uzbekistan, an important node of the BRI, possesses abundant energy resources and vast market potential. Over the years, Shanghai Electric has actively participated in the development of BRI partner countries, successfully implementing energy projects across multiple regions and accumulating extensive overseas experience. Wu said the company will continue to deepen cooperation with Uzbekistan in energy transition and low-carbon technologies, promoting the deployment of "Chinese technologies and Chinese solutions" locally and contributing to the country's energy development and social progress.

During talks with Isakulov, Wu Lei stated that Shanghai Electric attaches great importance to its long-term partnership with Uzbekistan National Power Networks JSC and is willing to expand multi-field cooperation building on previous successes. This includes technology transfer, equipment supply, and joint R&D to promote high-voltage grid upgrades and the implementation of clean energy projects, helping Uzbekistan develop a more resilient and sustainable energy system.

Isakulov noted that Uzbekistan is accelerating the diversification of its energy structure, and as the country's core grid operator, the National Power Networks JSC urgently needs international partners with advanced technologies and expertise. He praised the notable achievements already made in bilateral cooperation and expressed hope for further collaboration in new energy development, smart grid construction, and hydrogen applications, jointly supporting Uzbekistan's vision of becoming Central Asia's green energy hub.

On October 18, Wu Lei and his delegation visited the Zafarabad Substation project undertaken by Shanghai Electric, gaining first-hand insights into operations as well as the daily work and living conditions of frontline staff. He encouraged overseas employees to continue leveraging technical strengths, expand the company's international business segments, and promote the implementation of more high-quality projects, contributing to the global energy transition and embodying the pioneering spirit of Shanghai Electric.

Shanghai Electric Deepens Belt and Road Energy Cooperation and Explores New Opportunities in Kazakhstan

From October 16 to 17 (local time), Wu Lei, Chairman of Shanghai Electric Group, led a delegation to Kazakhstan. During the visit, he met with Han Chunlin, Chinese Ambassador to Kazakhstan, and held discussions with senior leaders from "Samruk-Energy" JSC and the Kazakhstan Electricity Grid Operating Company (KEGOC). Topics included the green energy transition, new energy development, and hydrogen cooperation. Multiple Memorandums of Understanding (MoUs) were signed during the visit.

At the Chinese Embassy in Kazakhstan, Ambassador Han Chunlin noted that China–Kazakhstan relations are currently at their strongest in history, with fruitful achievements in practical cooperation across various sectors. He highlighted that as a leading high-end equipment manufacturer, Shanghai Electric has vast development prospects in Kazakhstan. He expressed hope that the company would seize emerging opportunities, actively participate in Kazakhstan's energy infrastructure development, and drive the implementation of more landmark projects, thereby injecting new momentum into bilateral economic cooperation. He affirmed that the Embassy will continue providing support and services to facilitate Chinese enterprises' sustainable development in Kazakhstan.

Wu Lei presented Shanghai Electric's business progress in Kazakhstan, , highlighting that the country is a key strategic market along the Belt and Road Initiative and that the company has achieved notable advances in the energy sector in recent years. He stated that the company will leverage its comprehensive strengths in new energy and smart grids, remain committed to localized operations, and continue fulfilling its corporate social responsibility. Shanghai Electric will support Kazakhstan's green energy transition and contribute further to building a China–Kazakhstan community with a shared future.

In a meeting with Kazutin Nikolay, Chairman of the Board of "Samruk-Energy", Wu Lei highlighted Shanghai Electric's advanced capabilities in efficient and clean energy upgrades and gas turbine solutions. He noted that Kazakhstan holds an important strategic position in the regional energy market as a pivotal BRI country. Wu expressed hope for deeper cooperation in the areas of efficient and clean energy retrofits, new energy development, and green hydrogen production, contributing to Kazakhstan's sustainable development.

Kazutin spoke highly of Shanghai Electric's technological strengths and global track record. He introduced "Samruk-Energy" JSC as Kazakhstan's largest state-owned integrated energy company, with business covering thermal power, oil and gas, and renewable energy. Kazakhstan is accelerating its 2050 carbon-neutrality strategy and aims to raise the share of renewable energy to 15% by 2030, a vision that aligns closely with Shanghai Electric's transformation direction. He expressed expectations for stronger collaboration in coal-to-clean energy retrofits, gas-fired power plants, and new energy projects, as well as joint exploration of broader markets across Central Asia and the CIS region.

During the meeting with Nabi Aitzhanov, Chairman of the Management Board of KEGOC, Wu Lei highlighted Shanghai Electric's full-industry-chain capabilities in substation construction, smart grid planning, and equipment manufacturing, enabling one-stop energy infrastructure solutions. He noted that Kazakhstan serves as a key gateway market in Central Asia and affirmed that Shanghai Electric would continue to leverage its strengths in power transmission and distribution equipment manufacturing, smart grid integration, and new energy technologies to support Kazakhstan in enhancing grid security and advancing intelligent grid development.

Shanghai Electric and ACWA Power Discuss Deepening Mutually Beneficial Cooperation in the Global New Energy Sector

On the morning of November 10, Wu Lei, Chairman of Shanghai Electric Group, met in Shanghai with Marco Arcelli, CEO of ACWA Power. The two sides held constructive discussions on deepening cooperation across multiple fields and jointly expanding the global new energy market. Zhu Zhaokai, Deputy Party Secretary and President of Shanghai Electric Group, attended the meeting.

Wu Lei expressed his appreciation for ACWA Power's trust and collaboration over the years. He noted that the CSP-PV hybrid project jointly developed by the two companies in Dubai has become a benchmark for high-standard, sustainable energy cooperation, providing strong support for the region's energy transition. Looking ahead, Wu Lei stated that global energy transition and sustainable development have become a shared global goal. Shanghai Electric looks forward to working more closely with ACWA Power to consolidate existing cooperation while exploring collaborative innovation and joint investment in green hydrogen, energy storage technologies, and seawater desalination. Leveraging each other's strengths, the two sides will continue providing advanced, reliable and customized technologies and equipment, delivering more competitive and locally adapted integrated energy solutions for markets in the Middle East and around the world, and contributing to sustainable development across cooperation regions.

Arcelli expressed his appreciation for Shanghai Electric's outstanding execution and technical expertise displayed throughout project delivery. He pointed out that China's technology and experience in new energy carry global value, and that Saudi Arabia's "Vision 2030" and the China-proposed Belt and Road Initiative create significant potential for bilateral cooperation. ACWA Power places high importance on its strategic partnership with Shanghai Electric and aims to continuously innovate cooperation models, enhance execution efficiency, and deepen collaboration in wind power, CSP-PV hybrid projects, and energy storage.

Nineteen Shanghai Electric Scientific Achievements Win Prestigious Industry Awards

Recently, the China Machinery Industry Federation and the Chinese Mechanical Engineering Society released the list of winners of the 2025 "Science and Technology Award of the Machinery Industry." A total of 19 scientific and technological achievements led or co-developed by Shanghai Electric received awards. Among them, three projects won the First Prize of the Science and Technology Progress Award, while ten others received Second Prizes. This marks a historic high for both the number and caliber of awards, highlighting Shanghai Electric's full-spectrum innovation progress and its comprehensive technological strength across the entire industrial chain in green, intelligent, and high-end manufacturing.

World-Class Fusion Energy Conference Opens!

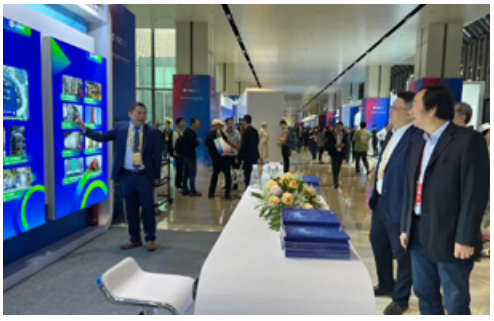
Shanghai Electric Showcases Key Achievements

On October 14, the 2nd Ministerial Meeting of the World Fusion Energy Group and the 30th International Atomic Energy Agency (IAEA) Fusion Energy Conference opened in Chengdu. The opening ceremony was attended by Zhang Guoqing, Vice Premier of the State Council. Welcome remarks were delivered by Wang Xiaohui, Sichuan Provincial Secretary; Rafael Mariano Grossi, IAEA Director General; and Chen Jiachang, China's Vice Minister of Science and Technology. Shan Zhongde, Director of the China Atomic Energy Authority, delivered the national keynote speech. Jin Xiaolong, Member of the Party Committee and Vice President of Shanghai Electric, attended the opening ceremony and the ministerial meeting.

Shanghai Electric comprehensively showcased the core technological capabilities it has developed over more than two decades in the field of controlled nuclear fusion equipment, along with its practical experience participating in major projects such as EAST, CRAFT, BEST, HT-6M, and HL-1. The company also demonstrated its leading domestic capabilities in integrated system supply. The exhibition highlighted Shanghai Electric's commitment to serving national strategies and its continued contribution of "Shanghai Electric Solutions" to advancing fusion energy development in China and globally.

During the exhibition, leaders and experts, including Liu Jing, Deputy Director of the State Administration of Science, Technology and Industry for National Defense and Deputy Director of the China Atomic Energy Authority; Zhang Tao, General Manager of CNNC; Gao Ligang, General Manager of CGN; ITER Deputy Director-General Jérôme Paméla; and Li Jiangang, Academician of the Chinese Academy of Engineering, visited the Shanghai Electric booth for guidance.

The 2nd Ministerial Meeting of the World Fusion Energy Group, themed "Fusion Energy: A Clean Energy Future," welcomed around 150 participants from 27 countries and six international organizations. The meeting released the Outlook for Fusion Energy 2025 report and the Chengdu Statement of the World Fusion Energy Group. The IAEA Fusion Energy Conference, the world's most influential international event in nuclear fusion science and engineering, attracted nearly 2,000 attendees from over 60 countries and regions. The five-day conference features keynote reports, thematic sessions, and technical exhibitions under the theme "Innovation and the Future of Fusion Energy — Technology, Collaboration, and Sustainable Development."



Focus on the **CIIE**

Shanghai Electric Strengthens Multi-Sector Coordination to Ensure Safe and Reliable Operations at the China International Import Expo

As the eastern winds rise and rivers converge into the sea, the 8th China International Import Expo (CIIE) opens as scheduled.

As a key state-owned enterprise deeply rooted in the industry, Shanghai Electric earnestly implements President Xi Jinping's important instruction that the CIIE "should be held better and better," abiding by the standards of "zero errors, zero failures, and zero hidden risks". Shanghai Electric's subsidiaries, including Shanghai Mitsubishi Elevator Co., Ltd., Shanghai Shendiantong Rail Transit Technology Co., Ltd., Shanghai Dahua Electrical Equipment Co., Ltd., Shanghai Nanhua-Lanling Electrical Co., Ltd., Shanghai Feihang Wires & Cables Co., Ltd., and Shanghai Electric Digital Eco-Tech Co., Ltd., integrated responsibility and commitment into every detail of their service. Together, they built a solid and reliable operational shield for this globally watched event, safeguarding the deep integration of China's vast market with global opportunities through concrete actions.

Elevator Operations Support: 24/7 Standby to Ensure Passenger Safety

Within the overall support framework of the Expo, the safe and smooth operation of elevators is crucial to visitor mobility and the orderly progress of the exhibition. As the "dedicated guardian" of the 424 elevators inside the National Exhibition and Convention Center (Shanghai), Shanghai Mitsubishi Elevator attached great importance to this year's mission. Through a rigorous selection process and technical training, the company swiftly established a special task force dedicated to the 8th CIIE elevator operations. The team ensures round-the-clock, 7×24 standby support, ready to respond immediately to any issue, at any time and in any location.

Rail Support: Comprehensive Safety Checks to Ensure Seamless Travel

As a key transport channel for Expo participants, the smooth operation of the metro system is essential. Drawing on previous experience and real-time operational assessments of the metro lines it services, Shendiantong developed a precise and targeted support plan. Taking into account predicted passenger flows during the 8th CIIE and current equipment conditions, Shendiantong mobilized multidisciplinary teams across power supply, signaling, rolling stock, and platform screen doors to conduct comprehensive safety checks and enhanced maintenance, reducing operational risks at their source.

Network Infrastructure Support: Full-Scenario Coverage for High-Efficiency Connectivity

In the digital era, network services and energy management are critical to the smooth operation of a world-class event. Shanghai Electric Digital Eco-Tech Co., Ltd. stepped up to the challenge by creating a full-scenario network matrix. A professional team of around 60 specialists was deployed to manage the venue's wired network, public Wi-Fi, and VIP-area telephone systems. Team members conducted comprehensive pre-event testing and optimization of all network infrastructure, ensuring seamless coverage throughout the venue. Whether exhibitors were hosting video conferences or visitors were livestreaming their experiences in real time, stable and high-speed connectivity was fully guaranteed.

Power Support: Early Material Deployment Strengthens Supply Security

Shanghai Electric's power transmission and distribution segment began preparations well in advance. Dahua Electrical, Nanhua-Lanling, and Feihang Wires & Cables all initiated special actions for CIIE power supply as early as October. Dahua Electrical allocated three high-performance RM Airset ring main units for deployment at the venue. Nanhua-Lanling supplied four ring main units, two high-voltage switchgear cabinets, one box-type substation, and four low-voltage switchgear units. Feihang Wires & Cables secured adequate inventories of the required cable specifications to fully support the Expo. In addition, each company established special teams to ensure immediate response and rapid handling of any emergencies, upholding the highest standards of responsibility and execution to guarantee flawless power supply.

Focus on the **CIIE**

Explore a Green Future with Global Partners

On January 7, the Shanghai Trading Group of the 8th CIIE hosted a signing ceremony and the Shanghai SOE High-Level Open Cooperation Summit Dialogue at the National Exhibition and Convention Center (Shanghai). Executive Vice Mayor Wu Wei attended and delivered remarks, with He Qing, Director of the Shanghai SASAC, presiding. Zhu Zhaokai, Deputy Party Secretary and President of Shanghai Electric Group, attended the meeting.

During the signing ceremony, Shanghai Electric Power Transmission & Distribution Group and Siemens AG signed a framework agreement for the "Smart Grid Blueprint — Procurement Project for Medium- and Low-Voltage New Power System Equipment." Under the agreement, both sides will focus on next-generation medium- and low-voltage power system equipment, strengthening collaborative innovation and exploring new opportunities in digitalization and the low-carbon economy. They will leverage complementary strengths to achieve win-win outcomes in market expansion, green and low-carbon transition, and digital transformation.

Shanghai Electric and Siemens China have enjoyed more than 30 years of close cooperation, achieving major milestones and setting industry benchmarks in China's power transmission and distribution sector. Today, against the backdrop of global carbon-neutrality goals and energy transformation, Shanghai Electric is accelerating its transition from a traditional equipment manufacturer to a green, intelligent energy system provider, while Siemens China continues to serve as a strategic pillar of Siemens' global layout. Going forward, both companies will actively support China's dual-carbon goals, deepen integration across industry application scenarios, and unlock further cooperation potential in high-end equipment, contributing to global green development.

According to reports, 12 projects from 11 major state-owned enterprise groups, including Shanghai Electric, SAIC, Shanghai Industrial Investment, Bright Food Group, Bailian Group, Donghao Lansheng Group, Orient International, Bank of Shanghai, Airport Group, Lingang Group, and Greenland Group, were signed during the ceremony. The total value of the agreements reached approximately RMB 2.99 billion. These signings deepen strategic partnerships between global enterprises and Shanghai's SOEs, expanding cooperation into broader dimensions, deeper industrial coordination, and shared innovation ecosystems.

Leading officials from relevant Shanghai municipal departments, SASAC executives, major SOE leaders, heads of the procurement alliance, representatives from multinational corporations, and signing parties attended the event.

Breakthrough in Nuclear Power:

World's Largest Power Electron Beam Collector Successfully Developed

Recently, the world's highest-power, high-energy electron beam collector (800 kW @ 8 GeV), led and developed by Shanghai Electric Nuclear Power Group, has successfully passed factory acceptance and been delivered to the Shanghai High-Repetition-Rate XFEL and Extreme Light Facility (SHINE) project site in Zhangjiang, Shanghai.

As one of the core components of the hard X-ray free-electron laser (XFEL) facility, the collector concentrates and absorbs redundant electron beams during commissioning or lasing operations, ensuring both equipment and radiation safety. Its performance specifications far exceed the 300 kW benchmark of the operational European XFEL facility, marking China's entry into "uncharted territory" in superconducting accelerator technologies.

To fill technological gaps and tackle critical "bottleneck" challenges, the project team, together with the Shanghai Synchrotron Radiation Facility, integrated upstream and downstream partners across the industry chain. A joint R&D consortium was established with the Shanghai Institute of Applied Physics, Shanghai Electric Nuclear Power Equipment Co., Ltd., Anhui Huainan Welding Center, and Kunshan Sanwei Heat Exchanger Co., Ltd. Through numerous trials, the consortium innovatively developed large-diameter Cu–graphite vacuum furnace brazing technology, integrated ultrasonic testing for absorber assemblies, high-penetration welding for large copper rings and ring-to-ring electron-beam welding. During manufacturing, the team also overcame multiple challenges, including deep-hole machining of copper rings without coolant, high-precision machining and assembly welding of long cylindrical parts, and complex turnover and sleeving processes for slender eccentric components.

Shanghai Electric Participates in the Launch of Core Equipment for the Hypergravity Mega Science Facility

Recently, the launch ceremony for the core equipment of the Centrifugal Hypergravity and Interdisciplinary Experiment Facility (CHIEF), a national major science and technology infrastructure project, was held in Hangzhou, Zhejiang Province, marking the official commissioning of the facility's core equipment. Led by Zhejiang University, the project comprises three main centrifuge units, including "CHIEF1500" and "CHIEF1900," the world's two largest-capacity centrifuges. The main systems and rotating systems of these centrifuges were manufactured by Shanghai Electric Nuclear Power Group. Developed entirely through China's independent R&D efforts, this hypergravity mega science facility is capable of generating a "hypergravity field" thousands of times stronger than Earth's gravity, enabling "spatiotemporal compression." It allows researchers to reproduce real-world changes at miniature scales and within extremely short timeframes in laboratory settings, providing critical support for the simulation and verification of kilometer-scale catastrophic events, pollution migration over millennia, and the development of new materials.

Energy Breakthrough: Dual 1,000 MW Units of Gansu Electric Power Investment Changle Power Plant Successfully Commissioned

On October 16, Unit 6 of the 2×1000 MW coal-fired expansion project at Gansu Electric Power Investment Changle Power Plant successfully completed its 168-hour full-load trial run and officially entered commercial operation. Shanghai Electric Power Generation Group supplied the project with the steam turbine, generator, low-pressure heaters, and condenser. Unit 5 entered commercial operation on September 6, marking the on-schedule completion of the entire project.

Both 1,000 MW units demonstrated outstanding performance during trial operation, with all technical indicators exceeding design specifications. Key parameters such as vibration and temperature rise performed exceptionally well, achieving an optimal balance of high efficiency, low emissions, and flexible operation.

As a key supporting project for major national energy strategies such as "Gansu Power Delivered to Zhejiang" and "West-to-East Power Transmission," the dual-unit commissioning enables an annual power generation capacity of up to 30 billion kWh. This will not only ease the power supply–demand imbalance in Northwest China but also significantly enhance the outbound transmission capability of renewable energy. The project plays an important role in optimizing China's national energy mix and ensuring the safe and stable operation of the power grid.

Shanghai Electric Wind Power Wins Multiple New Projects Nationwide

Shanghai Electric Wind Power Group Co., Ltd. ("Shanghai Electric Wind Power") has recently secured a series of new project bids across multiple regions.

In the Guangdong Energy Shaanxi Fugu 50 MW Wind Power Project, Shanghai Electric Wind Power will supply eight onshore turbines from its "Zhuoyue Platform" series. This marks another collaboration with Guangdong Energy in 2025, following the Weining Guanfenghai Town Kazishan Wind Farm Project.

In the China Datang Hubei Guangshui "Thousand Towns, Ten Thousand Villages" 70 MW Wind Power Project, the company will provide twelve onshore Zhuoyue Platform turbines, further expanding the depth and breadth of cooperation between the two parties.

Shanghai Electric Wind Power also continues to expand into the Southwest region. The company recently won bids for China Datang Guizhou Guyang 100 MW Wind Farm Project and Guangdong Energy Kazishan 90 MW Wind Farm Project. These projects will help consolidate the company's competitive edge in the onshore wind sector and inject new green momentum into the realization of China's dual-carbon goals.

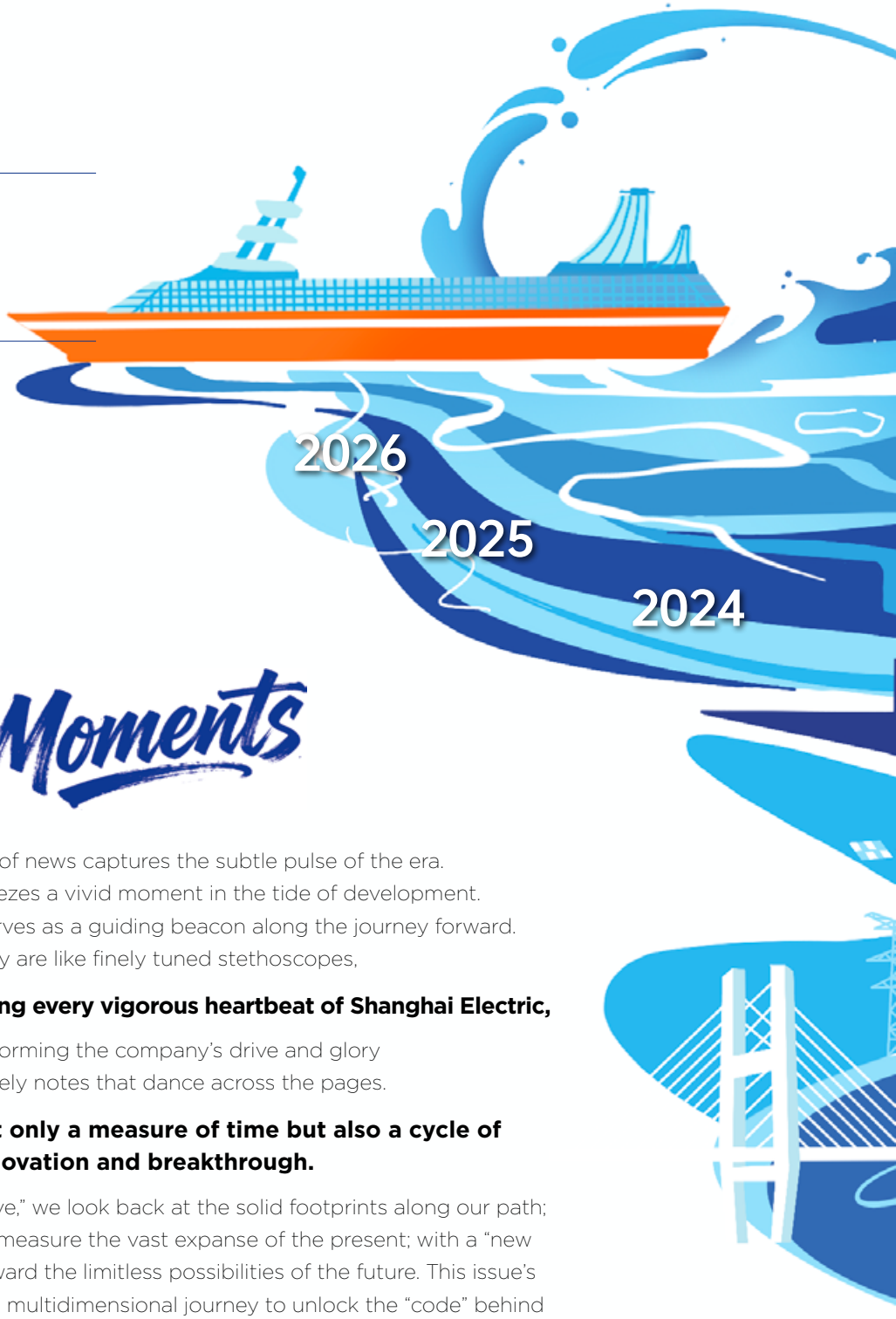
Shanghai Electric and Unitree Robotics Explore New Opportunities in Robotics Collaboration

On November 27, Wu Lei, Party Secretary and Chairman of Shanghai Electric Group, led a delegation to Unitree Robotics Co., Ltd. in Hangzhou, where he met with Chen Li, Co-founder of Unitree Robotics. The two sides held in-depth discussions on the industrial application of robotic products, technological cooperation, and component supply.

Wu Lei praised Unitree Robotics for its technological strengths in robotic motion control and scenario adaptability, and introduced Shanghai Electric's core advantages in industrial equipment, application scenarios, and manufacturing capabilities. He noted that, as a traditional equipment manufacturer, Shanghai Electric is actively advancing its transformation toward intelligence and digitalization, and expressed hope that both sides would fully leverage their respective strengths, establish effective communication mechanisms, and jointly explore cooperation opportunities in the robotics field.

Relevant functional department heads from both sides attended the meeting.

COVER TOPICS



Moments

Every piece of news captures the subtle pulse of the era.
Every report freezes a vivid moment in the tide of development.
Every campaign serves as a guiding beacon along the journey forward.
They are like finely tuned stethoscopes,

meticulously recording every vigorous heartbeat of Shanghai Electric,

Transforming the company's drive and glory
into lively notes that dance across the pages.

A decade is not only a measure of time but also a cycle of innovation and breakthrough.

With a "new perspective," we look back at the solid footprints along our path; with a "new domain," we measure the vast expanse of the present; with a "new observation," we gaze toward the limitless possibilities of the future. This issue's cover story takes you on a multidimensional journey to unlock the "code" behind Shanghai Electric's ten years of high-quality development.


2023
2022
2021
2020
2017
2019
2018
2016

Upholding Independent Innovation and Serving National Strategies

Contributing to New-Style Industrialization through World-Class Equipment Manufacturinges

Wu Lei, Party Secretary and Chairman of Shanghai Electric Group

Manufacturing is the lifeblood of the national economy, the foundation of the nation and the cornerstone of its strength. Equipment manufacturing, in particular, forms the backbone of a country's manufacturing sector. Today, as a new round of scientific and technological revolution accelerates and the global industrial structure and layout undergo profound adjustments, China stands at a critical juncture in its transition from a major manufacturing nation to a manufacturing powerhouse. As a world-class, comprehensive high-end equipment manufacturing enterprise, Shanghai Electric Group Co., Ltd. (hereinafter referred to as "Shanghai Electric") earnestly implements General Secretary Xi Jinping's important instructions on building a strong nation. Centered on the goal of "accelerating the development of a world-class equipment manufacturing enterprise," Shanghai Electric remains committed to serving national strategies, upholding technological self-reliance and self-strengthening, vigorously developing new quality productive forces, and comprehensively advancing new-style industrialization. It is striving to contribute to the building of a manufacturing powerhouse.

1 Strengthening Political Alignment and Deepening Understanding of the Strategic Significance of Advancing New-Style Industrialization in Equipment Manufacturing

General Secretary Xi Jinping has emphasized that industrialization is the inevitable path to national economic development, and that, on the industrial front, the Chinese Dream means accelerating the advancement of new-style industrialization. From a strategic perspective, new-style industrialization lies at the core of building a modern industrial system and is of profound significance to the development of a manufacturing powerhouse. It must be examined and positioned from the overall strategic layout of the country, and from the grand historical process of national rejuvenation. China must remain committed to a path of new-style industrialization with Chinese characteristics, better serve the formation of a new development paradigm, and help realize the goal of becoming a manufacturing powerhouse. From the perspective of current needs, new-style industrialization embodies the active practice of technological innovation and industrial upgrading in China's manufacturing sector in the new era. It reflects a pioneering approach to the holistic reshaping of the economic structure and the systemic transformation of social forms. At present, China's economy has shifted from a phase of high-speed growth to one of high-quality development. It is therefore essential to actively adapt to and lead the new round of scientific and technological revolution and industrial transformation, and to vigorously advance the practice of new-style industrialization, so as to build a strong material and technological foundation for Chinese modernization. From the perspective of the strategic pathway for advancing new-style industrialization, it is necessary to fully, accurately, and comprehensively implement the new development philosophy, adhere to innovation-driven development, and take a coordinated approach to the advancement of traditional industries, strategic emerging industries, and future industries. High-quality development must run through the entire process of new-style industrialization. Efforts should be intensified to reinforce industrial foundations and make breakthroughs in major technological equipment, driving manufacturing toward high-end, intelligent, and green development. From the perspective of the governing principles for equipment manufacturing, manufacturing is the mainstay of the national economy and the backbone of economic vitality, while equipment manufacturing is the backbone of manufacturing itself. By fully implementing the decisions and arrangements of the government, the equipment manufacturing sector must take the lead and move to the forefront in enhancing industrial innovation capacity, promoting structural upgrading, strengthening the autonomy, resilience, and security of industrial and supply chains,

and deepening the integration of digital technologies with the real economy, thus playing a strategic, leading, and supporting role.

As a "century-old major electrical equipment enterprise," Shanghai Electric is both a microcosm of modern Chinese industry and the cradle of China's power equipment sector. Since its origins in the Shanghai Dalong Machinery Factory in 1902, Shanghai Electric has shouldered the mission of serving the nation through industry and building a strong industrial base, deeply participating in and bearing witness to China's industrialization process. After the founding of the People's Republic of China, Shanghai Electric achieved numerous national and global firsts, including China's first 6,000 kW thermal generator set, the world's first double water inner cooled turbo-generator, and China's first 10,000-ton hydraulic press, playing an irreplaceable role in the country's industrialization. Since the launch of reform and opening up, Shanghai Electric has remained committed to technological self-reliance and open innovation, advancing joint ventures, cooperation, and technology introduction, deepening institutional and mechanism reforms, and building a strong high-end equipment manufacturing brand. The company has partnered with world-class enterprises such as Westinghouse (USA), Siemens, Mitsubishi (Japan), ABB, Schneider, and Ansaldo, consistently pursuing both technology absorption and independent R&D.

2 Upholding Strategic Positioning and Demonstrating Responsibility in Advancing New-Style Industrialization in Equipment Manufacturing

Focusing on high-quality development as the primary task and advancing new-style industrialization as the key mission, Shanghai Electric remains firmly rooted in its core business of equipment manufacturing. By leveraging its strengths in extreme manufacturing, system integration, and technological innovation, the company strives to be at the forefront of serving national strategies and a pioneer in advancing new-style industrialization.

First, taking service to national strategies as its mission and making proactive contributions to supporting national development and security. Leveraging its advantages in independently controllable, safe, reliable, and highly competitive modern high-end equipment manufacturing, Shanghai Electric fulfills its mission and duty as a state-owned equipment manufacturing enterprise by serving national strategies. To begin with, by leveraging the role of "a Pillar of a Great Power" and extreme manufacturing capabilities to consolidate the foundation of national energy security. Focusing on high-level manufacturing of coal-fired, gas-fired, and nuclear power equipment, Shanghai Electric supports the development of a new energy system. As one of the few domestic manufacturers with proven capabilities in both E-class and F-class gas turbines, Shanghai Electric possesses a complete industrial chain covering R&D, manufacturing, sales, and services. Its independently developed million-kilowatt-class double reheat ultra-supercritical power generation unit has achieved a power generation efficiency of 49.4% and a coal consumption rate of 248.86 g/kWh, setting a new global record for the lowest coal consumption. In line with the construction of a new power system, Shanghai Electric is accelerating the R&D of next-generation coal power technologies featuring deep peak shaving, fast regulation, and low emissions, thereby reinforcing coal power's role as a "ballast stone" and "main pillar" of national energy security. In the nuclear power sector, Shanghai Electric is one of the few equipment manufacturing groups in China with a complete industrial chain spanning nuclear island, conventional island, instrumentation and control systems, and large castings and forgings. Since supplying key nuclear power equipment for China's first Qinshan Nuclear Power Plant, Shanghai Electric has mastered the manufacturing technologies for second-, third-, and fourth-generation nuclear equipment. Notably, it plays a key role in demonstration fast breeder reactor projects, which are vital to China's medium- and long-term nuclear development, and advancing the country's three-step nuclear energy strategy. Focusing on comprehensive new energy equipment manufacturing to better serve the construction of a new power system, Shanghai Electric aligns with the integrated development trend of "source–grid–load–storage–control." The company continues to strengthen its capabilities in wind, solar, and energy storage equipment. For example, in wind power, Shanghai Electric ranks among the national leaders in cumulative installed offshore wind capacity and has completed the world's first floating wind–solar–fishery integrated project, the "CHN ENERGY Gongxiang" platform. In energy storage, Shanghai Electric offers a diversified portfolio covering second- and minute-level flywheel storage, hour-level lithium-ion storage, and long-duration technologies such as redox flow batteries, compressed air, molten salt, and pumped hydro storage. These solutions provide one-stop "optimal storage" system services for power generation, grid, and commercial & industrial users. Notably, Shanghai Electric has independently developed the world's first 300 MW-class compressed air energy storage series large-capacity motor. Furthermore, by leveraging

integrated equipment manufacturing advantages to serve the construction of a modern industrial system. An independently controllable, safe, and reliable industrial system is a prerequisite and strategic pillar for new-style industrialization. Focusing on major industry and intelligent manufacturing, and targeting national strategic needs such as building a strong aerospace sector, achieving self-reliance in defense science and technology, and strengthening industrial foundations, Shanghai Electric continues to enhance the core competitiveness of its industrial equipment.

Second, taking high-level self-reliance and strength in science and technology as the main thread, and continuously deepening efforts to comprehensively enhance the core competitiveness of high-end equipment manufacturing. Driving industrial innovation through scientific and technological innovation is fundamental to advancing new-style industrialization. In recent years, Shanghai Electric has adhered to the principle of the "Four Orientations": toward the world's scientific frontiers, toward the main economic battlefield, toward major national needs, and toward people's lives and health. Focusing on the fundamental driving and leading role of science and technology in industrial development, the company has strengthened the construction of an organized innovation system, steering frontier technological breakthroughs, future competitive advantages, and high-quality industrial growth across the Group. First, by strengthening the strategic layout of scientific and technological innovation. Shanghai Electric has continued to increase R&D investment. In recent years, its average annual R&D spending has exceeded RMB 6 billion, with R&D intensity reaching 4.5%, about 2 percentage points higher than the industry average. The company has optimized the structure of R&D investment, emphasizing scientific output, research achievements, and commercialization. By aligning investments with core industrial upgrading, the development of secondary industries, and major new-product iterations, Shanghai Electric has guided innovation resources toward emerging and future-oriented fields, which now account for nearly 40% of total R&D investment. With a focus on the global aggregation of innovation resources, Shanghai Electric has built an open, collaborative, agile, and efficient R&D ecosystem. Through strategic partnerships and joint research programs with leading domestic and international universities such as Tsinghua University and Shanghai Jiao Tong University, the Group has invested nearly RMB 2 billion over the past five years to accelerate the industrialization of scientific research results. Next, by adhering to national major projects as key drivers. Leveraging strengths in cross-sector and cross-disciplinary integration and coordination, Shanghai Electric has led or participated in more than 70 national key technology projects in critical fields such as nuclear power, gas turbines, and high-end machine tools. The company has won over 30 national, provincial, and municipal science and technology awards. By focusing on collaborative breakthroughs across industries, Shanghai Electric achieved China's first complete set supply of main equipment for the nuclear island of a high-temperature gas-cooled reactor, while the China Experimental Fast Reactor project received the Special Grand Prize of the National Science and Technology Progress Award. Moreover, by actively building high-level science and innovation platforms. Rooted in fundamental technologies in energy, power, automation, and artificial intelligence, Shanghai Electric has intensified the development of key platforms in areas such as advanced nuclear energy materials, hydrogen energy, green and low-carbon technologies and resource recycling, and intelligent manufacturing.

Third, leveraging Shanghai Electric's cross-industry, cross-sector, and cross-technology collaborative innovation to support breakthroughs in national priority industries. By capitalizing on its diverse industrial portfolio, broad coverage, and strong technological synergies, Shanghai Electric is driving breakthroughs in a range of critical products across key national industries. For example, drawing on its full industrial-chain capabilities spanning materials, forging, machining, and assembly, Shanghai Electric has successfully developed an extra-large 950 mm marine crankshaft, breaking through international blockades and monopolies. Looking ahead, Shanghai Electric will further orient its marine crankshaft products toward green-fuel engines, advancing toward higher power ratings, greater precision, and enhanced reliability to compete more effectively in the global market. Enhancing integrated solution capabilities to drive industrial chain development, Shanghai Electric is bolstering its capacity to deliver integrated, end-to-end solutions by bringing together its full industrial-chain technological strengths in new energy, smart grids, and green chemical engineering. Focusing on building a complete green fuel industrial chain, the company has launched China's first green methanol demonstration project in Taonan, Jilin Province. This project pioneers an integrated industrial ecosystem of "green power – green hydrogen – green methanol – green applications," marking a significant milestone in China's pursuit of holistic green fuel development. It is the first domestic project to obtain full-process certification under the EU ISCC standard and to secure international market access, making it a benchmark large-scale collaborative project in China's green chemical industry. Building on this success, Shanghai Electric will advance the large-scale application of green fuels in sectors such as shipping, aviation, chemical engineering, and metallurgy, providing system-level solutions for global industrial decarbonization.

3 Maintaining Strategic Focus and Leading the Way in High-End, Intelligent, and Green Equipment Manufacturing

High-end, intelligent, and green development is an inherent requirement of new-style industrialization and a defining feature of its characteristics. Looking ahead to the 15th Five-Year Plan period, Shanghai Electric will remain focused on the primary task of high-quality development and the accelerated cultivation of new quality productive forces, comprehensively promoting high-end, intelligent, and green transformation. The company aims to contribute practical experience and insights to China's exploration and theoretical understanding of new-style industrialization.

First, coordinating the development of traditional industries, strategic emerging industries, and future industries to drive equipment manufacturing toward high-end development. High-end development is the inevitable path toward building a strong nation. Shanghai Electric takes a coordinated approach to traditional industries, strategic emerging industries, and future industries, comprehensively enhancing equipment technologies and product capabilities, and accelerating transformations in quality, efficiency, and growth drivers. This is achieved, firstly, by accelerating the transformation of traditional industries and moving up the value chain. On the product side, Shanghai Electric promotes both horizontal expansion and vertical deepening. Horizontally, guided by the National Science and Technology Major Project on "High-End CNC Machine Tools and Basic Manufacturing Equipment," Shanghai Electric has further improved the machining precision of traditional grinding machines to the nanometer level and expanded into the semiconductor sector. Vertically, the company is extending turbomachinery applications from traditional coal-fired power generation to fields aligned with the new power system, such as air compressors, expanders, and energy storage. On the market side, Shanghai Electric continues to break into high-end markets. By undertaking the world's largest and most technologically advanced 950 MW Dubai Hybrid CSP+PV Project, the company has enabled 24-hour continuous and stable power generation using 100% renewable energy.

Second, adhering to digital transformation and "AI empowerment" to drive intelligent upgrades in equipment manufacturing. The development of digital technologies is both a fundamental requirement of new-style industrialization and a key driver of high-quality industrial growth. Shanghai Electric will follow a holistic strategy of "Digital + R&D," "Digital + Production," "Digital + Service," and "Digital + Management", promoting deep integration of digital intelligence with industrial operations. Firstly, by advancing industrial digital transformation. Since 2022, Shanghai Electric has systematically implemented multi-level, multi-scenario smart manufacturing practices to enhance its smart manufacturing capabilities. To date, the company has established 3 National Smart Manufacturing Factories, 1 National Model Smart Manufacturing Scenario, and 17 Shanghai Municipal Smart Manufacturing Factories. Looking ahead, Shanghai Electric will leverage a "scenario + technological innovation" approach to sequentially develop multiple National Excellence Factories, Pilot Factories, and Lighthouse Factories, serving as benchmarks for intelligent industrial practices. Secondly, by actively building enterprise-level trusted data space demonstrations. Shanghai Electric emphasizes the role of leading industry enterprises in driving upstream and downstream collaboration.

Third, emphasizing comprehensive and systematic approaches to drive green transformation in equipment manufacturing. Promoting green and low-carbon economic and social development is a key step toward achieving high-quality growth. As a core element of new-style industrialization, industrial green development is an important pathway for cultivating new quality productive forces and generating new economic momentum. Shanghai Electric actively implements the national "dual carbon" goals and follows the guiding principles of "energy efficiency improvement, energy substitution, and resource recycling", focusing on standards leadership, R&D and application, and benchmark factories. On one hand, by leading the industry through high standards. Shanghai Electric has collaborated with over ten leading domestic and international enterprises, including State Grid, Schneider, and Johnson Controls, to develop the "Implementation Pathways and Evaluation Guidelines for Zero-Carbon Industrial Parks", filling a critical gap in industry standards. The company has also published a Carbon Peak and Carbon Neutrality Action White Paper, clearly committing to achieving carbon peak in operations by 2030, striving for operational carbon neutrality by 2035, and aiming for full value chain carbon neutrality by 2055. On the other hand, by driving high-quality green R&D and application. Shanghai Electric integrates green and low-carbon principles throughout the product lifecycle and manufacturing processes.

Surveying the Journey, Forging Ahead

From deepening its roots in traditional energy to exploring future energy, from focusing on equipment manufacturing to empowering ecosystems—over the past decade, Shanghai Electric has consistently upheld its mission to "serve the national strategy," using technological innovation as its engine, leaving behind profound and inspiring marks of development.

>>Visual Highlights | Capturing Iconic Moments

Every achievement is a medal of effort, and every moment deserves to be remembered. Here, through carefully curated and precious images, we capture those shining highlights, exploring the extraordinary chapters unique to Shanghai Electric in the evolution of China's high-end equipment industry.

2018yr

01

02

2020yr

03

2020yr

04

01

2018 – First Overseas Hualong One Reactor Internal Shipped for Karachi Unit 2

China's nuclear power goes global as a national flagship.

02

2018 – Awarded 950 MW Dubai CSP + PV Power Plant Project

Shanghai Electric lights up the Middle Eastern desert with its "Integrated Generation-Grid-Load-Storage" technology.

03

2020 – Shanghai Electric Masters Long-Duration Vanadium Flow Battery Storage Technology

A world-leading breakthrough in energy storage technology.

04

2020 – Six-Cylinder, Six-Row Steam Double-Reheat Unit at Datang Dongying Project Commissioned

The world's longest-axis coal-fired power unit.

2021yr

05

06

2021yr

07

2021yr

05

2021 – Guangdong Yuedian Dapu Power Plant
Shanghai Electric's first fire-storage combined frequency regulation project, becoming a "new engine" for strategic transformation.

06

December 2021 – Huaneng Shidaowan High-Temperature Gas-Cooled Reactor Demonstration Plant Connected to Grid for the First Time
Marks China's leadership in high-temperature gas-cooled reactor nuclear power technology.

2022yr 09

11
2023yr

2022yr 08

10
2022yr

07

April 2021 – Thermal Management System for New Energy Vehicles Showcased at Multiple Exhibitions
This system can switch among 18 comfort driving modes, meeting temperature control, dehumidification, and defogging needs across multiple seasons.

08

2022 – SPIC's Jieyang Shenquan Phase II Offshore Wind Farm Project First 11 MW Turbines Connected to Grid
Breaks the world record for the largest single commercial offshore wind turbine at 11 MW.

09

2022 – Shanghai Mitsubishi Elevator Delivers Its 1.2 Millionth Elevator
A major milestone in the company's development history.

10

December 2022 – C919 Large Aircraft Officially Enters Commercial Operation
Shanghai Electric contributes composite fuselage sections and aero-engine components to a national flagship project.

11

2023&2024 – Fangchenggang Nuclear Power Phase II Units 3 & 4 Commissioned
Expands the application of China's self-developed 1,000 MW nuclear technology in newly built third-generation PWR nuclear power plants represented by the Hualong One design.

Jan 2024

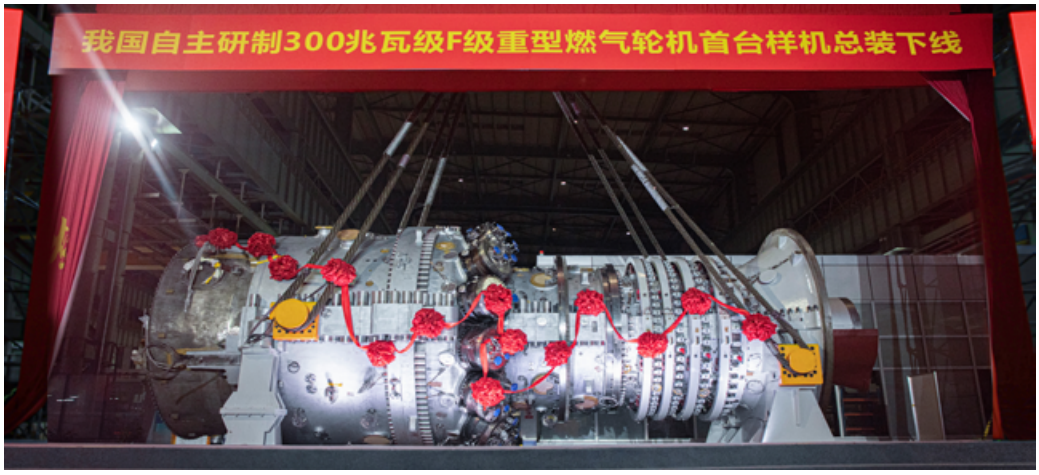
12

Jan 2024

14

13

Jan 2024



Dec 2024

16

Sep 2024

15

12

January 2024 – Completion of the First Fully Domestic 920mm Crankshaft Across the Entire Industry Chain
Becomes a key support for China's shift from a "major shipbuilding nation" to a "strong shipbuilding power."

13

February 2024 – First Prototype of 300 MW F-Class Heavy Gas Turbine Rolls Off the Line
China's first self-developed, largest-power, highest-tech-level heavy gas turbine, placing its manufacturing at the global forefront.

14

August 2024 – Asia's First Offshore Wind Power SOV "Zhizhen 100" Delivered
A major breakthrough in the localization of core offshore engineering equipment, providing strong support for deep offshore project operations and maintenance.

15

September 2024 – World's First 16 MW Offshore Low-Frequency Wind Turbine Unit Completed
A crucial technological direction addressing challenges in long-distance offshore transmission, large-capacity renewable energy integration, and weak regional grids.

16

December 2024 – Jiangsu Huaian Salt Cavern Compressed Air Energy Storage National Demonstration Project
Marks China's breakthrough in large-capacity, high-parameter compressed air energy storage technology and equipment.

17

January 1, 2025 – Zhangzhou Nuclear Power Unit 1 Commissioned
The unit 1 of China's self-developed third-generation Hualong One nuclear power series, with six units planned, and steam turbine equipment for units 1–4 designed and supplied by Shanghai Electric.

18

January 2025 – Uzbekistan's First Digital Substation
The country's first digital substation, a benchmark for technological advancement and a milestone in China-Uzbekistan "Belt and Road" cooperation.

Nov 2025 22

Sep 2025 21

Jul 2025 20

19

April 2025 – "Lingrui" Integrated Mobile C-Arm Debuts at the 91st CMEF
Shanghai Electric Medical integrates the trolley and main unit into a unified C-arm, creating the strongest domestic C-arm product line.

20

July 2025 – Taonan Wind-Biomass Green Methanol Integrated Demonstration Project Commissioned
Achieves a major breakthrough in green hydrogen-based fuels, offering a replicable "China solution" for energy transition, carbon peaking and carbon neutrality.

21

September 2025 – Humanoid Robot "SUYUAN" at the CIIF
Through the cross-industry integration of "AI + Precision Manufacturing," Shanghai Electric is redefining reliability standards for components, helping related industries achieve technological leaps.

22

November 2025 – First 650°C Ultra-Supercritical High-Efficiency Coal-Fired Unit at Zhejiang Huaneng Yuhuan Power Plant
The project is part of multiple national-level demonstration initiatives, including the "Clean and Efficient Coal Utilization Technology" key R&D program. Once completed, it will set new world records for the highest parameters and lowest coal consumption of coal-fired units, significantly advancing the clean and efficient use of coal power.

2016——2025 十刻

Expanding Boundaries Across Industries, Outlining a New Blueprint

In 2025, with a brand value of RMB 228.565 billion, Shanghai Electric has ranked among the Top 50 of China's 500 Most Valuable Brands for ten consecutive years. The company continues to unlock the "high-quality innovation code" driven by technological advancement. From the Carbon Neutrality Expo to the CIIF, and from Hannover Messe in Germany to Intersolar Munich, Shanghai Electric provides systematic solutions to address carbon reduction problems across industrial chains.When the industry spotlight shines, Shanghai Electric undoubtedly stands out.Over the past decade, Shanghai Electric has expanded its reach across energy equipment, machine tools, and frontier technologies, achieving historic milestones and delivering replicable, practical "China solutions"

Leading the Full Hydrogen Chain, Empowering with Energy Storage Matrices

Shanghai Electric's transformation from "selling products" to "offering solutions + services + ecosystem" mirrors its strategic thinking of "scenario-driven, technology-enabled, cross-industry collaboration", representing China's leap from manufacturing to innovation.

The Taonan Green Methanol Project, built by Shanghai Electric, is China's first green hydrogen-coupled biomass gasification green methanol project, one of the first on-site green power-to-hydrogen demonstration projects, and the first green methanol project fully certified by the EU's ISCC system. As a key part of the "Hydrogen-Powered Jilin" and "Jilin Hydrogen to Shanghai" strategic layout, the project, once fully operational, can produce one million tons of green methanol annually, serving as a national benchmark for the development of the new energy industry.

The Taonan project exemplifies Shanghai Electric's commitment to national strategy, development of new productive forces, cultivation of core competitiveness, and pursuit of high-quality growth. Leveraging this project as a strategic anchor, Shanghai Electric aims to build a globally leading full-industry green fuel platform, accelerating the construction of an integrated ecosystem of green power – green hydrogen – green methanol – green applications. The company continuously refines a complete technology matrix spanning renewable power generation, water electrolysis for hydrogen, biomass gasification, carbon capture, production of green methanol, green ammonia, and sustainable aviation fuel.

Zhangjiakou "Olympic Clean Energy City" Multi-Energy Complementation Demonstration Project was developed in support of the 2022 Beijing Winter Olympics. Its 150 MW wind farm generates nearly 430,000 MWh annually on average; while the 30 MW PV system generates about 46,000 MWh per year. The entire project saves about 1.48 million tons of standard coal and reduces CO_2 emissions by 3.69 million tons each year.

The Anhui Jinzhai Independent Energy Storage Power Station Project, with a scale of 100 MW/200 MWh, is supported by Shanghai Electric's lithium iron phosphate battery storage system. It integrates a "4+1" smart management, a three-tier fire protection system and "SEunicloud" lifecycle energy storage cloud platform, strongly supporting local clean energy development.

The Baicheng All-Vanadium Redox Flow Battery Storage Project primarily involves the construction of a 100 MW/600 MWh all-vanadium redox flow battery storage power station; as well as a research and production base with an annual capacity of 1 GW for vanadium battery integrated equipment, electrode plates, membranes, electrolytes, and storage tanks.

The Lianyungang Integrated Solar, Storage, and Charging Project combines wind turbines, PV, energy storage, and charging piles. By incorporating the most advanced technologies in microgrid integration, control, and maintenance technologies, it enables self-consumption of distributed electricity and feed-in of surplus power.

Scaling New Heights, Forging a Diverse Industrial Pinnacle

Breakthroughs in industrial equipment often stem from pushing the boundaries of technology. Shanghai Electric leverages its industrial DNA to empower high-end equipment, demonstrating the hardcore strength of a "national team" committed to tackling challenges and fulfilling its mission.

In aerospace manufacturing, Shanghai Electric plays a significant role in China's domestic large aircraft program, undertaking key assembly projects for the C919 and C929 and establishing digitalized aero-engine assembly production lines, ensuring quality and precision throughout the manufacturing process. Shanghai Electric has consecutively won core automation projects from two leading domestic aerospace manufacturers—Zhejiang Huarui Aerospace Manufacturing Co., Ltd. and Zhejiang Xizi Aircraft Manufacturing Co., Ltd., reflecting strong business expansion momentum.

In the field of new energy vehicle (NEV) thermal management systems, Shanghai Electric continues to lead technological innovation, pioneering the development of internationally advanced electric compressors and automotive thermal management systems. The company also provides high-quality, reliable precision cast components to global automakers. In September 2024, Shanghai Electric successfully commissioned an annual production capacity of 650,000 NEV air-conditioning electric compressors at the Wuhu Economic and Technical Development Zone, enabling large-scale global deliveries. Currently, the company's total production capacity for automotive electric compressors has reached 1 million units per year, providing strong mass-production support for both domestic and international NEV projects.

In the chemical equipment sector, Shanghai Electric aims to be a global leader in integrated high-end oil, gas, and chemical equipment solutions. In June this year, the largest domestic gas-phase polyethylene reactor was installed with a total weight of 529 tons, a height of 44.5 meters, and a maximum diameter of 9.2 meters. This sets a new scale record for similar facilities in China's petroleum industry and injects new momentum into the localization of energy and chemical equipment.

Breakthroughs in high-end equipment rely on strong foundations in basic parts and machine tools. While basic parts may be small, they are decisive for equipment performance, reliability, and lifespan. Machine tools, as the machinery behind manufacturing equipment, are the cornerstone of the entire industrial system.

In recent years, Shanghai Electric has focused on strengthening foundational engineering and achieving autonomous control of core industrial

chains, overcoming technological problems in key components, and continuously enhancing support capabilities in aerospace, rail transit, robotics, NEVs, shipbuilding, and other key sectors, solidifying the resilient foundation of China's industrial system.

◎ Independently developed subway Type A axlebox bearings and traction motor insulated bearings have successfully replaced imported components, supporting passenger operations on multiple domestic subway lines.

◎ Blade products are applied to key domestic engine and aircraft models as well as major international civil aviation engine models.

◎ Cutting tool products provide customized, integrated machining solutions for key sectors such as aerospace and NEVs, achieving multiple successful applications of high-precision, high-efficiency, and high-reliability series products.

◎ The fastener segment, with a long-standing focus on the NEV industry, has demonstrated strategic effectiveness, successfully delivering customized new products to leading customers in the sector.

◎ Committed to the indigenization of low-speed diesel engine crankshaft technology, leveraging national R&D programs to tackle critical technological challenges for large-cylinder diameter marine crankshafts, Shanghai Electric successfully developed and delivered China's first 920mm marine crankshaft forging piece, marking a major breakthrough in domestic production of large marine crankshafts.

◎ Instrumentation and control products are widely used in nuclear power, thermal power, and petrochemical sectors, serving as a core driver for the localization of instrumentation and control technologies in these industries. Shanghai Electric's products cover all domestic operating and under-construction nuclear power plants and provide high-performance ball valves for the mainline of the West-to-East Gas Pipeline Project, strongly supporting the construction of major national energy projects.

Driven by the rapid rise of strategic emerging industries, the machine tool sector has entered a new phase of development. The explosive growth of the humanoid robot industry has further injected strong momentum into Shanghai Electric's machine tool segment. Leveraging its independent design and manufacturing capabilities in large precision grinding machines and mid-to-high-end CNC machine tools, Shanghai Electric has built a comprehensive product system of over 200 specifications, covering high-precision CNC grinders, intelligent machine tools, and more. The company continuously provides high-quality machine tools and solutions for China's equipment manufacturing sector, serving as a solid pillar supporting the modernization of the national industrial chain.

Shanghai Electric's industrial equipment portfolio focuses not only on major national equipment sectors, but also on urban operation support and the improvement of people's livelihoods, steadily expanding a value co-creation smart ecosystem.

In rail transit, the independently developed TSTCBTC® autonomous signaling system by Shanghai Electric serves as the intelligent core of next-generation urban rail transit. Its deployment continues to expand, with 1,328 km of lines in operation and 286 km under construction, totaling 1,615 km, providing core support for the smooth operation of urban arteries.

Smart elevators are another hallmark of Shanghai Electric's service to modern buildings and public spaces. Its products maintain leading domestic and advanced international standards in energy efficiency, environmental friendliness, safety, reliability, and comfort. In 2024, the company's 12.5 m/s ultra-high-speed elevator, with fully independent intellectual property, passed full-scale type testing and entered the market, setting a new domestic speed record. To date, Shanghai Electric has deployed over 1.4 million elevators and escalators, exporting products to 101 countries and regions worldwide.

In the heating and cooling equipment sector, Shanghai Electric has built a globalized air-conditioning compressor industrial footprint, with five world-class green factories and five technical service centers, producing over 1,000 high-efficiency, energy-saving models across nine series covering all refrigerant types and multiple voltages/frequencies, capturing approximately one-seventh of the global market share. The business continues to lead in residential and commercial AC, heat pump water heaters, and refrigeration, while actively expanding into thermal management, data centers, and RV applications, redefining urban comfort through green technology.

In smart healthcare, Shanghai Electric integrates its industrial intelligence expertise into the life and health industry, working closely with renowned research institutions to provide comprehensive solutions from hospital design and construction to medical equipment configuration. Innovations such as the IROS orthopedic surgical navigation system and the MirraLan e7 3.0T superconducting MRI system exemplify the company's mission to "give warmth to medical technology and depth to Chinese intelligent manufacturing."

Intelligent Empowerment: Industrial Internet Reshaping the Industrial Ecosystem.

Shanghai Electric's SEunicloud

industrial internet platform has been selected as a national "Double-Cross Platform". Currently, the platform connects over 460,000 devices with a total asset value exceeding RMB 200 billion, serving 13 industry sectors, including energy and industrial manufacturing, and supporting full lifecycle management of products. For example, the platform has already established AI-based fault diagnosis models for high-end equipment such as wind power, thermal power, and gas turbines. Using data collected from sensors, the system can diagnose faults in real time and generate solutions, monitor and evaluate equipment operating conditions continuously, and provide early warnings for potential risks. These capabilities reduce operation and maintenance costs, extend equipment lifespan, and enhance operational stability. The realization of these intelligent diagnostic technologies relies heavily on the development of 5G+ technology, as high-speed data transmission is a key driver for industrial internet advancement.

The world's first floating wind power and fishery integrated project has been successfully completed. The project is the world's first deep offshore floating wind power and marine pasture integrated project, which was selected as one of the Top Ten Industrial Technology Problems by China Association for Science and Technology, and included in the Fujian Major Special Science and Technology Project. The project was built in Putian Nanri Island National Marine Pasture Demonstration Zone in Fujian. About 35 meters under water, it uses three-column semi-submersible floating platform, whose hexagonal center serves as the breeding area. The platform is equipped with a 4 MW offshore wind turbine and lightweight flexible PV modules to support efficient ocean use and cross-sectoral development.

Technology R&D, Sustained Investment and Expansion

Over the past decade, Shanghai Electric has transitioned from "equipment manufacturing" to "ecosystem empowerment", increasing R&D investment, achieving technological self-reliance, driving innovation, and fostering ecosystem collaboration, marking the leap from "fast follower" to industry leader.

Shanghai Electric has contributed to the launch of the world's largest-capacity centrifuge by manufacturing the core equipment for a major hypergravity science facility. Recently, the launch ceremony for the core equipment of the Centrifugal Hypergravity and Interdisciplinary Experiment Facility (CHIEF), a national major science and technology infrastructure project, was held in Hangzhou, Zhejiang Province, marking the official commissioning of the facility's core equipment. Led by Zhejiang University, the project comprises three main centrifuge units. Among them are two of the world's largest-capacity centrifuges, whose main systems and rotating systems were manufactured by Shanghai Electric Nuclear Power Group. Developed entirely through China's independent R&D efforts, this hypergravity mega science facility is capable of generating a "hypergravity field" thousands of times stronger than Earth's gravity, enabling "spatiotemporal compression."

Shanghai Electric has achieved a major breakthrough in fusion technology with the successful delivery of the world's largest TF coil box. On October 7, 2025, a delivery ceremony for the Toroidal Field (TF) Magnet Coil Box of China's "13th Five-Year Plan" major scientific infrastructure—the Comprehensive Research Facility for Fusion Technology (CRAFT)—jointly developed by Shanghai Electric and the Institute of Plasma Physics, Chinese Academy of Sciences (ASIPP), was successfully held at the CRAFT campus in Hefei. The successful handover of the TF coil box marks a significant milestone in the construction of the CRAFT project and represents an important step forward in elevating China's high-end manufacturing capabilities in the field of fusion technology.

Shanghai Electric has steadily increased its investment in scientific and technological R&D. Over the past six years, Shanghai Electric has continuously increased its R&D investment, with overall R&D intensity rising to 4.5% and nearly 40% of R&D spending dedicated to emerging

and future-oriented fields. As of the end of 2024, Shanghai Electric has over 70 high-tech enterprises, 7 national-level enterprise technology centers, 23 municipal and provincial-level enterprise technology centers, 12 municipal and provincial-level engineering technology research centers, 1 Shanghai key laboratory, 17 CNAS-accredited laboratories, 7 academicians' and experts' workstations, and 5 postdoctoral research stations. The company holds 6,823 valid patents (with 3,276 invention patents) as of the end of 2024.

The layout of scientific and technological innovation has been continuously optimized. Shanghai Electric has established a three-tier project management system, covering group-level major projects in industrial gas turbines, humanoid robots, and machine tools, enterprise-level major projects in green methanol and advanced nuclear equipment, and core technology projects such as deep offshore large wind turbines and flexible improvement of thermal power units.

The intensity of collaborative innovation has been continuously strengthened. In the integrated energy sector, the Eastern Hub Integrated Energy Project leverages energy equipment advantages, enabling group subsidiaries to provide green, low-carbon energy solutions. In the green fuel sector, the Taonan Green Methanol Demonstration Project utilizes full-industry chain expertise and diversified equipment collaboration to establish scalable green methanol production routes.

The construction of high-level scientific and technological innovation platforms has been accelerated. Key initiatives include the establishment of five specialized laboratories—notably the Resource-Electric-Thermal Conversion and Circulation Laboratory, approved in 2024 as a first for Shanghai key laboratories. The company promotes deep "2+X" collaborations with universities and research institutions, enhancing joint R&D mechanisms. Over 1,000 industry–academia–research cooperative projects have been completed, with a total investment of approximately RMB 900 million.

In energy sector, Shanghai Electric acts as a fearless pioneer, leading the full hydrogen chain and empowering energy storage matrices, charting a "green blueprint" for global industrial decarbonization. In industrial equipment, it acts as a skilled artisan, scaling high-end equipment peaks and creating diverse industrial achievements. In technology, it becomes a driver of innovation, empowered by intelligence and R&D, seizing technological high grounds in multiple frontier fields and guiding the industry toward a new future.

Advancing Reform to Answer the Call of Industrial Revitalization

Shanghai Electric Accelerates Transformation Toward a World-Class Equipment Manufacturer

In September, the Congress of Shanghai Electric Group was successfully convened. The work report set development goals for the next five years, focusing on three strategic pillars: Technology Leadership, Green Transformation and Global Deployment. The company plans to establish national-level laboratories and joint innovation platforms, build full-lifecycle green manufacturing systems, promote deep integration of "AI + Advanced Manufacturing," and steadily advance global strategies, ultimately forming a technology–industry–ecosystem triad of global competitiveness.

Once known for its "Four Industrial Giants" in Minhang, Shanghai Electric has quietly undergone a profound transformation. Leveraging the national initiative to deepen state-owned enterprise reform, the company is reshaping its industrial layout around major national strategies, accelerating the development of new quality productive forces, and strengthening talent cultivation. With these efforts, Shanghai Electric is striving to deliver a new "Answer Sheet" on its journey toward becoming a world-class enterprise.

Optimizing the Industrial Layout to Serve Major National Strategies

On October 7, major news shook the nuclear physics community: the toroidal field (TF) coil box of the "Comprehensive Research Facility for Fusion Technology (CRAFT)," a key national science and technology infrastructure project under the 13th Five-Year Plan, jointly developed by Shanghai Electric and the Institute of Plasma Physics of the Chinese Academy of Sciences, was officially delivered. This milestone signifies a critical breakthrough in the construction of the CRAFT project and marks an important achievement in enhancing China's high-end equipment capabilities in the field of fusion energy.

Standing 21 meters tall, 12 meters wide, and weighing 400 tons, the CRAFT TF coil box is currently the world's largest. Its overall size exceeds that of the corresponding component for International Thermonuclear Experimental Reactor (ITER) by more than 1.2 times, representing successful mastery of multiple key technologies.

The Action Plan for Deepening and Upgrading SOE Reform calls for state-owned enterprises to fully leverage their roles in technological innovation, industrial control, and security support, driving the development of a modern industrial system and a new development paradigm. In recent years, Shanghai Electric has aligned its industrial layout with major national strategies, focused on core businesses, and accelerated reform, development, and transformation.

In supporting the development of China's new-type power system, Shanghai Electric contributed to the successful assembly and ignition of China's independently developed 300 MW-class F-class heavy-duty industrial gas turbine prototype. It also realized fully independent and controllable manufacturing capabilities across the entire nuclear power equipment chain, including the nuclear island, conventional island, and instrumentation & control systems, driving upgrades in traditional energy equipment.

In the new energy sector, Shanghai Electric has comprehensively deployed multiple energy-storage technology pathways, including redox flow batteries, lithium-ion storage, compressed-air energy storage, flywheel storage, and molten-salt thermal storage. Meanwhile, the company has established a full hydrogen-energy industry chain covering production, storage, refueling, and application. The nation's first large-scale wind-to-biomass green-methanol demonstration project, also supported by Shanghai Electric, has been successfully commissioned.

In industrial equipment, Shanghai Electric is deeply involved in the domestic large aircraft strategy, undertaking key assembly projects for the C919 and C929 as well as the digitalized assembly production line for aviation engines, contributing to the advancement of China's commercial aviation sector. Leveraging national major science and technology projects, the company has promoted the upgrading of machine tools and achieved domestic substitution of high-end grinding machines. It also strengthened its self-developed software platform and built a full-lifecycle service ecosystem for rail transit, while accelerating strategic emerging businesses such as "AI + high-end equipment," embodied robotics, and digital transformation.

In industrial basic parts, Shanghai Electric delivered its first set of humanoid-robot joint modules and successfully developed and delivered China's first completely self-designed set of turbine blades for the F-class 50 MW heavy-duty gas turbine. The company has also achieved breakthroughs in core components across aerospace, medical, and rail transit applications.

Attracting Global Talent to Build a High-Caliber Technology Workforce

Mid-year, a global recruitment post released by Shanghai Electric garnered widespread attention. Positions were offered across China, Japan, the United States, Europe, and the Middle East, along with highly competitive, tailored compensation packages, highlighting the company's genuine commitment to attracting exceptional talent worldwide.

This ambitious drive underscores Shanghai Electric's strong emphasis on science, technology, and talent as it accelerates its transformation journey. In recent years, Shanghai Electric has continuously increased investment in R&D. In the first half of 2025, the company invested RMB 2.546 billion in R&D, up 9.4% year-on-year, representing 4.7% of revenue. Investment in emerging and future technologies rose to 39.5%.

Accelerated scientific and technological development requires strong talent support. Shanghai Electric has long regarded talent as its most critical resource, striving to build a politically reliable, highly skilled, and structurally balanced workforce while deepening reform of its talent development system.

By developing a distinctive talent-evaluation framework, the company established an assessment mechanism aligned with high-quality development, piloted the "challenge-based" model for scientific research, improved value-creation-oriented compensation systems, and introduced innovative mechanisms for sharing returns from technology commercialization. These efforts have enabled breakthroughs in multiple critical "bottleneck" technologies and strongly supported industrial transformation and high-quality growth.

Shanghai Electric has also fully implemented tenure-based and contract-based management, deepened the "three-capability mechanism," clarified criteria for demotion, and maintained clear exit pathways. The company strictly enforces performance-based adjustments for underperforming managers, creating a healthy and dynamic environment that inspires internal motivation and cultivates industry leaders, scientific pioneers, and world-class high-skilled talent.

In recent years, Shanghai Electric has attracted more than 80 leading and high-potential young experts, co-developed 78 PhD and master engineering talents with top universities, won 37 national-level talent awards and 192 Shanghai-level awards, and developed a "Team Awarded the National Engineer Award." The company's leadership team has also become significantly more professional and younger. The average age of the management team has dropped noticeably, with a marked increase in "post-70s" executives, forming a leadership structure with balanced age levels and optimized professional composition.

Setting Sail Globally to Build a World-Class Enterprise

In recent months, Shanghai Electric has reported a steady stream of positive developments in its overseas business. Shanghai Marine Crankshaft Co., Ltd., a subsidiary of Shanghai Electric Nuclear Power Group, successfully exported its first self-developed and manufactured 5G70 marine low-speed diesel engine crankshaft, achieving a breakthrough in overseas markets. Shanghai Electric Wind Power Group Co., Ltd. ("Shanghai Electric Wind Power") won bids for the 29.9MW Galešici Wind Power Project and the 90MW Orlokuk Wind Power Project in Bosnia and Herzegovina. Meanwhile, Shanghai Zhenhua Bearing Works Co., Ltd. has entered the commissioning phase of its first European factory, located in Bulgaria.

At present, overseas revenue accounts for more than one-fifth of Shanghai Electric's total revenue. As

China's high-end equipment manufacturing industrial chain continues to mature, Shanghai Electric is leveraging the Belt and Road Initiative as a strategic anchor, capitalizing on opportunities from the global energy transition. Through engineering contracting, overseas investment, and the export of technical standards, the company is accelerating its global expansion strategy as a state-owned enterprise.

In promoting engineering projects "going global," Shanghai Electric's Dubai 950MW Hybrid CSP+PV Project has been steadily handed over, while the Thar Coal-Electricity Integration Project has successfully entered commercial operation. Both projects have been selected as national model cases of Belt and Road cooperation. Among them, the Dubai Hybrid CSP+PV Project is a strategic initiative reflecting Shanghai Electric's commitment to China's dual-carbon goals and the transition toward renewable energy. Once completed, the project will provide clean electricity to over 300,000 households, reducing carbon emissions by more than 1.6 million tonnes annually, and will play a significant role in supporting the local clean energy strategy.

In advancing investment "going global," Shanghai Electric has in recent years acquired 100% equity of Nedschroef Group (Netherlands) and 100% equity of Broetje-Automation (Germany), successfully entering the high-end automotive fastener and advanced aerospace equipment manufacturing sectors. These moves have enabled key overseas market expansion and significantly enhanced the company's international manufacturing capabilities.

In promoting technology "going global," Shanghai Electric Wind Power signed a comprehensive cooperation agreement in April with the Mawarid Group of Oman, covering wind power equipment supply, technology licensing, and localized factory design. Through an innovative model that combines technology licensing with local supply chain development, the company will leverage its technical expertise and innovation capabilities to deliver more high-quality projects, jointly writing a new chapter in China–Arab energy cooperation.

Looking ahead, Shanghai Electric will continue to optimize its international footprint by accelerating the transformation of its global business model: shifting from an engineering-led "going global" approach to an equipment-led one; advancing from simple foreign trade toward international deployment of production capacity and industrial chains; and adhering to an integrated strategy that evolves from single-entity overseas expansion to coordinated, system-wide global growth, fostering synergy and collective advancement across its international operations.


诸育枫
Zhu Yu Feng
崔伟
Cui Wei
李斌
LiBin
王晓芳
Wang Xiaofang
赵娟
Zhao Juan
施俊俊
Shi Junjun

Zhuang Qiu Feng
庄秋峰

张征荣
Zhang Zhengrong

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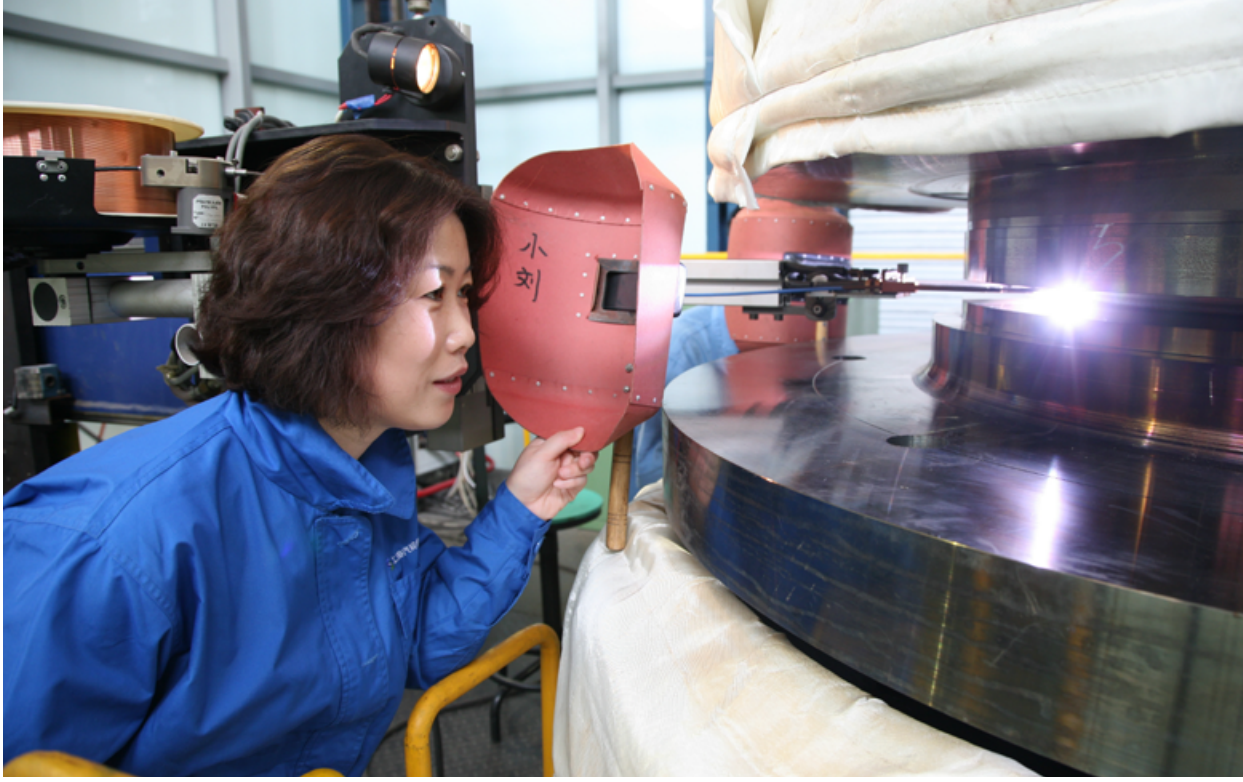
王伟岸
Wang Wei'an

曾明军
Zeng Mingjun



Liu Xia

Sparks of Dedication, Forge of Mastery

When people think of welding, they often imagine massive machinery, dazzling arcs of light, intense heat, and workers clad in dark protective gear. In most minds, it is a profession dominated by men. Yet Liu Xia, who specializes in the development of welding processes for high-temperature, critical components of steam turbines, has broken that stereotype. She has successfully led and delivered national major projects, including welding technologies for ultra-supercritical 1,000 MW steam turbine low-pressure rotors, heavy-duty gas turbines, and medium- and low-pressure rotors for combined-cycle steam turbines. Within the industry, she is recognized as an expert in tackling cutting-edge welding challenges. These achievements have earned her exceptional professional expertise and extensive hands-on experience, forming the foundation for her recognition as a National Model Worker and giving her the confidence and conviction to move forward.

Zhao Liming

Pursuing Dreams, Embarking on New Journeys

Shanghai Boiler Works, where Zhao Liming works, is a flagship in Shanghai's heavy equipment manufacturing sector. Landmark projects such as the tower boiler at Waigaoqiao Power Plant and the world's most coal-efficient boiler at Taizhou Power Plant were all built here. Over more than 30 years of relentless dedication and research, Zhao has refined welding processes through craftsmanship and perseverance, raising the first-pass qualification rate of weld joints from 92% to 98%. His mastery of small-diameter boiler welding has earned him the title of National-level Skills Master. As power station boilers continue to evolve, he has overcome more than ten major welding challenges and has actively mentored young welders, contributing to the growth of the skilled workforce. His honors include Shanghai Model Worker, the National May 1st Labor Medal,

the Shanghai May 1st Labor Medal, and Shanghai Craftsman. He has been appointed Chief Technician of Shanghai Electric Group for many consecutive years, and in 2020, he was named a National Model Worker.

Wang Xiaofang

"One Commitment, Two Breakthroughs" — Forging Excellence in High-End Equipment

In every age, there are individuals who, through unwavering perseverance and bold innovation, dedicate themselves to their fields and become the driving force behind industry progress. Wang Xiaofang, a materials engineer at Shanghai Electric SHMP Casting & Forging Co., Ltd. and recipient of the National Model Worker title, has crafted an extraordinary career through her guiding principle of "one commitment, two breakthroughs," embodying the spirit of the modern worker.

Zhuang Qiufeng

Bringing the "Factory" to the Power Plant

From Xibaipo to Bangladesh, from a 5-ton milling machine to VR glasses, Zhuang Qiufeng of Shanghai Electric Power Generation Equipment Co., Ltd. Turbine Plant (hereafter referred to as “Turbine Plant”) has spent over a decade turning “service” into “product” and transforming the “field” into a “factory.” Through years of persistence and innovation, he has led his team to a development path that integrates service innovation with technological breakthroughs.

Wu Daoxiang

Crafting Dreams in the Wind

In Dongtai, Jiangsu Province, rows of white wind turbines, each over 100 meters tall, stand like giants along the coast. Their blades turn with the wind, delivering clean energy to countless households. This vital node in the Yangtze River Delta’s green energy landscape shines even brighter thanks to the craftsmanship and perseverance of “wind chaser” Wu Daoxiang, Senior Technician at Shanghai Electric Wind Power and a National Model Worker.

From an ordinary assembly fitter to a team leader, he has spent a decade honing his skills, overcoming technical challenges, passing on the spirit of craftsmanship, and helping China’s wind power become an increasingly admired “golden calling card” on the global stage.

Zeng Mingjun

From "Patchwork Boy" to Pillar of the Industry

The first time you shake his hand, you feel a rough, weighty texture — like sandpaper etched by the passing years. His palms are covered with calluses, the knuckles traced with fine cracks, and in the creases remains a "stubborn" stain of machine oil. As your eyes move upward, a dark brown scar stretches across his sunburned forearm — a badge of honor. "This one? Got it when I was an intern at a foundry in Shanxi — molten iron splashed on the pump assembly line. Consider it 'a souvenir for the beginning of my career'," Zeng Mingjun said with an open, hearty laugh, his voice carrying the crisp, straightforward cadence typical of the Qiang nationality.

Zeng, now the production section head in the Manufacturing Department at Mianyang Highly Electric Appliance, is a Qiang ethnic man who has worked on the production frontline for twenty-five years. Through diligence and perseverance, he has perfectly embodied the profound meaning and contemporary value of craftsmanship.

Shanghai No.1 Machine Tool Works

Honored as "National Outstanding Engineer Team"

To recognize advanced models, build a contingent of outstanding engineers in the new era, strengthen the development of national strategic talent, and encourage engineers to forge ahead in the new era and make achievements on the new journey, the ceremony of the first National Engineer Awards was held in Beijing on Jan 19, 2024. 81 individuals and 50 teams were bestowed the National Engineer Awards for their outstanding contributions to the field of engineering technology. Shanghai No.1 Machine Tool Works Co., Ltd., a subsidiary of Shanghai Electric Nuclear Power Group, was among the award recipients.

Ten years mark not only a milestone, but also a new beginning.

——Shanghai Electric: Staying true to craftsmanship, advancing toward the future !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CARBON PEAKING CARBON NEUTRALITY GOALS
数智集成
医疗行业 再立风口
SHANGHAI ELECTRIC GO GREEN, GO LOW-CARBON
人机共舞 携群交响
储能行业 再立风口
ZERO-CARBON ERA
云罗天“网”
时光不负 逐梦人
CHINA
EMPOWERING WATER WITH INTELLIGENCE