



2025 环境、社会及治理(ESG)报告

Environmental, Social and Governance Report

国家电投集团水电股份有限公司

SPIC Hydropower Co., Ltd.

报告规范

本报告是国家电投集团水电股份有限公司编制的第四份可持续发展报告。主要介绍国家电投集团水电股份有限公司ESG理念和实践，旨在加强与利益相关方沟通，回应关切与希望。

时间范围

2025年1月1日至2025年12月31日，部分内容超出上述范围。

发布周期

国家电投集团水电股份有限公司ESG报告为年度报告。

组织范围

报告覆盖国家电投集团水电股份有限公司及其附属公司，为便于表达和阅读，在报告中以“电投水电”“公司”或“我们”指代“国家电投集团水电股份有限公司”，“国家电投集团”“集团公司”指代“国家电力投资集团有限公司”；“远达环保”指代电投水电相关环保产业类企业和单位；“五凌电力”指代“五凌电力有限公司”；“广西公司”指代“国家电投集团广西电力有限公司”；“长洲水电”指代“国家电投集团广西长洲水电开发有限公司”。

参考依据

国务院国资委《关于新时代中央企业高标准履行社会责任的指导意见》

财政部《企业可持续披露准则—基本准则（试行）》

中国企业改革与发展研究会、责任云研究院《中国企业可持续发展报告指南（CASS-ESG 6.0）》

上海证券交易所《上海证券交易所上市公司自律监管指引第14号——可持续发展报告（试行）》《上海证券交易所上市公司自律监管指南第4号—可持续发展报告编制(2026年1月修订)》

全球可持续发展标准委员会（GSSB）《可持续发展报告标准（GRI Standards）》

联合国可持续发展目标2030（SDGs）

数据说明

本报告所引用的历年数据为最终统计数据，财务数据如与年报有出入，以年报为准。报告中的财务数据以人民币为单位，特别说明除外。

质量保证

国家电投集团水电股份有限公司对社会责任报告编制全流程进行规范管理，并保证、承诺报告内容真实、准确、完整，不存在任何虚假记载、误导性陈述或重大遗漏。

报告版本

本报告为中英双语版本，主要以PDF电子文档形式向利益相关方及社会公众公布，您可以在国家电投集团水电股份有限公司微信公众号及上海证券交易所（<https://www.sse.com.cn>）查阅和下载本报告。本报告在编制过程中尽可能考虑不同利益相关方阅读兴趣和要求，力求简洁、清晰和易于阅读。

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About This Report

This report is the fourth sustainable development report prepared by SPIC Hydropower Co., Ltd. It outlines the Company’s ESG philosophy and practices, and aims to strengthen communication with stakeholders and respond to their concerns and expectations.

Time Frame

From January 1, 2025 to December 31, 2025 Some content exceeds the time frame mentioned above.

Release Cycle

The ESG Report of SPIC Hydropower Co., Ltd is issued annually.

Coverage

This report covers SPIC Hydropower Co., Ltd. and its subsidiaries. For ease of reference and readability, the following terms are used throughout this report: “SPIC Hydropower Co., Ltd.,” “the Company,” or “we” refer to SPIC Hydropower Co., Ltd.; “SPIC” or “the Group” refer to State Power Investment Corporation Limited; “Yuanda Environmental Protection” refers to the Company’s environmental protection-related businesses and entities; “Wuling Power” refers to Wuling Power Corporation Ltd.; “SPIC Guangxi Electric Power” refers to SPIC Guangxi Electric Power Co., Ltd.; “Changzhou Hydropower” refers to SPIC Guangxi Changzhou Hydropower Development Co., Ltd.

References

Guidelines to the State-owned Enterprises Directly under the Central Government on Fulfilling Corporate Social Responsibilities per Higher Standards in the New Era issued by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC)

Enterprise Sustainability Disclosure Standards—Basic Standards (for Trial Implementation) issued by the Ministry of Finance

Guidelines on Corporate Sustainable Development Reporting for Chinese Enterprises (CASS-ESG 6.0) issued by China Enterprise Reform and Development Society and the Responsibility Cloud Research Institute

Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report (Trial) and Guide No.4 for Self-Regulatory Supervision on Listed Companies of the SSE—Compilation of Sustainable Development Reports (January 2026 Revision) issued by the Shanghai Stock Exchange (SSE)

GRI Standards issued by Global Sustainability Standards Board (GSSB)

Sustainable Development Goals 2030 (SDGs)

Data

The data over the years cited in the report is the final statistical data, and in case there is a difference between the financial data and the annual report, the latter shall prevail. Unless otherwise specified, the unit of the financial data in the report is RMB.

QA

SPIC Hydropower Co., Ltd. standardizes the entire process of social responsibility reporting, ensuring that the content of the report is true, accurate, and complete, and that there are no false records, misleading statements, or material omissions

Version

This report is available in both Chinese and English and is primarily released to stakeholders and the public in PDF format. It can be accessed and downloaded via the Company’s official WeChat account and the website of the Shanghai Stock Exchange (<https://www.sse.com.cn>). In preparing this report, consideration has been given to the interests and expectations of different stakeholders, with an emphasis on clarity, conciseness, and readability.

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董事长致辞



当今世界正经历深刻的能源变革，推动绿色低碳转型、构建新型能源体系，是关乎国计民生的重大战略。国家电投集团作为能源革命的领军企业，明确了“建设世界一流清洁能源企业”的宏伟目标与“均衡增长”的战略路径。2025年，在此时代背景与集团战略指引下，“电投水电”承载着集团水电产业高质量发展的重任正式启航。站在这一历史性跨越的新起点，我们将环境、社会与治理（ESG）理念深度融入公司战略与运营全过程，以高标准提升管理效能与核心竞争力，打造国际一流的水电产业专业化管理平台；以ESG为导向引导绿色资本集聚，成为集团公司水电与新能源产业投融资平台；将人才强国战略融入电投水电人才培养体系，构建水电产业高素质专业队伍的成长培育平台；以高质量的ESG实践推动改革创新与可持续发展，塑造集团公司“三级四层五化”改革的示范平台，致力于在服务国家“双碳”目标、落实集团战略部署中，切实担当起水电产业高质量发展“主力兵团”的时代使命，全面提升公司可持续发展能力。

筑牢绿色根基，让发展有底色更有成色。我们坚定履行清洁能源发展的核心使命。环境管理立柱架梁，全级次生态环保责任制落地生根，中央及各级环保督察问题整改高效推进，实现闭环销号。绿色发展动能澎湃，公司于2025年12月30日成功揭牌，作为集团水电产业专业

化平台正式启航；通过成功整合优质资产，公司市值稳步攀升至近600亿元，实现了“价值重塑+资产激活”的阶段性战略目标。我们不仅深耕水电，还积极谋划“水风光一体化”发展。推动AI、大数据与产业深度融合，以数智化赋能绿色转型。生态保护精益求精，从强化流域生态环保管理，到成功应对特大洪水考验，我们始终坚守防线，让“绿水青山就是金山银山”的理念在运营实践中生动体现。

凝聚共益生态，让责任有厚度更有温度。我们致力于与各利益相关方共创价值。人才是第一资源，我们精准设置组织架构，通过公开竞聘汇聚核心团队，并健全培训体系，为员工成长赋能。运营是价值纽带，我们构建了涵盖8大板块的全方位制度框架，推动管理标准化；在供应链中强化廉洁与责任采购。我们积极履行社会责任，持续投入专项资金支持乡村发展，广泛惠及地方群众，助力巩固拓展脱贫攻坚成果。“映山红”等志愿服务活动持续开展，将央企担当融入社区发展。

锻造现代治理，让运转有章法更有韧劲。卓越治理是行稳致远的根基。党的领导坚强有力，我们坚持“两个一以贯之”，将党建融入公司治理各环节，以高质量党建引领保障高质量发展。公司治理规范高效，我们着力构建“定位清晰、职能完善、管放相宜、治理现代”的体系，厘清各治理主体权责边界，有效激发经理层经营活力。风险防控扎实有效，我们完善法治、合规、风险、内控一体化管理体系。安全生产“雷霆行动”与隐患排查治理常态化开展，以智慧运维平台助力实现从“人防”到“技防”的升级，为公司稳健运营保驾护航。

2026年是“十五五”规划的开局之年。站在新起点，电投水电将紧紧围绕国家战略，秉持“绿色、创新、融合，真信、真干、真成”的核心价值观，持续深化ESG实践，全面提升发展品质，奋力开启高质量发展新征程，共同书写电投水电高质量发展新篇章，为助力国家“双碳”目标实现、推动能源行业绿色转型贡献更强劲的水电力量！

Message from the Chairman

The world is undergoing profound changes in the energy landscape. Advancing the green and low-carbon transition and building a new energy system are strategic imperatives of vital importance to national development and public well-being. As a leading force in the energy revolution, SPIC has set forth the ambitious goal of becoming a world-class clean energy enterprise and defined a strategic pathway of “balanced growth.” Against this backdrop and under the Group’s strategic guidance, SPIC Hydropower Co., Ltd. was officially launched in 2025, undertaking the mission of advancing the high-quality development of the Group’s hydropower sector. At this historic new starting point, we are embedding ESG principles throughout our strategy and operations. We enhance management effectiveness and core competitiveness to develop a World-Class Specialized Hydropower Management Platform; guide the aggregation of green capital under ESG principles to develop a Hydropower and Renewable Energy Investment and Financing Platform; integrate the national talent strategy into our talent development system to develop a Hydropower Talent Development Platform; and leverage high-quality ESG practices to drive reform, innovation and sustainable development, and to develop a Reform Demonstration Platform for the Group’s “Three-Tier, Four-Level, Five-Oriented” Framework. Through these efforts, we are committed to fulfilling our role as the backbone force in advancing the high-quality development of the hydropower sector, contributing to the achievement of China’s “dual carbon” goals, ensuring the effective implementation of the Group’s strategy, and continuously enhancing our sustainability performance.

Strengthening the Green Foundation to Anchor High-Quality Development. We remain firmly committed to our core mission of clean energy development. Our environmental management framework has been systematically strengthened, with ecological and environmental accountability fully implemented across all levels. Issues identified by central and local environmental inspections have been efficiently addressed, achieving closed-loop resolution. Green development continues to gain strong momentum. On 30 December 2025, the Company was officially inaugurated as the Group’s specialized platform for the hydropower sector. Through the successful integration of high-quality assets, our market capitalization steadily increased to nearly RMB 60 billion, marking the achievement of the phased strategic objective of value enhancement and asset revitalization. While deepening our expertise in hydropower, we are actively advancing the integrated development of hydropower, wind and solar energy. At the same time, we are accelerating the integration of AI and big data with our operations, leveraging digital and intelligent transformation to drive the green transition. We pursue excellence in ecological protection. From strengthening watershed ecological and environmental management to successfully responding to extreme flood challenges, we have remained steadfast in safeguarding ecological security, bringing to life the principle that “lucid waters and lush mountains are invaluable assets” in our operational practice.

Fostering a Shared-Value Ecosystem to Strengthen the Depth and Warmth of Responsibility. We are committed to creating value in partnership with all stakeholders. Talent is our most critical resource. We have put in place a well-designed organizational structure, built a core team through open and competitive selection, and strengthened our training system to empower employee development. Operations are a key pillar of value creation. We have established a comprehensive management framework covering 8 major areas to advance standardized management, while reinforcing business integrity and responsible procurement across the supply chain. We actively fulfill our social responsibilities by continuously investing in dedicated initiatives to support rural development, benefiting a wide range of local communities and contributing to the consolidation and expansion of poverty alleviation outcomes. Volunteer service and environmental awareness programs, including the “Yingshanhong” initiative, are carried out on an ongoing basis, embedding the responsibilities inherent to a central SOE into community development.

Advancing Modern Corporate Governance to Ensure Well-Structured and Resilient Operations. Sound governance is the foundation for sustainable and steady development. We uphold the Party’s leadership as a fundamental principle and adhere to the “Two Consistencies,” integrating Party building into all aspects of corporate governance to lead and ensure high-quality development. We continue to strengthen a governance system characterized by clear positioning, well-defined functions, an appropriate balance between control and delegation, and modern governance practices. By clarifying the roles and responsibilities of each governance body, we effectively enhance managerial dynamism. Our risk prevention and control capabilities have been comprehensively reinforced through the establishment of an integrated management system covering legal, compliance, risk, and internal control. Safety initiatives, including the “Thunder Action” campaign and the routine identification and remediation of potential hazards, are carried out on an ongoing basis. Supported by intelligent operation and maintenance platforms, we are accelerating the transition from human-based controls to technology-driven safeguards, providing robust assurance for the Company’s stable and secure operations.

The year 2026 marks the beginning of the “15th Five-Year Plan” period. At this new starting point, SPIC Hydropower Co., Ltd. will remain firmly aligned with national strategies, uphold the core values of “Pursuing Green, Innovative and Integrated Development; Delivering Great Performance with Belief”, and continue to deepen ESG practices while enhancing the quality of development in all respects. We will forge ahead on a new journey of high-quality development, shape a new chapter for SPIC Hydropower Co., Ltd., and deliver stronger hydropower-driven support for the realization of China’s “dual carbon” goals and the green transformation of the energy sector.

关于电投水电

About SPIC Hydropower Co., Ltd.

公司简介 Company Profile

电投水电是国家电力投资集团有限公司水电产业的专业化管理和投融资平台，A股上市公司（股票代码：600292），注册资本金438,020.6201万元，地处“一带一路”与长江经济带的联结点、西部大开发重要战略支点城市重庆。公司于2025年11月13日通过发行股份及支付现金的方式，完成购买中国电力国际发展有限公司、湖南湘投国际投资有限公司合计持有的五凌电力100%股权以及广西公司持有的长洲水电64.93%股权。2026年1月4日，公司名称由原“国家电投集团远达环保股份有限公司”变更为“国家电投集团水电股份有限公司”。公司主营业务包括水力发电及流域水电站新能源一体化综合开发运营，烟气治理、水处理等环保类业务。截至2025年12月末，公司在运发电项目总装机912.6万千瓦，其中水电586万千瓦、风电178万千瓦、光伏148.6万千瓦；在运烟气治理特许经营装机规模4835万千瓦，污水处理运营管理项目63.74万吨/天。

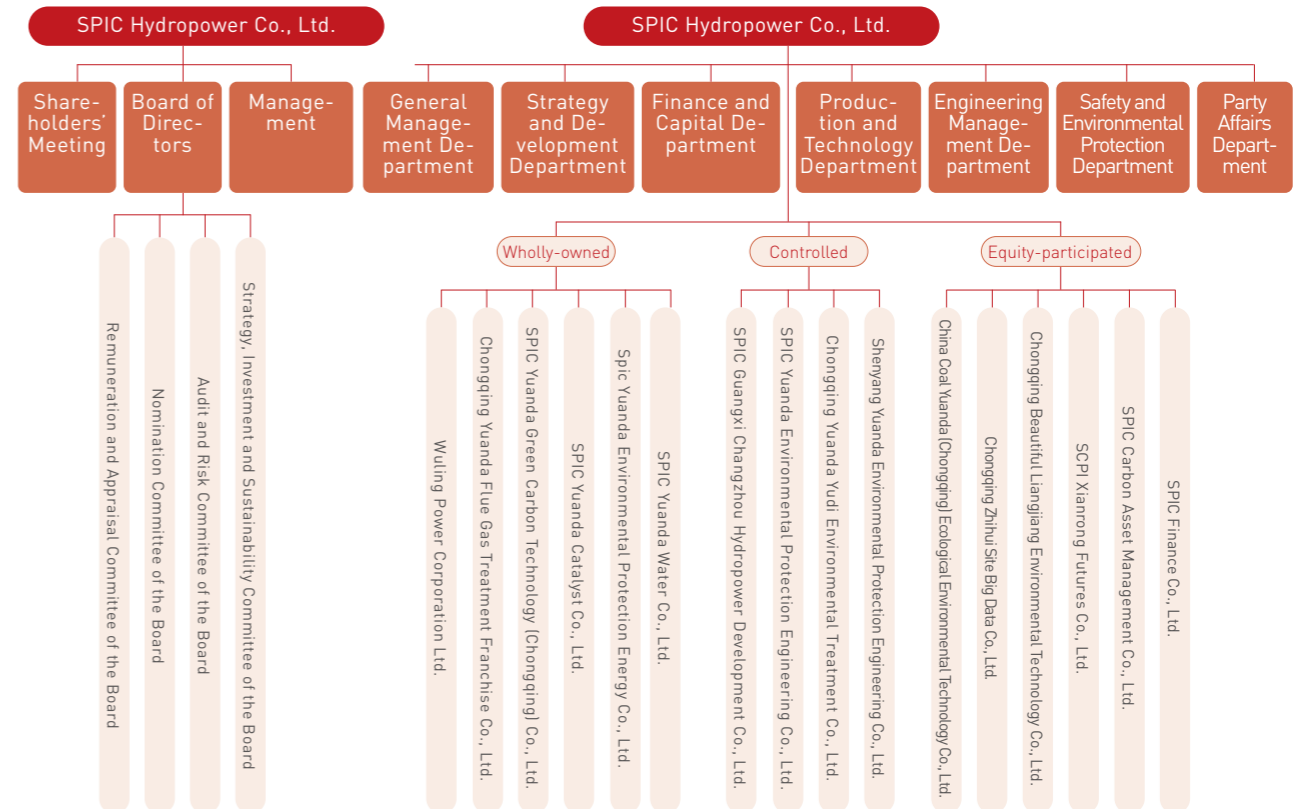
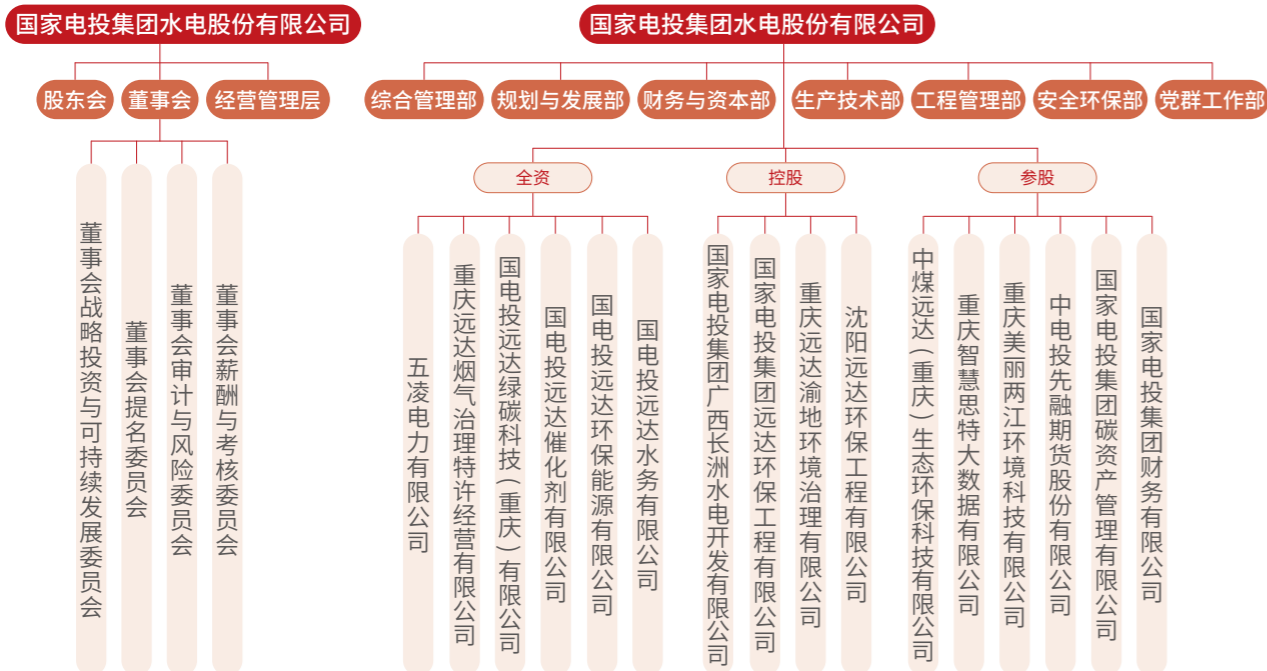
作为国家电投集团引领水电产业发展的“主力兵团”，电投水电以战略为引领、以资本为纽带、以“专业化、标准化、集约化、数字化、国际化”为方向，坚持科学有序发展不动摇，聚焦自身能力建设、聚焦大基地、聚焦清洁能源、聚焦创新驱动、聚焦存量提质增效做优，努力实现“装机规模稳步扩容、多能融合高效协同、生态安全双向筑牢、产业价值全面升级、新质生产力深度赋能”的发展目标，高起点、高标准打造国际一流水电产业管理平台，助力国家电投集团加快建设世界一流清洁能源企业，为国家能源安全和绿色低碳转型提供坚实保障。

SPIC Hydropower Co., Ltd. ("the Company") is an integrated management and investment platform for the hydropower business of SPIC Hydropower Co., Ltd ("SPIC"). The Company is an A-share listed company (stock code: 600292) with a registered capital of RMB 4,380,206,201, and is based in Chongqing—a key strategic hub linking the Belt and Road Initiative and the Yangtze River Economic Belt, as well as an important city in China's Western Development strategy. On 13 November 2025, the Company completed the acquisition of a 100% equity interest in SPIC Wuling Power Co., Ltd. and a 64.93% equity interest in SPIC Guangxi Electric Power through a combination of share issuance and cash consideration. The equity interests were acquired from China Power International Development Limited, Hunan Xiangtou International Investment Co., Ltd., and SPIC Guangxi Electric Power Co., Ltd. On 4 January 2026, the Company was renamed from SPIC Yuanda Environmental Protection Co., Ltd. to SPIC Hydropower Co., Ltd. The Company's principal businesses include hydropower generation and the integrated development and operation of hydropower and renewable energy projects across river basins, as well as environmental protection services such as flue gas treatment and water treatment. As of 31 December 2025, the Company had a total installed capacity of 9.126 million kW in operation, including 5.86 million kW of hydropower, 1.78 million kW of wind power, and 1.486 million kW of photovoltaic power. It also operated concession-based flue gas treatment projects with a total capacity of 48.35 million kW, as well as wastewater treatment projects with a total processing capacity of 637,400 tons per day.

As the flagship platform driving the development of SPIC's hydropower business, the Company is guided by strategy and underpinned by capital, with a clear focus on specialization, standardization, intensification, digitalization, and internationalization. It remains committed to disciplined and orderly development, prioritizing capability building, large-scale base development, clean energy expansion, innovation-driven growth, and the optimization of both existing assets and incremental capacity. The Company is committed to achieving a steady expansion of installed capacity, efficient multi-energy integration, strengthened ecological and operational security, comprehensive enhancement of industrial value, and deeper empowerment through new quality productive forces. With high standards and a strong starting point, it is building a world-class hydropower management platform, supporting SPIC in its transition toward a world-class clean energy enterprise, and contributing to national energy security and the green and low-carbon transition.

组织架构

Organizational Structure



企业战略与目标

Corporate Strategy and Objectives

围绕“五聚焦”

聚焦平台能力建设、聚焦大基地、聚焦清洁能源、聚焦创新驱动、聚焦存量提质增量做优。

推进“五化”

专业化、标准化、集约化、数智化、国际化。

打造“四平台”

国际一流的水电产业专业化管理平台；集团公司水电与新能源产业投融资平台；水电产业高素质专业队伍的成长培育平台；集团公司“三级四层五化”改革的示范平台。

Focus on Five Strategic Priorities

Strengthening platform capabilities; advancing large-scale base projects; expanding clean energy; driving innovation; and enhancing the quality and efficiency of existing assets while optimizing incremental growth.

Advance the “Five Transformations”

Specialization, standardization, intensification, digital and intelligent transformation, and internationalization.

Develop Four Core Platforms

World-Class Specialized Hydropower Management Platform; Hydropower and Renewable Energy Investment and Financing Platform; Hydropower Talent Development Platform; and Reform Demonstration Platform for the Group’s “Three-Tier, Four-Level, Five-Oriented” Reform Framework.



企业荣誉
Corporate Honors



首届中国长江经济带ESG标杆企业
First China Yangtze River Economic Belt ESG Benchmark Enterprise



第三届国新杯·ESG新锐金牛奖
Third "Guoxin Cup" · ESG Emerging Golden Bull Award



获评2024十大重庆
社会责任影响力年度企业
Top Ten Chongqing Social Responsibility Impact Enterprises of the Year



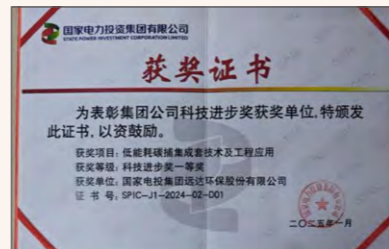
2025年水电运维检修质量管理小组活动
成果一等奖
First Prize of 2025 Hydropower O&M Quality Management Team Achievement



五凌电力新能源智能运维系统研发2023-
2025年度优秀融创项目
Wuling Power New Energy Intelligent Operation and Maintenance System R&D - Excellent Integration and Innovation Project for the 2023-2025 Period



2025年中国水利电力质量管理协会ESG
案例交流发布会二等典型案例
Second-Class Typical Case at the 2025 China Association for Water and Electricity Quality Management ESG Case Exchange and Release Conference



集团公司科技进步奖
Science and Technology Progress Award of the Group



2025年水电设备管理与技术创新典型案
例成果一等奖
First Prize of 2025 Typical Case in Hydropower Equipment Management and Technological Innovation



2025年水电设备管理与技术创新典型案
例成果一等奖
First Prize of 2025 Typical Case in Hydropower Equipment Management and Technological Innovation



五凌电力“大青山二期风电全投”2023-
2025年度优秀融创项目
Wuling Power "Daqingshan Phase II Wind Power Fully Operational" Excellent Integration and Innovation Project for the 2023-2025 Period



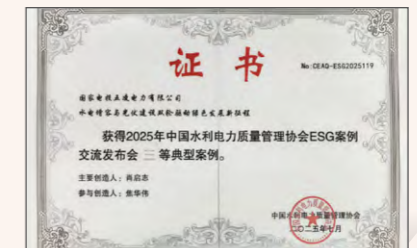
2025年度最佳产权交易组
织奖
Best Property Rights Transaction Organization Award of the Year 2025



第二届全国电力行业工程建设管理创新
成果特等项目
Special Prize of 2nd National Electric Power Industry Engineering Construction Management Innovation Achievement



2025（第八届）中国企业国际形象建设案
例征集活动“发展共进（视频类）”优秀案
例、“十大优秀案例（视频）”
Outstanding Case, "Advancing Together" (Video Category), 2025 (8th) China Corporate International Image Building Case Collection Top 10 Outstanding Cases (Video Category), 2025 (8th) China Corporate International Image Building Case Collection



2025年中国水利电力质量管理协会ESG
案例交流发布会三等典型案例
Third Prize of Typical ESG Case, 2025 ESG Case Exchange Conference of China Water Resources and Electric Power Quality Management Association

ESG 管理

ESG Management

电投水电以国务院国资委《关于新时代中央企业高标准履行社会责任的指导意见》等政策为根本遵循，以《国家电力投资集团有限公司社会责任管理规定》等集团公司社会责任要求为行动指引，持续深化ESG研究与认识，建立健全ESG管理机制，推动ESG工作水平不断提升，为助力国家电投集团加快建设世界一流清洁能源企业贡献水电力量。

SPIC Hydropower Co., Ltd. adheres to the guiding policies such as the State-owned Assets Supervision and Administration Commission's *Guidelines to the State-owned Enterprises Directly under the Central Government on Fulfilling Corporate Social Responsibilities per Higher Standards in the New Era*, and follows the Group's own requirements, including the *SPIC CSR Management Regulations*. The Company continuously deepens its understanding and research of ESG, establishes and improves ESG management mechanisms, and steadily elevates its ESG practices, thereby contributing to SPIC's accelerated development into a world-class clean energy enterprise through hydropower.

ESG 理念 ESG Philosophy

电投水电以“创造绿色价值”为使命，以“打造国际一流水电产业管理平台”为目标，将ESG理念深度融入企业战略和日常运营，聚焦服务“双碳”目标、保障能源供应、共创社会价值等重点领域，切实推动ESG与企业高质量发展同频共振、协同前行。

Guided by the mission of creating green value and the goal of building a world-class hydropower management platform, SPIC Hydropower Co., Ltd. integrates ESG principles deeply into corporate strategy and daily operations. The Company focuses on key areas such as serving the “dual carbon” objectives, ensuring energy supply, and co-creating social value, effectively promoting the alignment and synergy of ESG practices with the high-quality development of the enterprise.

ESG 治理 ESG Governance

电投水电持续深化ESG管理体系建设，在董事会下设董事会战略投资与可持续发展委员会，负责谋划、协调推动公司ESG工作重要事项，包括审议ESG目标、绩效及年度报告，指导推动公司及所属单位高标准履行社会责任，保障ESG工作顺利开展，全面提升公司可持续发展能力。

电投水电已逐步建立起董事会统筹监督、财务与资本部牵头开展、各部门及子公司配合落实执行的常态化ESG报告编制组织架构和工作机制，形成“董事会统一领导、业务部门专业支撑、上下联动、全员参与”的ESG治理格局。

SPIC Hydropower Co., Ltd. continuously strengthens its ESG management system. Under the Board of Directors, the Strategy, Investment and Sustainability Committee is responsible for planning and coordinating major ESG matters, including reviewing ESG objectives, performance, and annual reports, guiding the Company and its subsidiaries in high-standard fulfillment of social responsibility, and ensuring the smooth implementation of ESG work while enhancing the Company's sustainability capacity.

The Company has gradually established a structured and regular ESG reporting organization and workflow, led by the Board, coordinated by the Finance and Capital Department, and executed in cooperation with relevant departments and subsidiaries. This has formed an ESG governance framework characterized by unified Board leadership, professional support from business units, top-down and bottom-up coordination, and full staff participation.

ESG 能力 ESG Capability

电投水电以精细化管理和高水平信息披露为目标，系统推进ESG能力建设。公司定期组织召开ESG报告编制推进会，系统解读监管要求与披露要点，围绕水电产业特点深化实质性议题识别，建立健全ESG指标采集、核验与披露闭环机制；积极探索数字化赋能ESG管理新路径，强化碳足迹管理、生物多样性保护、社区沟通等水电行业关键议题的专业能力建设，着力培育一支懂产业、通标准、善治理的ESG专业化人才队伍。

Aiming for refined management and high-quality disclosure, SPIC Hydropower Co., Ltd. systematically advances ESG capability building. The Company regularly convenes ESG report preparation meetings to interpret regulatory requirements and disclosure priorities, conducts materiality assessments tailored to the hydropower industry, and establishes a closed-loop mechanism for ESG data collection, verification, and disclosure. The Company also actively explores digital solutions to empower ESG management, strengthens professional capabilities in critical hydropower topics such as carbon footprint management, biodiversity conservation, and community engagement, and cultivates a team of ESG professionals who possess industry expertise, standards awareness, and governance proficiency.

利益相关方沟通
Communicating with Stakeholders

电投水电高度重视与利益相关方的沟通，持续健全多层次、常态化的沟通机制，主动倾听来自各方的意见和建议，充分回应各类合理关切，推动形成互信、互促、互利的良性关系。

SPIC Hydropower Co., Ltd. attaches great importance to communication with its stakeholders, continuously improving a multi-level and routine engagement mechanism. The Company actively listens to opinions and suggestions from all parties, responds fully to reasonable concerns, and promotes a relationship of mutual trust, mutual support, and mutual benefit.

	政府与监管机构 Government and Regulatory Authorities	股东 Shareholders	员工 Employees	客户 Customers	商业伙伴 Business Partners	非政府组织 Non-Governmental Organizations (NGOs)	社区 Community
期望与诉求 Expectations and Concerns	依法纳税 响应国家政策 合规经营 品牌、技术引领 Tax compliance Response to national policies Legal and compliant operations Brand and technological leadership	财务业绩 保障投资者权益 风险管理 可持续发展 Financial performance Protection of investor rights Risk management Sustainable development	权益保障 绩效与晋升 培训与发展 Rights protection Performance and promotion Training and development	优质产品 信息安全 诚信经营 High-quality products Information security Honest business practices	反腐败 合作共赢 Anti-corruption Win-win cooperation	可持续发展 应对气候变化 Sustainable development Climate change response	公益慈善 社区经济发展 社区文化保护 Public welfare and charity Community economic development Protection of community culture
沟通机制 Communication Mechanisms	项目合作 监督检查 专题汇报 专题研讨会 Project cooperation Supervision and inspection Special reports Workshops and seminars	履行法定信息披露义务 业绩路演 投资者交流会 Statutory information disclosure Performance roadshows Investor meetings	成立各级工会组织 设立投诉、反馈信箱 职工代表大会 走访调研 Establish trade unions at all levels Suggestion/complaint boxes Staff representative conferences Field visits and surveys	举行客户满意度调查 投诉热线电话 日常联络 客户沟通大会 Customer satisfaction surveys Complaint hotlines Daily contact Customer communication conferences	举行招投标会议 资质考察 合同谈判 业务交流会议 Bidding meetings Qualification assessments Contract negotiations Business exchange meetings	论坛交流会 Forums and exchange meetings	社区活动 宣传教育 实地调研 举报投诉热线 Community activities Awareness campaigns Field visits Complaint hotlines
回应与行动 Response and Actions	带动就业 依法纳税 诚信合规经营 参与公益活动 Job creation Tax compliance Integrity and compliant operations Participation in public welfare activities	提高盈利能力 发布定期和临时公告 加强上证e互动管理 Improve profitability Issue periodic and ad hoc announcements Enhance interaction through the Shanghai Stock Exchange e-Interaction platform	晋升机制清晰 定期培训 开展企业文化活动 Clear promotion mechanisms Regular training Conduct corporate culture activities	产品创新 客户走访 问卷调查 网站、微信公众号信息发布 Product innovation Customer visits Surveys Information release on website and WeChat	公开采购信息 供应链管理 Transparent procurement Supply chain management	参加论坛会议 分享企业经验 Participation in forums Sharing corporate experience	参加公益活动 项目风险评估 环境信息公示 Participation in public welfare activities Project risk assessment Disclosure of environmental information

重要性议题识别
Identification of Material Topics

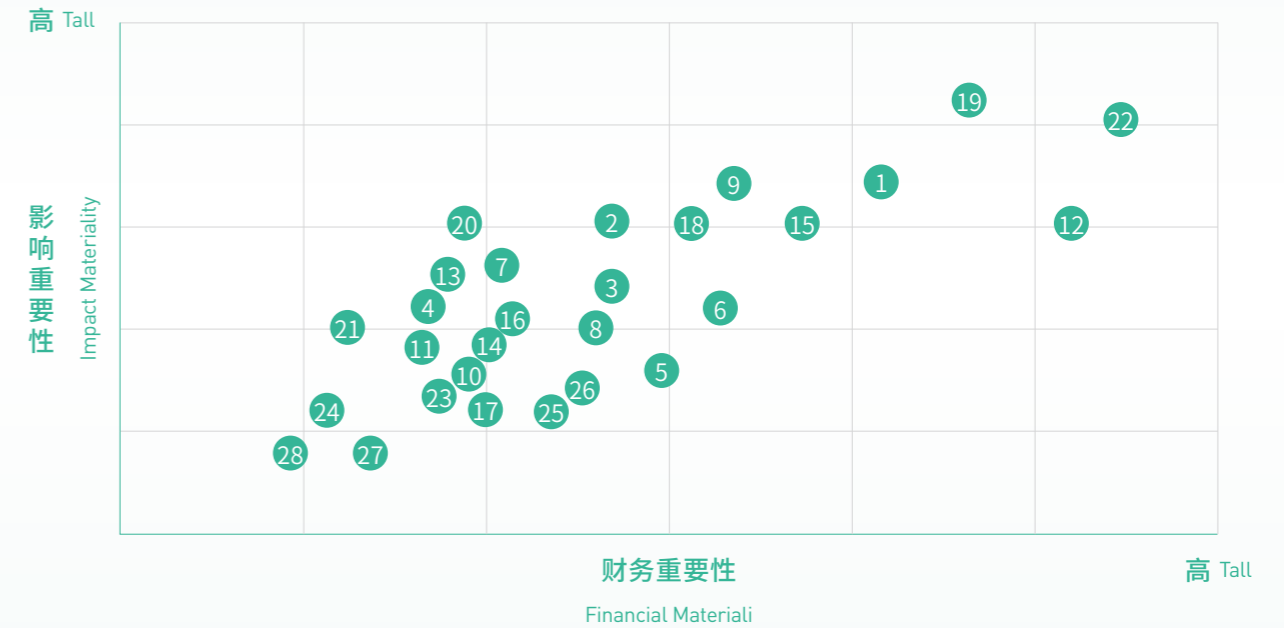
电投水电持续完善ESG议题识别与管理工作机制，逐年构建并更新公司双重重要性议题矩阵，明确年度重点ESG议题。2025年，电投水电以《上海证券交易所上市公司自律监管指引第14号——可持续发展报告（试行）》《上海证券交易所上市公司自律监管指南第4号——可持续发展报告编制》等相关要求为指引，系统性开展议题重要性评估。结合所处行业特点、行业发展阶段、自身商业模式、所处价值链等情况，更新公司ESG议题池；面向内外部利益相关方发放问卷，并结合不同专业背景ESG专家意见，综合开展议题双重重要性分析，最终识别出应对气候变化、创新驱动、电力保供、安全生产4项财务重要性议题，并按照监管要求，采用“治理—战略—影响、风险和机遇管理—指标与目标”四要素框架在本报告中披露，全面展现相关管理实践、战略规划与目标进展。

SPIC Hydropower Co., Ltd. continuously improves its ESG topic identification and management mechanisms, gradually building and updating the Company's double materiality matrix to define key ESG topics for each year. In 2025, guided by the *Shanghai Stock Exchange Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report (Trial)* and *Shanghai Stock Exchange Guidelines No. 4 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Guidelines for the Preparation of Sustainability Reports*, SPIC Hydropower Co., Ltd. systematically conducted materiality assessments. Considering the characteristics and development stage of the industry, the Company's business model, and its position in the value chain, the ESG topic pool was updated. Questionnaires were distributed to internal and external stakeholders, and combined with the input of ESG experts from different professional backgrounds, a comprehensive double materiality analysis was performed. As a result, four financially material topics were identified: Climate Change Response, Innovation-Driven Development, Ensuring power supply, and Work Safety. In accordance with regulatory requirements, these topics are disclosed in this report following the four-element framework of "Governance – Strategy – Impact, Risk, and Opportunity Management – Metrics and Targets," providing a comprehensive presentation of management practices, strategic planning, and progress toward objectives.

环境范畴	社会范畴	治理范畴
1.应对气候变化 2.污染物排放 3.废弃物处理 4.生态系统和生物多样性保护 5.环境合规管理 6.能源利用 7.水资源利用 8.循环经济 9.绿色产品与服务	10.乡村振兴 11.社会贡献 12.创新驱动 13.供应链安全 14.平等对待中小企业 15.产品和服务安全与质量 16.数据安全与客户隐私 17.员工责任 18.职业健康与安全 19.电力保供 20.社区关系 21.移民管理 22.安全生产	23.利益相关方 24.投资者关系管理 25.风险管理 26.反商业贿赂及反贪污 27.反不正当竞争 28.尽职调查

电投水电2025年ESG报告实质性议题双重重要性议题分析*

SPIC Hydropower Co., Ltd. 2025 ESG Report Material and Double Materiality Issues Analysis



Environment Category	Social Category	Governance Category
1. Responding to Climate Change 2. Pollutant Emissions 3. Waste Management 4. Ecosystem and Biodiversity Protection 5. Environmental Compliance Management 6. Energy Utilization 7. Water Resource Utilization 8. Circular Economy 9. Green Products and Services	10. Rural Revitalization 11. Social Contribution 12. Innovation-Driven Development 13. Supply Chain Security 14. Equal Treatment of SMEs 15. Product and Service Safety and Quality 16. Data Security and Customer Privacy 17. Employee Responsibility 18. Occupational Health and Safety 19. Power Supply Security 20. Community Relations 21. Migration Management 22. Work Safety	23. Stakeholder Engagement 24. Investor Relations Management 25. Risk Management 26. Anti-Bribery and Anti-Corruption 27. Anti-Unfair Competition 28. Due Diligence

*经评估，对电投水电不具有重要性的议题有科技伦理、平等对待中小企业等议题。电投水电的主营业务为水力发电及流域水电站新能源一体化综合开发运营、烟气治理、水处理等环保类业务，不涉及科技伦理议题；其余议题虽不具备重要性，议题识别结果已在本报告中体现，同时已在相关章节介绍了上述议题相关工作在本年度的开展情况。

*Based on the materiality assessment, the topics identified as not material to SPIC Hydropower Co., Ltd. include technology ethics, and equitable treatment of small and medium-sized enterprises. The core business of Electric Power Hydropower primarily involves hydropower generation and the integrated development and operation of hydropower stations and new energy projects within river basins, as well as environmental protection services such as flue gas treatment and water treatment. Accordingly, the Company's operations do not involve issues related to technology ethics. Although the remaining topics have been assessed as not material, the outcomes of the topic identification process are disclosed in this Report. In addition, the relevant chapters provide an overview of the initiatives and activities undertaken during the reporting year in relation to the aforementioned topics.

多维聚焦

Multi-Dimensional Focus

明战略定航向

Strategic Vision Sets the Course

置身于国家深入推进能源革命、加快构建新型电力系统的时代洪流，电投水电作为国家电投集团倾力打造的水电产业专业化平台，自诞生之日便承载着引领产业升级、支撑集团战略的核心使命。我们以推进“五化”价值导向为重点，将战略重心精准锚定于做优水力发电及流域水电站新能源一体化等清洁能源、扎实环保产业、全面提质增效、强化科技创新驱动等核心维度，系统规划高质量发展实施路径，致力于将平台的资源整合与专业管理势能，切实转化为推动清洁能源事业实现跨越式发展的强劲动能。

Amid the profound wave of China's energy revolution and the accelerated establishment of a new-type power system, SPIC Hydropower Co., Ltd., as a specialized hydropower platform meticulously built by SPIC, has carried since its inception the core mission of leading industry upgrading and supporting the Group's strategic objectives. By emphasizing the value-oriented advancement of the "Five Transformations," we precisely anchor our strategic focus on optimizing hydropower generation, integrating new energy across river basin hydropower stations, strengthening environmental protection initiatives, enhancing efficiency and quality across operations, and driving technological innovation. We systematically plan the implementation path for high-quality development, aiming to translate the platform's resource integration and professional management capabilities into powerful momentum for achieving leapfrog progress in the clean energy sector.

20

围绕“五聚焦” 做优清洁能源

Focusing on the "Five Strategic Priorities" to Optimize Clean Energy

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扎实环保产业

Strengthening the Environmental Protection Industry

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全面提质增效

Driving Quality Improvement and Efficiency Gains

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科技创新驱动

Innovation and Technology Empowerment

围绕“五聚焦” 做优清洁能源

Focusing on the “Five Strategic Priorities” to Optimize Clean Energy

电投水电坚定将水力发电及流域水电站新能源一体化等清洁能源作为立身之本与发展之基。我们以服务国家能源安全与“双碳”目标为根本遵循，通过专业化管理、技术创新与全产业链协同，致力于提升清洁能源资产的运营效率、综合效益与核心竞争力，持续巩固和扩大公司在清洁能源领域的领先优势，为构建新型电力系统贡献坚实力量。

SPIC Hydropower Co., Ltd. firmly regards clean energy—particularly hydropower generation and the integration of new energy with-in river basin hydropower stations—as the foundation and cornerstone of its growth. Guided by the imperatives of national energy security and China’s “dual carbon” goals, we leverage professional management, technological innovation, and full-industry-chain collaboration to enhance the operational efficiency, overall performance, and core competitiveness of clean energy assets. In doing so, we continuously consolidate and expand our leading position in the clean energy sector, contributing robustly to the construction of a new-type power system.

完善治理架构 Strengthening Governance Framework

电投水电坚守清洁能源发展使命，践行优先发展清洁能源的战略理念，统筹推进清洁能源布局，以专业化、系统化管控思路统筹流域水电开发、风电、光伏运营及枢纽管理，紧扣国家电投集团“三级四层五化”战略部署，构建了权责清晰、运行高效、管控科学的现代化治理架构，深耕主业、强化责任落实，全力筑牢绿色发展根基。

SPIC Hydropower Co., Ltd. remains committed to the mission of clean energy development and upholds the strategic philosophy of prioritizing clean energy. The Company coordinates the deployment of clean energy assets, adopting a professional and systematic approach to manage hydropower development across river basins, as well as wind and photovoltaic operations and hub management. In alignment with SPIC’s “Three-Tier, Four-Level, Five-Oriented” strategic framework, SPIC Hydropower Co., Ltd. has established a modern governance structure characterized by clear responsibilities, efficient operations, and scientific controls. This governance framework ensures a focused approach to the core business, strengthens accountability, and firmly consolidates the foundation for green development.



● 公司开展专业化管理调研

The Company Conducted Professional Management Research



平台化整合与战略管控 Platform Integration and Strategic Oversight

通过完成对五凌电力100%股权及长洲水电64.93%股权的战略性收购，实现了优质清洁能源资产的集约化管理和专业化运营。以此为基础，公司着力构建统一的战略规划、资本运作和风控管控体系，强化平台在资源配置、标准输出和专业服务方面的核心功能，为集团水电与新能源产业的高质量发展提供坚实的投融资与管理支撑。

Through strategic acquisitions of 100% equity in Wuling Power and 64.93% equity in Changzhou Hydropower, the Company has realized centralized management and professional operation of high-quality clean energy assets. Building on this foundation, SPIC Hydropower Co., Ltd. focuses on establishing a unified system for strategic planning, capital operations, and risk management, enhancing the platform’s core capabilities in resource allocation, standard-setting, and professional services, thereby providing solid investment, financing, and management support for the high-quality development of the Group’s hydropower and renewable energy sector.



专业化运营与标准化建设 Professional Operations and Standardized Management

所属单位严格执行统一的专业化、标准化管理要求。五凌电力深入落实集团管控部署，全面推进沅水流域梯级电站的智能化改造与集约化运营。长洲水电聚焦长洲水利枢纽的安全高效运行，精准执行电网调度指令，充分发挥其流域综合枢纽功能。电投水电将通过数字化、标准化手段，实现对水电、风电、光伏等多业态资产的协同、高效管控，持续提升整体运营效能。

Subsidiaries strictly implement unified professional and standardized management requirements. Wuling Power has thoroughly executed the group’s management directives, advancing intelligent upgrades and centralized operations across the cascade hydropower stations in the Yuan River Basin. Changzhou Hydropower focuses on the safe and efficient operation of the Changzhou Water Conservancy Hub, precisely following grid dispatch instructions and fully leveraging its integrated river basin hub functions. SPIC Hydropower Co., Ltd. is leveraging digitalization and standardization to achieve coordinated and efficient management across multiple asset types, including hydropower, wind power, and photovoltaics, continuously enhancing overall operational efficiency.



夯实战略规划 Strengthening Strategic Planning

电投水电围绕“聚焦平台能力建设、聚焦大基地、聚焦清洁能源、聚焦创新驱动、聚焦存量提质增量做优”的战略核心，制定清晰的水力发电及水风光一体化等清洁能源发展实施路径。

SPIC Hydropower Co., Ltd., centering its strategy on the core priorities of strengthening platform capabilities, advancing large-scale base projects, expanding clean energy, driving innovation, and optimizing incremental growth while enhancing existing assets, has formulated a clear implementation pathway for the development of hydropower and integrated hydro-wind-solar renewable energy.

• 巩固水电压舱石，发挥基础保障作用

Consolidating Hydropower as a Cornerstone and Ensuring Fundamental Support

作为国家电投集团旗下聚焦水电主业的核心产业平台，电投水电专注于水电梯级开发、水电保供、电站运营管理与资产整合等业务，有力构建上下游协同调度的梯级电站集群运营模式，以智慧化、精细化管理保障高效发电，在电站运营过程中同步坚守生态保护与社会责任，是国家电投集团推动清洁能源转型、助力“双碳”目标落地的核心水电力量。

深度挖掘存量水电价值，强化其电力保供和系统调节功能。五凌电力通过流域联合优化调度与设备精益管理，2025年水电水能利用率提升8%，增发电量4.54亿千瓦时；五强溪电厂安全运行超11,000天，是华中电网可靠的调峰骨干。长洲水电通过精细化水情预测与调度，2025年三季度发电量创历史同期新高，有力保障了区域能源保供。

As the Group's core industrial platform focused on hydropower, SPIC Hydropower Co., Ltd. concentrates on cascade hydropower development, power supply assurance, plant operations management, asset integration, and related operations. The Company has effectively built a coordinated cascade operation model across upstream and downstream hydropower stations, leveraging intelligent and meticulous management to ensure efficient power generation. Throughout plant operations, ecological protection and social responsibility are fully observed, making SPIC Hydropower Co., Ltd. a key force in SPIC's clean energy transition and a central contributor to achieving China's "dual carbon" targets.

By fully leveraging the value of existing hydropower assets, the Company strengthens their role in hydropower supply assurance and grid regulation. Wuling Power improved hydropower utilization by 8% in 2025 through basin-wide optimized dispatch and lean equipment management, generating an additional 454 million kWh. Wuqiangxi Hydropower Plant has operated safely for over 11,000 days, serving as a reliable peak-shaving backbone for the Central China Power Grid. Changzhou Hydropower, through precise hydrological forecasting and dispatch, set a historical quarterly generation record in Q3 2025, effectively ensuring regional energy supply security.



01

凌津滩电厂位于湖南省桃源县境内，是国家重点建设工程，以发电为主，兼有航运效益。电厂先后荣获“全国电力行业设备管理工作先进单位”“全国绿化模范单位”“湖南省电力安全生产工作先进单位”“集团公司文明单位”“集团公司建功创一流安全环保先进集体”等荣誉。

凌津滩电厂总装机容量27万千瓦，安装9台30MW灯泡贯流式机组，设计年发电量12.15亿千瓦时，库容6.34亿立方米。

Lingjintan Hydropower Plant is located in Taoyuan County, Hunan Province, and is a key national construction project. The plant primarily generates electricity while also supporting navigation. It has been honored as "Advanced Unit in Equipment Management of China's Power Industry," "National Model Unit for Greening," "Advanced Unit in Power Safety Production of Hunan Province," "Civilized Unit of the Group," and "Group's Advanced Collective in Safety, Environmental Protection, and First-class Achievement."

Lingjintan Hydropower Plant has a total installed capacity of 270,000kW, equipped with nine 30 MW bulb-type Kaplan units, with a designed annual generation of 1.215 billion kWh and a reservoir capacity of 634 million m³.



02

三板溪水电站是国家重点建设工程项目，是五凌电力跨省开发和在国家电投集团在黔建成投产的首座电站，也是沅水干流梯级电站中唯一具有多年调节性能的龙头水电站。

三板溪水电站总装机100万千瓦，库容37.48亿立方米，平均发电量24.28亿千瓦时，以发电为主，兼具补偿梯级电量、多年调节性能。

Sanbanxi Hydropower Station is a key national construction project and the first cross-province hydropower plant developed by Wuling Power and put into operation by SPIC in Guizhou Province. It is also the leading hydropower plant in the cascade of the Yuan River main stream with multi-year regulation capability.

Sanbanxi has a total installed capacity of 1 million kW, a reservoir capacity of 3.748 billion m³, and an average annual generation of 2.428 billion kWh, primarily for power generation while providing cascade compensation and multi-year regulation functions.



03

五强溪扩机工程是湖南省重点建设工程项目，是湖南沅水流域大型水电工程开发的收官之作。

五强溪电厂总装机175万千瓦，年设计发电量59.3亿千瓦时，是湖南省最大的水电站，也是华中电网调频、调峰骨干电厂，已连续安全运行超11,000天，持续保持国内大中型水电安全运行领先纪录，为湖南省提供清洁电量逾1,550亿千瓦时。

The Wuqiangxi Expansion Project is a key construction project in Hunan Province and the final stage of large-scale hydropower development in the Yuan River Basin.

Wuqiangxi Hydropower Plant has a total installed capacity of 1.75 million kW and a designed annual generation of 5.93 billion kWh, making it the largest hydropower plant in Hunan Province and a backbone for frequency regulation and peak-shaving in the Central China Power Grid. It has safely operated for over 11,000 days, continuously maintaining a leading safety record among large and medium-sized hydropower plants in China, supplying over 155 billion kWh of clean electricity to Hunan Province.



04

马迹塘水电站位于资水干流的中游、益阳市桃江县马迹塘镇，于1983年建成投产，是我国第一座低水头灯泡贯流式机组的水电厂，实施改革后整体并入我五凌电力。电站总装机容量5.55万千瓦，年设计发电量2.76亿千瓦时。作为当时国家引进国外技术的试点项目，为灯泡贯流式机组技术在我国的推广应用发挥了龙头示范、技术支援的作用，为国内10多家同类型电厂培养和输送了大批生产技术人才。

Majitang Hydropower Station, located in Majitang Town, Taojiang County, midstream of the Zi River, was commissioned in 1983 as China's first hydropower plant with low-head bulb-type Kaplan units. Following reforms, it was fully integrated into Wuling Power. The plant has a total installed capacity of 55,500 kW and a designed annual generation of 276 million kWh. As a pilot project adopting foreign technology, Majitang played a leading demonstration role in promoting bulb turbine technology in China and provided technical support, cultivating a large number of operational and technical personnel for more than ten similar domestic plants.



05

托口水电厂地处洪江市境内，是沅水干流梯级开发规划的第5级电厂，总装机容量83万千瓦。托口水电工程为湖南省重点建设工程项目，工程以发电为主，兼有防洪、航运等综合效益。工程于2006年3月开工建设，2014年2月下闸蓄水，2014年3月六台机组全投，已累计发电逾230亿千瓦时，连续安全运行超4,300天。

Tuokou Hydropower Plant is located in Hongjiang City and is the fifth stage of the Yuan River main stream cascade development. With a total installed capacity of 830 MW, the project is a key construction project in Hunan Province, primarily for power generation while providing flood control and navigation benefits. Construction began in March 2006, with reservoir impoundment in February 2014 and all six units commissioned in March 2014. The plant has cumulatively generated over 23 billion kWh and safely operated for more than 4,300 days.



06

洪江水电厂地处洪江区境内，是沅水干流梯级开发的第6级电厂，总装机容量27万千瓦。洪江水电工程以发电为主，兼有航运、供水等综合效益，年设计发电量10.17亿千瓦时。工程于1998年3月开工建设，2002年12月下闸蓄水，2003年2月首台机组发电，2005年7月六台机组全投，已累计发电逾210亿千瓦时，连续安全运行超8,300天。2022年7月，右岸船闸开始扩建，扩建后通航能力可达1,000吨。

Hongjiang Hydropower Plant is located in Hongjiang District, the sixth stage of the Yuan River main stream cascade development, with a total installed capacity of 270,000 kW. The plant primarily generates electricity while also supporting navigation and water supply. Its designed annual generation is 1.017 billion kWh. Construction began in March 1998, with reservoir impoundment in December 2002, first unit commissioning in February 2003, and full six-unit operation in July 2005. The plant has cumulatively generated over 21 billion kWh and safely operated for more than 8,300 days. In July 2022, expansion of the right-bank ship lock commenced, increasing navigation capacity to 1,000 tons.



07

长洲水电主要负责水电项目的开发建设和运营管理，长洲水利枢纽水电装机63万千瓦，位于珠江干流浔江段，是国家“西电东送”计划和广西实施西部大开发战略的重点项目。长洲水利枢纽横跨“两洲三江”（长洲、泗洲，外江、中江、内江），共安装15台单机4.2万千瓦的灯泡贯流式机组。自2009年投产发电以来，发电、通航、防汛、压咸补淡、城市供水、鱼道过鱼等经济、社会和生态效益显著。

Changzhou Hydropower is primarily responsible for hydropower project development, construction, and operations management. The Changzhou Water Conservancy Hub has a total installed capacity of 630,000 kW and is located on the Xunjiang section of the Pearl River mainstream. It is a key project under the national "West-to-East Electricity Transmission" initiative and Guangxi's Western Development Strategy. The hub spans "two continents and three rivers" (Changzhou, Sizhou; Waijiang, Zhongjiang, Neijiang), equipped with 15 bulb-type Kaplan units of 42,000 kW each. Since commissioning in 2009, it has generated significant economic, social, and ecological benefits, including power generation, navigation, flood control, salinity regulation, urban water supply, and fish passage.



• 大力发展新能源，构建一体化发展格局

Vigorously develop new energy and build an integrated development pattern

积极布局风电、光伏，推动水风光一体化大基地建设。

Actively deploy wind power and photovoltaic energy, and promote the construction of large bases for multi-energy complementarity featuring "hydro, wind, solar, and storage".

风电 wind power

电投水电因地制宜发展水电路域一体化风电业务，重点布局山地、丘陵等风能资源富集区域，打造了一批兼具经济效益与生态效益的标杆风电项目，有效实现多能互补、高效调度，为区域电网提供稳定可靠的清洁电力支撑，成为国家电投集团清洁能源版图中不可或缺的重要组成部分，为助力“双碳”目标实现注入强劲风电动能。

The Company develops wind power along hydropower basins in line with local conditions, focusing on regions rich in wind resources such as mountains and hills. It has established a number of benchmark wind projects that balance economic and ecological benefits, achieving multi-energy complementarity and efficient dispatch, providing stable and reliable clean power to regional grids. Wind power has become an indispensable component of SPIC's clean energy portfolio, injecting strong momentum toward achieving China's "dual carbon" targets.



涟源龙山风电场位于湖南省娄底市涟源市南部茅塘镇境内的龙山林场，总装机容量5万千瓦，

Lianyuan Longshan Wind Farm is located in Longshan Forest, Maotang Town, southern Lianyuan City, Loudi, Hunan Province. It has a total installed capacity of 50,000 kW, with 2,174 full-load equivalent hours. The first unit was connected to the grid on April 25, 2018. The wind farm has completed smart station upgrades and, following Wuling Power's acceptance at the end of 2023, now operates under an "unmanned regional maintenance and inspection" model. It is the first unmanned wind farm under SPIC, and its successful experience in smart station construction has been promoted across the Group. *CCTV Business Review* featured the Lianyuan Longshan Wind Farm as a typical case, and the project has received in-depth media coverage from 18 outlets including People's Daily and Xinhua News Agency, establishing a national benchmark for smart management of new energy.

年等效满负荷利用小时数为2174小时。2018年4月25日，涟源龙山风电场首台机组并网发电，目前已完成智慧化场站改造，2023年底经五凌电力验收后实行“区域维检、无人值守”运维管理模式，是国家电投集团旗下首个实现无人值守的场站，智慧场站建设成功经验在国家电投全集团进行推广；《央视财经评论》将五凌电力湘中维检中心涟源龙山风电场智慧场站建设作为典型宣传，成为全国新能源智慧管控标杆，为新能源产业的发展提供了智慧化示范，无人值守场站获得人民网、新华社等18家媒体深度报道。



Songmutang Wind Farm, located in the southwestern mountainous area of Taojiang County, Yiyang City, Hunan Province, has a designed installed capacity of 100,000 kW and currently an operational capacity of 50,000 kW(Phase I). It achieved full grid connection on December 9, 2019, with a designed annual generation of 96.06 million kWh. The wind farm has received recognition from the Communist Youth League of Yiyang City as a "Youth Civilization Unit" and from the Taojiang County Safety Committee as an "Advanced Enterprise in Safety Production and Fire Protection."

松木塘风电场位于湖南省益阳市桃江县西南山区，设计装机10万千瓦，目前已建成装机5万千瓦（一期），2019年12月9日实现全部并网发电，电场设计年上网电量为9,606万千瓦时。风电场先后获得了益阳市共青团“青年文明号”、桃江县安委会“安全生产和消防工作先进企业”等荣誉。



- 后塘风电场地处辰溪县境内，总装机容量5万千瓦，年设计上网电量8,865.7万千瓦时。2025年10月全容量投产，截至2025年底，累计发电1,082.02万千瓦时。

Houtang Wind Farm, located in Chenxi County, has a total installed capacity of 50,000 kW, and a designed annual grid-connected generation of 88.657 million kWh. Full capacity operation began in October 2025, and by the end of 2025, cumulative generation reached 10.8202 million kWh.



月岩风电场位于永州市江永县北部山区，总装机5万千瓦，设计年发电量为12,450万千瓦时，年等效满负荷利用小时为2,431小时。

月岩风电场是湖南省重点工程建设项目，先后获得湖南省可再生能源学会“2022年度绿色生态风电场”、中共江永县委、江永县人民政府“2023年度平安建设（综治）工作优秀企业”“中电联2022年度电力行业风电运行指标对标华中地区”、湖南省AAA级优胜风电场、中国电力企业联合会“2023年度全国风电场生产运行指标对标华中地区湖南省AAAA级”等荣誉。

- Yueyan Wind Farm, located in the northern mountainous area of Jiayong County, Yongzhou City, has a total installed capacity of 50,000 kW, with a designed annual generation of 124.5 million kWh and 2,431 full-load equivalent hours.

It is a key construction project in Hunan Province, recognized by the Hunan Renewable Energy Society as the “2022 Green Ecological Wind Farm,” awarded by the Jiayong County Committee and Government for “2023 Excellence in Safe Production and Comprehensive Governance,” and recognized in multiple national and regional benchmarking programs, including AAA and 4A-level performance rankings in China’s wind power industry.



- 铜山岭一期风电场位于湖南省永州市江永县铜山岭农场南部区域，总装机5万千瓦，平均年发电量为12,760万千瓦时。2020年12月26日全容量投产发电。

铜山岭一期风电场是湖南省重点工程建设项目，先后获得“中国电力优质工程奖”“永州市重点项目劳动竞赛先进单位”“全国风电场生产运行统计指标对标4A优胜风电场”等荣誉。

Tongshanling Phase I Wind Farm, located in the southern area of Tongshanling Farm, Jiayong County, Yongzhou City, Hunan Province, has a total installed capacity of 50,000 kW, with an average annual generation of 127.6 million kWh. Full capacity operation commenced on December 26, 2020.

It is a key construction project in Hunan Province and has received awards including the “China Electric Power Quality Project Award,” “Advanced Unit of Yongzhou Key Projects Labor Competition,” and “4A Excellent Wind Farm in National Wind Farm Production and Operation Benchmarking.”



紫云山风电场位于湖南省娄底市双峰县境内，总装机规模5万千瓦，预计年上网电量为9,429万千瓦时。

2018年11月15日，紫云山风电场首台机组并网发电，2018年11月23日全部投产，先后获得湖南省档案局档案工作规范化管理“省一级”荣誉，中国电力技术市场协会运维检修分会“壹百日无故障风电场”，被树立为无故障风电场标杆。

Ziyunshan Wind Farm, located in Shuangfeng County, Loudi City, Hunan Province, has a total installed capacity of 50 MW, with expected annual grid-connected generation of 94.29 million kWh.

The first unit was connected on November 15, 2018, with full commissioning by November 23, 2018. The wind farm has received recognition from the Hunan Provincial Archives Bureau for standardized archival management at the provincial level and the "100 Days Without Faults" award from the Operation & Maintenance Division of the China Electric Power Technology Market Association, setting a benchmark for fault-free wind farm operation.

光伏 Solar Power

电投水电因地制宜发展水电流域一体化光伏业务，形成水电资源的协同互补发电格局，充分发挥水电调峰能力与光伏间歇性发电的互补优势，结合水电站智慧调度平台，实现水光资源的动态最优配置，提升清洁能源供应的稳定性和灵活性，推动能源结构优化升级，为区域电网提供更可靠的绿色电力支撑。

SPIC Hydropower Co., Ltd. develops basin-integrated solar PV projects in line with local conditions, forming a complementary generation pattern with hydropower resources. By leveraging hydropower's peak-shaving capability and the intermittent nature of solar PV, and integrating with smart dispatch platforms at hydropower stations, the Company achieves dynamically optimal allocation of water and solar resources, enhancing the stability and flexibility of clean energy supply, optimizing the regional energy mix, and providing more reliable green power to local grids.



邵阳县是国家整县屋顶分布式光伏开发试点县、国家电投集团“三网融合”示范县、“雪炭行动”试点县。邵阳县屋顶分布式光伏电站利用邵阳县公共建筑、工商业屋顶、居民屋顶、车棚等建筑物闲置屋顶建设屋顶分布式光伏电站。党政机关、公共建筑、工商业屋顶光伏采用“自发自用、余电上网”模式，户用光伏采用“全额上网”模式，于2025年1月22日全容量并网发电。

Shaoyang County is a national pilot county for distributed rooftop PV development, a SPIC "Three-Network Integration" demonstration county, and a pilot county for the "Snow Carbon Action." Rooftop distributed PV projects have been installed on public buildings, industrial and commercial rooftops, residential rooftops, and carports. For government, public, and industrial/commercial rooftops, a "self-consumption with surplus fed to the grid" model is used; for residential PV, a "full-feed-in" model is adopted. Full-capacity grid connection was achieved on January 22, 2025.



托口营地园区光伏项目总装机容量0.12万千瓦，安装17台逆变器，年设计发电量108万千瓦时，2025年4月投产，截至2025年底，累计发电94.06万千瓦时。

Tuokou Camp Park PV Project has a total installed capacity of 1,200 kW, equipped with 17 inverters, with a designed annual generation of 1.08 million kWh. The project commenced operation in April 2025, and by the end of 2025, cumulative generation reached 0.9406 million kWh.



2025年4月，五凌电力五强溪电厂1.5万千瓦分布式光伏项目全容量并网。项目配置光功率预测系统（预测精度超90%）与AGC/AVC系统，突遇云层遮挡时，光功率预测系统会提前15分钟向电网发送出力变化预警，调度中心随即自动调整出力曲线，整个过程无需人工干预，这一智慧管理模式可使光伏年均利用小时数提升约5%—15%。

In April 2025, Wuling Power's Wuqiangxi Hydropower Plant 15 MW distributed PV project was fully connected to the grid. The project features a solar power forecasting system (with over 90% accuracy) integrated with AGC/AVC systems. In the event of sudden cloud cover, the forecasting system sends a 15-minute advance output variation warning to the grid, and the dispatch center automatically adjusts the output curve without manual intervention. This smart management mode can increase annual PV utilization hours by approximately 5%—15%.



湖南汨罗鹤巢湖光伏电站位于汨罗市汨罗镇黄家坪村鹤巢湖现代特色水产养殖产业园内，属于太阳能资源较丰富区域。总装机容量2万千瓦，电站类型为渔光互补发电项目，电站包括太阳能光伏发电系统及相应的配套设施。项目年均发电量为2,166.25万千瓦时。

Miluo Hechaohu PV Station, located in Huangjiaping Village, Miluo Town, Miluo City, within the Hechaohu Modern Aquaculture Industrial Park, is in a region with abundant solar resources. The station has a total installed capacity of 20 MW and operates as an agri-photovoltaic (fish-solar complementary) project. The project includes the PV generation system and supporting facilities, with an average annual generation of 21.6625 million kWh.



五凌电力新田光伏电站位于湖南省永州市新田县三井镇罗溪村，电站光伏区总占地面积703亩，装机容量为2万千瓦。电站设计2025年平均上网电量约1,766.4万千瓦时。2017年6月28日首批组件并网发电。

新田光伏是湖南省重点工程建设项目，先后获得五凌电力“安全示范班组”、全国太阳能光伏电站生产运行统计指标对标“AAA”级、中国电力技术市场运维检修协会全年无故障光伏电站、永州市总工会重点建设项目劳动竞赛先进班组等荣誉称号。

Xintian PV Station, located in Luoxi Village, Sanjing Town, Xintian County, Yongzhou City, Hunan Province, occupies a total PV area of 703 mu and has an installed capacity of 20,000 kW. The project's average annual grid-connected generation is approximately 17.664 million kWh in 2025. The first batch of modules was connected to the grid on June 28, 2017.

Xintian PV is a key provincial project in Hunan, having received numerous honors, including Wuling Power's "Safety Demonstration Team," AAA rating in national PV station production and operation benchmarking, the "Year-Round Fault-Free PV Station" award from the China Electric Power Technology Market O&M Association, and recognition as an advanced labor team in Yongzhou City's key project labor competition.

风险机遇管理 Risk and Opportunity Management

影响因素 Influencing factors	相关风险 Related risks	潜在机遇 Potential opportunities
<p>自然条件与气候：水电产业发电量直接取决于来水情况（流量、水位），具有明显的季节性和年际波动。气候变化导致的长期干旱或极端降雨，会加剧这种不确定性；风电及光伏产业发电量受风力条件、日照条件影响，具有高度不确定性。</p> <p>Natural conditions and climate: Hydropower generation directly depends on water inflow (flow and water level), exhibiting obvious seasonal and interannual fluctuations. Climate change-induced long-term droughts or extreme rainfall may exacerbate this uncertainty. Wind and solar PV generation are affected by wind conditions and solar irradiation, showing high variability.</p> <p>电力市场政策：新能源行业受国家能源战略（如“双碳”目标、新型电力系统建设）驱动。电价形成机制直接影响项目收益。</p> <p>Power market policies: The new energy sector is driven by national energy strategies (e.g., "dual carbon" targets, new power system development). Electricity pricing mechanisms directly affect project returns.</p>	<p>气候风险：长期干旱、暴雨等极端天气是最大威胁之一，可直接导致发电量锐减，甚至引发区域电力危机。</p> <p>Climate risk: Long-term droughts, extreme rainfall, and other weather events are among the greatest threats, potentially causing sharp declines in power output and even triggering regional electricity crises.</p> <p>市场价格风险：新能源项目前期固定投资高，在市场化电价波动中可能面临收益不确定性。</p> <p>Market price risk: New energy projects require high upfront investment and may face uncertain returns under fluctuating market electricity prices.</p>	<p>水风光一体化基地建设：国家积极推动建设大型水风光一体化基地，三者可实现多能互补，提高整体消纳水平和供电可靠性。</p> <p>Integrated hydropower-wind-solar bases: The state actively promotes large-scale integrated hydropower-wind-solar bases, enabling multi-energy complementarity, improving overall grid absorption, and enhancing supply reliability.</p>

风险机遇管理 Impact, risk, and opportunity management

影响因素 Influencing factors

技术能力与设备运维：数字化转型（如智能调度、预测性维护）是提升效率与安全的核心。设备状态直接决定能否稳定运行。

Technical capability and equipment operation & maintenance: Digital transformation (e.g., smart dispatch, predictive maintenance) is central to improving efficiency and safety. Equipment condition directly affects stable operation.

周边环境与社会责任：水电项目不仅发电，还承担防洪、灌溉、供水、生态等综合任务，这些社会责任因素可能影响其发电的灵活性，在参与电力市场时构成约束。环保要求、移民安置也是项目开发的重要考量。

Surrounding environment and social responsibility: Hydropower projects serve multiple functions beyond power generation, including flood control, irrigation, water supply, and ecological protection. These responsibilities may constrain operational flexibility and participation in power markets. Environmental regulations and resettlement issues are also key considerations in project development.

相关风险 Related risks

财务与运营风险：水量波动、日照条件、风力等级直接导致发电量和业绩波动，且项目通常建设周期长、投资巨大，且面临生态保护、移民安置等成本压力。

Operational and financial risks: Variability in water flow, sunlight, and wind directly impacts generation and performance. Projects generally have long construction cycles, significant capital requirements, and face cost pressures related to ecological protection and resettlement.

潜在机遇 Potential opportunities

推动技术改造与智能化：对存量发电机组和光伏设备进行扩容扩机、智能化改造，是提升调节能力和运行效率的重要途径。利用数字孪生、AI等技术优化调度和运维，已成为行业发展趋势。2025年，公司继续加大科技创新管理力度及数智化建设，详情请阅读《科技创新驱动》部分。

Technological upgrade and digitalization: Capacity expansion and intelligent upgrades of existing generating units and solar PV systems are key measures to enhance regulation and operational efficiency. Leveraging digital twin, AI, and other technologies for optimized dispatch and maintenance has become an industry trend. In 2025, the Company will continue to strengthen innovation management and digital transformation; see the *Innovation and Technology Empowerment* section for details.

绩效与目标 Metrics and Objectives

电投水电坚定不移将发展水电、水风光一体化基地等清洁能源作为服务国家“双碳”目标的核心路径与首要责任。我们致力于通过专业化运营、技术创新与集约化管理，持续做大清洁能源规模、做优资产质量、做强保供能力，以实实在在的绿色发展绩效，巩固集团水电产业发展“主力兵团”地位，为构建新型电力系统注入绿色动能。未来，公司将持续提升清洁能源装机总量与发电占比；通过数字化转型与精益管理不断提升水能利用率、设备可利用率及整体运营效率，进一步降低度电成本；探索“清洁能源+”新模式，全面提升清洁能源业务的绿色价值、经济价值与社会价值。

SPIC Hydropower Co., Ltd. steadfastly regards the development of hydropower and integrated hydropower-wind-solar bases as the core path and primary responsibility in supporting China's dual-carbon goals. Through professional operations, technological innovation, and intensive management, the Company aims to continuously scale up clean energy capacity, optimize asset quality, and strengthen power supply reliability, delivering tangible green development outcomes. This consolidates its position as the core force of SPIC's hydropower sector and injects green momentum into the establishment of a new-type power system. Looking ahead, the Company will: Continue increasing total installed clean energy capacity and the share of clean power generation; Enhance water utilization, equipment availability, and overall operational efficiency through digital transformation and lean management, further reducing cost per kWh; Explore new "Clean Energy+" models to comprehensively enhance the environmental, economic, and social value of its clean energy business.

数读·2025 Data Insights 2025

水力发电：全年实现水电发电量**1,779,726.16**万千瓦时。

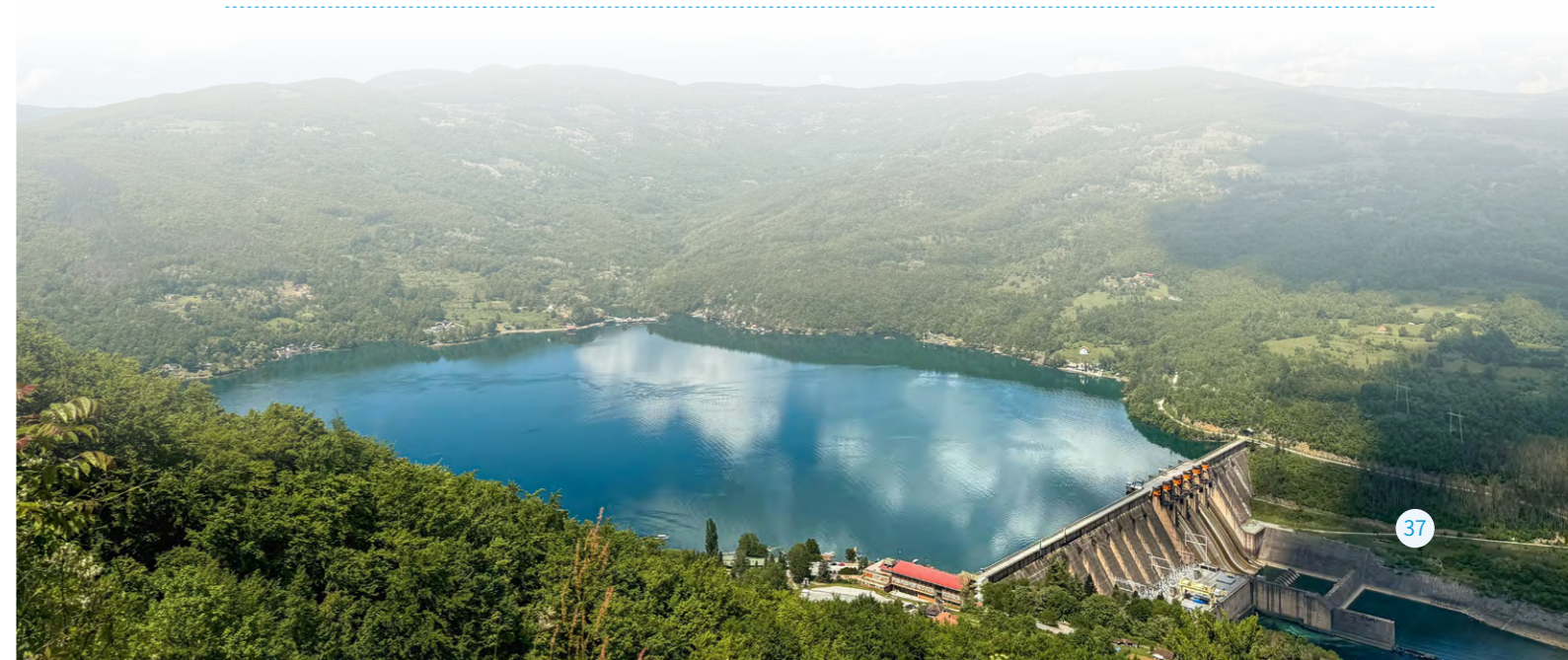
Hydropower: Annual generation reached **177,972,616** MWh.

风电、光伏：全年实现风电发电量**313,452.69**万千瓦时，光伏发电量**115,506.21**万千瓦时。

Wind and Solar PV: Annual generation reached **31,345,269** MWh (wind) and **11,550,621** MWh (solar PV).

运营能效：五凌电力通过优化调度与精细化管理，风电、光伏项目度电成本同比分别下降**2.49%**和**4.62%**。

Operational Efficiency: Wuling Power, through optimized dispatch and refined management, achieved year-on-year reductions in cost per kWh of **2.49%** for wind power and **4.62%** for solar PV.



扎实环保产业

Strengthening the Environmental Protection Industry

电投水电始终坚持生态优先、绿色发展的战略方向，将环境保护作为扎实主业履责的重要工作，为可持续发展筑牢绿色根基。作为国家电投集团唯一的环保产业平台，远达环保承载着绿色低碳发展、拓展外部生态环保市场的双重使命。深度聚焦“能源生态环保”核心赛道，致力于在大气治理、水处理、矿山及土壤修复、能源废弃物循环利用、CCUS及“双碳”服务、新能源工程建设等关键领域打造核心竞争力，为集团清洁能源战略实施提供坚实的环保支撑，为社会生态文明建设贡献专业力量。

SPIC Hydropower Co., Ltd. consistently adheres to a strategy of ecological priority and green growth, treating environmental protection as a key responsibility in its core business and laying a solid green foundation for sustainable development. As the Group's sole platform dedicated to the environmental protection industry, Yuanda Environmental Protection carries a dual mission of promoting green, low-carbon development and expanding external ecological and environmental markets. With a deep focus on the "energy-ecology-environment" sector, the Company strives to build core competitiveness in critical areas such as air pollution control, water treatment, mine and soil remediation, energy waste recycling, CCUS and "dual carbon" services, and new energy project construction. This provides robust environmental support for the Group's clean energy strategy while contributing professional expertise to the advancement of ecological civilization in society.

• 环保技术研发与工程化应用

Environmental Technology R&D and Engineering Applications

大气治理 Air Pollution Control

以火电及工业领域烟气治理为重点，系统开展脱硫、脱硝、除尘及多污染物协同控制相关业务，形成集工程建设、投资运营和技术服务于一体的大气治理解决方案。依托高效脱硫脱硝工艺、先进除尘技术及催化剂研发、制造与再生能力，远达环保持续提升烟气污染物治理的稳定性与可靠性。

截至2025年末，远达环保累计承接大气治理相关业务900余个。2025年新增项目30余个，在运烟气治理特许经营装机规模达4,835万千瓦，业务覆盖全国31个省级行政区，并拓展至“一带一路”沿线12个国家。相关项目有效削减燃煤及工业生产过程中大气污染物排放，年度实现二氧化硫减排69.6万吨、氮氧化物减排12.1万吨。

Focusing on flue gas treatment in thermal power and industrial sectors, the Company systematically carries out businesses related to desulfurization, denitrification, dust removal, and multi-pollutant synergistic control, forming integrated air pollution control solutions that combine engineering construction, investment and operation, and technical services. Leveraging efficient desulfurization and denitrification processes, advanced dust removal technologies, and capabilities in catalyst R&D, manufacturing, and regeneration, Yuanda Environmental Protection continues to enhance the stability and reliability of flue gas pollutant treatment.

As of the end of 2025, Yuanda Environmental Protection had undertaken over 900 air pollution control projects. In 2025, more than 30 new projects were added, with flue gas treatment concession projects in operation reaching a total installed capacity of 48.35 million kW. The business covers all 31 provincial-level administrative regions in China and has expanded to 12 countries along the Belt and Road Initiative. These projects have effectively reduced atmospheric pollutant emissions from coal combustion and industrial production, achieving annual reductions of 696,000 tons of sulfur dioxide (SO₂) and 121,000 tons of nitrogen oxides (NO_x).



• 青海桥电厂头脱硫项目

The No.3 absorption tower of the Qiaotou project has been successfully jacked up

水环境治理 Water Environment Management

围绕工业废水和城镇水环境治理需求，持续开展水处理工程建设与投资运营业务，形成覆盖水环境规划设计、工程实施及运营管理的全流程服务能力。通过推进高难度工业废水处理及水资源循环利用技术应用，远达环保不断提升水环境治理工作的系统性和长期治理成效的稳定性。

截至2025年末，累计承接水处理相关业务200余个，2025年新增项目10余个，业务覆盖全国27个省级行政区，并延伸至境外国家土耳其。相关项目年度实现污水处理量2,954.39202万吨，削减化学需氧量(COD) 1.889559万吨、氨氮0.270483万吨。

Addressing the needs of industrial wastewater treatment and urban water environment management, the Company continuously advances water treatment engineering, investment, and operation, forming full-cycle service capabilities covering planning and design, project implementation, and operational management. By promoting the application of advanced industrial wastewater treatment and water recycling technologies, Yuanda Environmental Protection enhances the systematic effectiveness and long-term stability of water environment governance.

As of the end of 2025, the Company had undertaken more than 200 water treatment projects, including over 10 newly added in 2025. Its business spans 27 provincial-level administrative regions in China and has expanded overseas to Turkey. These projects treated 29.5439202 million tons of wastewater annually, reducing chemical oxygen demand (COD) by 18,895.59 tons and ammonia nitrogen by 2,704.83 tons.



• 商丘废水零排放项目

Shangqiu Wastewater Zero Discharge Project



• 昌图污水处理项目

Changtu Wastewater Treatment Project

CCUS 全流程技术研发及资源化利用 CCUS Full-Chain Technology Development and Resource Utilization

围绕能源领域深度减碳需求，持续推进二氧化碳捕集、利用与封存（CCUS）相关业务，覆盖工程建设、产品销售及技术服务等多个环节，逐步形成较为完整的CCUS技术与工程能力体系。依托规模化二氧化碳捕集装置研发经验和全流程解决方案能力，远达环保为不同应用场景提供差异化技术路径。

2025年度，远达环保继续推进CCUS技术研发，开展碳捕集节能工艺研究和燃气机组烟气碳捕集技术研究，并布局开展基于混合胺吸收剂的催化解吸材料研究，持续推进碳捕集成本降低。推进绿色甲醇合成催化剂开发；完成撬装式胺液净化装置研制，并在上海长兴岛CCUS项目应用验证。

Focusing on the need for deep decarbonization in the energy sector, Yuanda Environmental Protection has continued to advance its carbon capture, utilization and storage (CCUS) business, covering multiple segments including engineering construction, product commercialization, and technical services. Through these efforts, the Company has progressively established a relatively comprehensive CCUS technology and engineering capability system. Leveraging its experience in the development of large-scale CO capture facilities and its full-chain solution capabilities, the Company provides differentiated technical pathways tailored to diverse application scenarios.

In 2025, Yuanda Environmental Protection further advanced CCUS technology development by conducting research on energy-efficient carbon capture processes and flue gas carbon capture technologies for gas-fired power units. It also initiated research on catalytic desorption materials based on mixed-amine absorbents, continuously driving down the cost of carbon capture. In parallel, the Company advanced the development of catalysts for green methanol synthesis, completed the development of a skid-mounted amine solution purification unit, and successfully validated its application in the Shanghai Changxing Island CCUS Project.



上海长兴岛CCUS创新示范项目

Shanghai Changxing Island CCUS Innovation Demonstration Project

案例 CASE

远达环保牵头优化市级创新中心，打造能源废弃物循环利用标杆

Yuanda Environmental Protection Leads Optimization of Municipal Innovation Center, Setting a Benchmark for Energy Waste Recycling

2025年，远达环保在环保科技领域取得重要进展，成功牵头完成“重庆市能源废弃物循环利用减污降碳技术创新中心”的优化整合，并获得重庆市科技局认定。此举旨在统筹开展工业烟气与废水治理、二氧化碳捕集与利用，以及退役光伏组件、电池等能源废弃物的循环利用关键技术研发、标准制定及产业化推广。通过与清华大学、重庆大学等行业顶尖机构合作，远达环保打造了省部级的原创技术策源地与产业生态试验地，畅通了资源循环利用的减污降碳链条，为推动行业发展和建立健全绿色低碳循环经济体系树立了新标杆。

In 2025, Yuanda Environmental Protection achieved significant progress in environmental technology by successfully leading the optimization and integration of “the Chongqing Energy Waste Recycling and Pollution & Carbon Reduction Technology Innovation Center”, which was officially recognized by the Chongqing Municipal Science and Technology Bureau. This initiative aims to coordinate the R&D, standard development, and industrial application of key technologies in industrial flue gas and wastewater treatment, carbon capture, utilization and storage (CCUS), as well as the recycling and reuse of decommissioned photovoltaic modules, batteries, and other energy wastes. Through collaboration with leading institutions such as Tsinghua University and Chongqing University, Yuanda Environmental Protection has established a provincial- and ministerial-level hub for original technology innovation and an industrial ecosystem testbed. This effort has effectively streamlined the pollution and carbon reduction value chain for resource recycling, setting a new benchmark for advancing industry development and improving the green, low-carbon circular economy system.



固危废处理处置 Solid and Hazardous Waste Treatment and Disposal

围绕服务“美丽中国”生态环境治理，加快推进固危废处理业务。

In support of ecological environmental governance under the “Beautiful China” initiative, the Company is accelerating the development of its solid and hazardous waste treatment and disposal business.

光伏组件回收处理方面 PV Module Recycling

自主开发了废旧光伏组件低能耗辐照拆解及资源化利用技术，利用特定光源释放的能量使组件封装材料层失去其原有的黏连性能，实现组件各材料层拆解。已建成50MW/年可移动式光伏组件拆解产线。

The Company has independently developed a low-energy irradiation-based dismantling and resource recovery technology for end-of-life PV modules. By using energy released from specific light sources to weaken the adhesion properties of encapsulation materials, the technology enables efficient separation of component layers. A mobile PV module dismantling production line with a capacity of 50 MW/year has been established.

废旧电池回收处理方面 Waste Battery Recycling

采用“锂电池电芯全自动精细化拆解+磷酸铁锂正极材料固相修复”技术路线，实现锂电池全组分高效回收及资源化利用。已建成1,000吨/年全自动精细化拆解技术示范线，正在建设配套正极材料修复示范线。

The Company adopts a technical route combining “fully automated precision disassembly of lithium battery cells and solid-phase regeneration of lithium iron phosphate (LFP) cathode materials,” enabling efficient recovery and resource utilization of all battery components. A demonstration line with a capacity of 1,000 tons/year has been completed, and a supporting cathode material regeneration demonstration line is under construction.



● 电池资源循环利用基地

Battery Resource Recycling Base

风电叶片回收方面 Wind Turbine Blade Recycling

确定了“精准切割—梯级利用—回收处置”的物理法技术路线，已开发出全自动、智能化现场切割设备，可实现风电叶片回收梯级利用率60%以上，正在建设2,000吨/年风电叶片回收技术示范线，为风电产业绿色发展做好技术储备。

A physical recycling pathway featuring “precision cutting – cascading utilization – recycling and disposal” has been established. Fully automated and intelligent on-site cutting equipment has been developed, achieving a cascading utilization rate of over 60% for recycled wind turbine blades. A demonstration line with a capacity of 2,000 tons/year is under construction, providing technological reserves for the green development of the wind power industry.

矿山及土壤修复 Mine and Soil Remediation

围绕资源开发地区生态修复需求，持续推进矿山治理与土壤修复相关业务，重点开展矿区地形重塑、水土保持、土壤改良和植被恢复等综合治理工作，推动受损生态系统功能修复。依托系统化修复技术路径，逐步形成从调查评估到工程实施的综合服务能力。

截至2025年末，远达环保累计承接矿山及土壤修复相关业务160余个，2025年新增项目12个，业务主要覆盖内蒙古、重庆等区域。相关项目年度完成生态修复面积1,823亩。

Focusing on ecological restoration needs in resource development regions, the Company continuously promotes mine rehabilitation and soil remediation projects, carrying out integrated treatments such as terrain reshaping, soil and water conservation, soil improvement, and vegetation restoration to restore damaged ecosystem functions. Through systematic remediation approaches, it has gradually developed integrated service capabilities spanning from investigation and assessment to engineering implementation.

As of the end of 2025, Yuanda Environmental Protection had undertaken more than 160 mine and soil remediation projects, including 12 newly added in 2025, primarily covering regions such as Inner Mongolia and Chongqing. These projects completed ecological restoration over an area of 1,823 mu during the year.



● 重庆大渡口区重钢渔鳅浩原址场地污染土壤治理修复项目

Chongqing Dadukou Heavy Steel Yuqiuhaio Former Site Soil Remediation Project

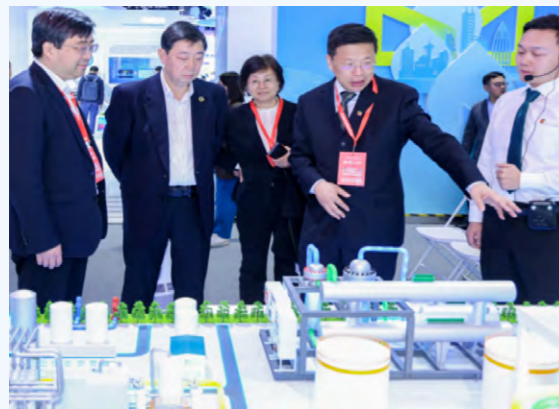
案例
CASE

远达环保亮相第二十三届中国国际环保展览会（CIEPEC 2025）

Yuanda Environmental Protection Showcases at the 23rd China International Environmental Protection Exhibition and Conference (CIEPEC 2025)

2025年4月，远达环保受邀参加第二十三届中国国际环保展览会（CIEPEC 2025），并参加同期召开的2025生态环保产业创新发展大会及分论坛成果交流。在展会现场，远达环保展台以国家电投“中国红”和“梦想绿”企业品牌色彩为主色调，紧扣“绿色低碳 新质领航”展示主题，以展板、视频、模型、产品等多种形式，重点展示了公司近年来在CCUS（碳捕获、利用与封存）、能源废弃物循环利用、脱硝催化剂制造，以及在气、水、固、土综合治理方面的卓越环保技术和创新解决方案，充分彰显了远达环保在环保领域的技术实力、品牌影响力及行业领军地位。

In April 2025, Yuanda Environmental Protection was invited to participate in the 23rd China International Environmental Protection Exhibition and Conference (CIEPEC 2025), and attended the 2025 Eco-Environmental Industry Innovation and Development Conference and related sub-forum sessions held concurrently. At the exhibition, the Company's booth adopted SPIC's signature "China Red" and "Dream Green" brand colors as its primary visual identity. Centered on the theme of "Green and Low-Carbon Development, Leading with New-Quality Productivity," the booth showcased—through panels, videos, models, and product displays—the Company's latest environmental technologies and integrated solutions in areas including carbon capture, utilization and storage (CCUS), energy waste recycling, denitrification catalyst manufacturing, and comprehensive treatment across air, water, solid waste, and soil. The exhibition highlighted Yuanda Environmental Protection's technological capabilities, brand influence, and leading position in the environmental protection sector.



清洁能源建设

Clean Energy Development

新能源工程建设 New Energy Project Construction

2025年2月，远达环保宿州风电EPC项目9号、10号风机率先并网发电，标志着公司正式开启风电工程总承包业务新纪元。全面建成后，预计年发电量可达1.3亿千瓦时，相当于每年减排二氧化碳10万吨。

In February 2025, turbines No. 9 and No. 10 of Yuanda Environmental Protection's Suzhou wind power EPC project were the first to be connected to the grid, marking the official launch of the Company's wind power EPC business. Upon full completion, the project is expected to generate approximately 130 million kWh of electricity annually, equivalent to reducing carbon dioxide emissions by 100,000 tons per year.



2025年12月，远达环保首个山地风电EPC项目——富源西风电场四期项目顺利实现2台机组首次并网。该项目是云南省“十四五”新能源规划的重点项目，设计装机容量达14.74万千瓦，将安装21台单机容量为6.7MW的先进大功率风力发电机组，代表当前陆上风电场建设的先进水平。其余机组预计于2026年6月30日完成建设，建成后预计年减排二氧化碳数十万吨，对优化区域能源结构、推动绿色发展具有显著意义。

In December 2025, Yuanda Environmental Protection's first mountainous wind power EPC project—the Phase IV of the Fuyuanxi Wind Farm—successfully achieved initial grid connection of two turbine units. The project is a key project under Yunnan Province's 14th Five-Year Plan for new energy development, with a total installed capacity of 147,400 kW. It will be equipped with 21 advanced high-capacity wind turbines, each with a unit capacity of 6.7 MW, representing the advanced level of onshore wind power development. The remaining units are scheduled to be completed by June 30, 2026. Once fully operational, the project is expected to reduce carbon dioxide emissions by several hundred thousand tons annually, making a significant contribution to optimizing the regional energy structure and promoting green development.



山地光伏工程建设 Mountainous Photovoltaic Project Construction

远大环保首个直流侧百兆瓦级山地光伏工程建设项目——云南楚雄南华竹田箐EPC项目克服了险峻的地质条件、首次应用柔性支架的技术挑战，于2025年6月25日顺利全容量并网。项目投运后，预计每年可生产绿色电力1.27亿kWh，每年可节约标煤约123.3万吨，减排二氧化碳约338.6万吨，为当地能源结构转型和绿能生态融合发展作出积极贡献。

Yuanda Environmental Protection's first 100 MW-class (DC-side) mountainous photovoltaic engineering EPC project—the Zhutianqing Project in Nanhua, Chuxiong, Yunnan—overcame challenging geological conditions and technical difficulties associated with the first-time application of flexible mounting systems, and achieved full-capacity grid connection on June 25, 2025. Upon commissioning, the project is expected to generate approximately 127 million kWh of green electricity annually, save about 1.233 million tons of standard coal per year, and reduce carbon dioxide emissions by approximately 3.386 million tons annually, contributing to the optimization of the local energy mix and the integrated development of green energy and ecological systems.



全面提质增效

Driving Quality Improvement and Efficiency Gains

电投水电坚持统筹重组转型与内生增长，全方位激活经营效能、释放价值潜力，为高质量发展筑牢盈利根基。在工程建设领域，我们把“做有效益的项目、把项目做出效益”作为宗旨，推动全价值链降本增效，确保各项经营指标稳步提升，为公司可持续发展注入强劲动力。

SPIC Hydropower Co., Ltd. advances restructuring and transformation in parallel with organic growth, comprehensively enhancing operational performance and unlocking value potential to build a solid profitability foundation for high-quality development. In the field of engineering and project development, we uphold the principle of “delivering value-generating projects and ensuring projects deliver value”, driving cost optimization and efficiency enhancement across the entire value chain to steadily improve key operating indicators and inject strong momentum into the Company's sustainable growth.

资产整合优化 Asset Integration and Optimization

2025年12月30日，电投水电在重庆市委、市政府主要领导和国家电投集团主要领导的见证下隆重揭牌。公司于2025年内顺利完成重大资产重组，成功收购五凌电力100%股权及长洲水电64.93%股权，实现水力发电及流域水电站新能源一体化等清洁能源资产成功注入，重组后公司资产规模及经营业绩显著提升。标志着电投水电作为国家电投集团水电产业专业化管理与投融资平台正式扬帆起航、逐梦前行。

On 30 December 2025, SPIC Hydropower Co., Ltd. was officially inaugurated in Chongqing in the presence of senior officials from the Chongqing Municipal Party Committee and Municipal Government, as well as senior executives of SPIC. During 2025, the Company successfully completed a major asset restructuring, acquiring a 100% equity interest in Wuling Power and a 64.93% equity interest in Changzhou Hydropower. This enabled the successful injection of high-quality clean energy assets, including hydropower generation and integrated river-basin hydropower-new energy projects. Following the restructuring, the Company's asset scale and operating performance were significantly enhanced. This milestone marks the official launch of SPIC Hydropower Co., Ltd. as a specialised platform for hydropower industry management, investment, and financing under SPIC, embarking on a new journey of growth and development.



参加重大资产重组答辩和开展募路演

Participation in Major Asset Restructuring Defense and Fundraising Roadshow

生产运营增效 Enhancing Efficiency in Production and Opera- tions

电投水电各单位深化“一分钱行动”，节约生产费用和采购成本，优化项目设计与造价管控，减少新能源度电成本和燃料单价，依托供应链优化与生产节能实现显著降本增效。

All subsidiaries of SPIC Hydropower Co., Ltd. further advanced the "Every Penny Counts" initiative, reducing production and procurement costs, optimizing project design and cost control, lowering the levelized cost of electricity for new energy as well as fuel unit costs, and achieving significant cost savings and efficiency gains through supply chain optimization and energy-saving measures in operations.

五凌电力 Wuling Power

- 深化“一分钱行动”，优化生产费用支出**5,900**万元
Further advanced the "Every Penny Counts" initiative, reducing production expenses by RMB **59** million
- 控降采购成本，费用支出较预算降低**12%**
Strengthened procurement cost control, with expenditures **12%** below budget
- 推进债务优化，综合融资利率降至**2.35%**
Optimized debt structure, lowering the blended financing rate to **2.35%**
- 优化项目设计与造价管控，风电项目平均造价同比降低**554**元/千瓦
Enhanced project design and cost management, reducing the average cost of wind power projects by RMB **554**/kW year-on-year

远达环保 Yuanda Environmental Protection

- 工程服务与市场协同发力，累计获取订单**25.09**亿元，其中“大火电”工程订单**10.88**亿元并保持稳定增长，各业务板块订单均实现突破式增长，通过强化设计、供应链等环节精细化管理，在建工程执行毛利率整体提高近2个百分点。
Leveraged synergies between engineering services and market development, securing total orders of RMB **2.509** billion, including RMB **1.088** billion in conventional thermal power engineering orders, maintaining steady growth; all business segments achieved breakthrough expansion. Through refined management across design and supply chain processes, the overall gross margin of projects under execution increased by nearly 2 percentage points.
- 扎实推进“一分钱”专项工作，通过供应链优化、毛利率提升及生产节能降耗实现降本增效超**3,700**万元，平均融资成本降至**2.54%**，创历史最低，节约财务费用超**1,100**万元。
Solidly advanced the "Every Penny Counts" initiative, achieving cost savings and efficiency gains exceeding RMB **37** million through supply chain optimization, margin improvement, and energy conservation measures; the average financing cost decreased to **2.54%**, a record low, saving over RMB **11** million in financial expenses.

严格质量管理 Strengthening Quality Management

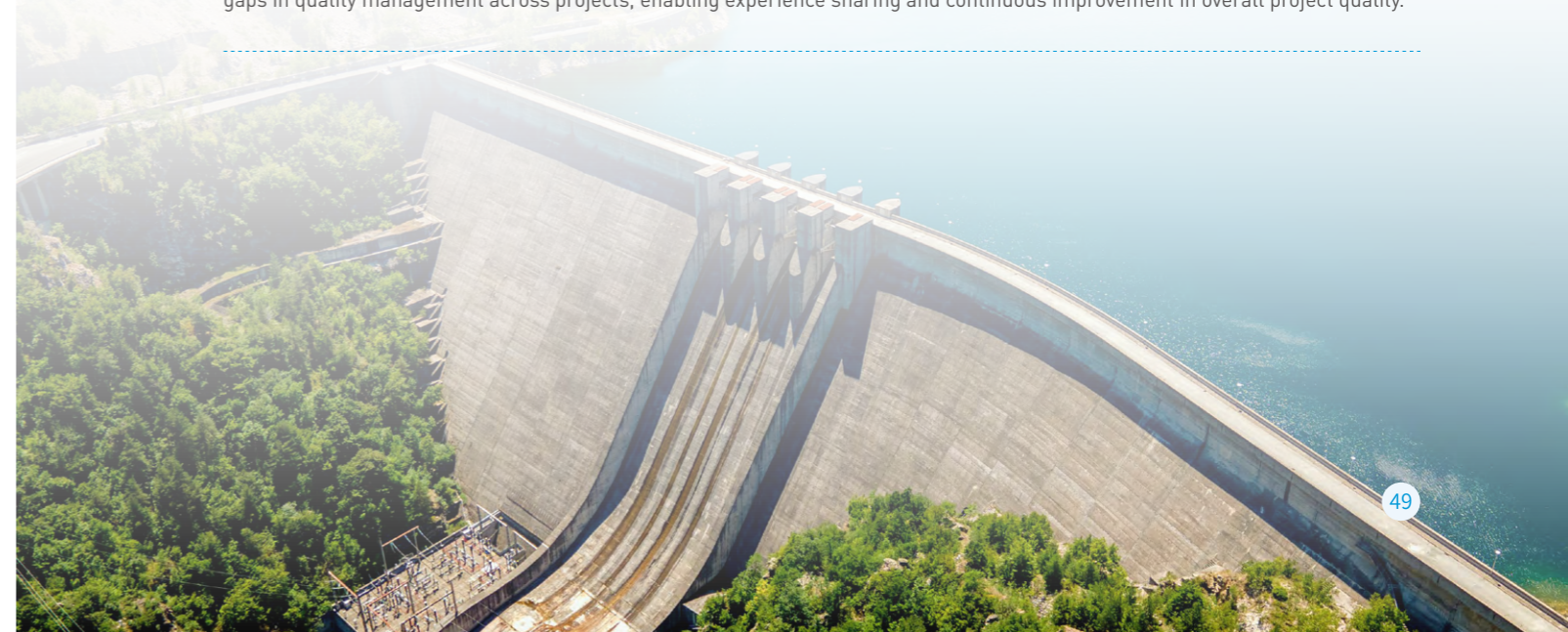
电投水电建立健全工程建设管控体系，构建科学可行的工程建设制度体系；制定严格的项目质量监督管理机制与措施，按照质量管理标准明确工程、生产质量管控全过程要求，为公司工程项目质量提升筑牢坚实地基。2025年，五凌电力下属8家单位通过质量管理体系三标认证；远达环保各单位制定《质量管理工作规定》，明确工程、生产质量管控全过程要求，逐级签订年度目标责任书，明确质量管理目标和工作举措，确保质量目标实现，同时开展质量监督检查、设备监造、管理体系内外审等活动60余次；长洲水电成功取得安全、质量、环保体系认证。

SPIC Hydropower Co., Ltd. has established and continuously improved a comprehensive project construction management and control system, developing a structured and robust institutional framework for engineering delivery. Rigorous project quality supervision mechanisms and measures have been put in place, with full-process quality control requirements clearly defined in accordance with recognized quality management standards, thereby laying a solid foundation for enhancing project quality. In 2025, eight subsidiaries of Wuling Power obtained certification under the three major management system standards for quality, environment, and occupational health and safety. All subsidiaries of Yuanda Environmental Protection formulated the *Regulations on Quality Management*, clarifying full lifecycle quality control requirements for both engineering and production activities. Annual target responsibility agreements were signed at each organizational level to define quality objectives and corresponding action plans, ensuring effective target delivery. In addition, more than 60 activities were carried out, including quality supervision and inspection, equipment manufacturing supervision, as well as internal and external audits of management systems. Changzhou Hydropower successfully obtained certifications for quality, safety, and environmental management systems.

责任行动·2025 Actions & Responsibilities · 2025

五凌电力深入贯彻落实《建设工程质量管理条例》，增强全员质量意识。督促项目管理单位、建设项目完善质量管理组织机构和制度、标准，配齐配强专业人员，确保质量管理体系有效运转；总结发布典型质量通病与控制措施，定期通报各项目质量管理良好实践和存在的不足，吸取经验教训，促进各项目工程质量共同提高。

Wuling Power has thoroughly implemented the *Regulations on the Administration of Construction Project Quality*, strengthening quality awareness across the workforce. It has urged project management entities and construction projects to improve quality management organizational structures, systems, and standards, while ensuring adequate staffing with qualified professionals to support the effective operation of quality management systems. In addition, typical quality defects and corresponding control measures have been systematically summarized and published. Regular briefings are conducted to share best practices and identify gaps in quality management across projects, enabling experience sharing and continuous improvement in overall project quality.



科技创新驱动

Innovation and Technology Empowerment

电投水电正逐步完善科技管理体系，优化科技创新机制，将科技创新作为企业经营管理重要板块。寻求加快新产业孵化进程，着力培育新产业竞争力，为公司产业高质量发展提供持续驱动力。

SPIC Hydropower Co., Ltd. is steadily improving its science and technology management system, optimizing innovation mechanisms, and positioning technological innovation as a core component of corporate operations and management. The Company is accelerating the incubation of emerging industries and fostering new competitive advantages, thereby providing sustained momentum for high-quality industrial development.

完善治理架构 Strengthening Governance Framework

电投水电持续完善科研管理制度体系建设，坚定不移实施创新驱动发展战略，以更大力度加大科技投入，以更实举措突破关键核心技术，以更高标准推进数智化转型，持续激发发展活力。2025年，五凌电力按照《国家电投集团“十五五”科技创新规划水电领域专题报告》，制定科技发展战略规划，搭建国家能源水电智能远程运维技术研发中心、湖南省水电智慧化工程技术研究中心、长沙市能源智慧运行技术创新中心3家科研平台；远达环保聚焦科技创新管理规范化建设，编制《科研项目全流程管理操作手册》，明确科研项目从立项、执行、验收至成果转化全生命周期的管理标准、职责分工及流程要求，为科技创新治理体系构建坚实保障。

SPIC Hydropower Co., Ltd. continues to strengthen the institutional framework for research and development management, steadfastly implementing an innovation-driven development strategy. The Company is increasing investment in science and technology with greater intensity, advancing breakthroughs in critical and core technologies through more targeted measures, and accelerating digital and intelligent transformation to higher standards, thereby continuously unlocking growth momentum. In 2025, Wuling Power, in accordance with the *SPIC 15th Five-Year Science and Technology Innovation Plan – Hydropower Sector Report*, formulated its science and technology development strategy and established three research platforms: the National Energy Hydropower Intelligent Remote Operation and Maintenance Technology R&D Center, the Hunan Provincial Hydropower Intelligent Engineering Technology Research Center, and the Changsha Municipal Energy Intelligent Operation Technology Innovation Center. Yuanda Environmental Protection focused on standardizing science and technology innovation management by compiling the Full Lifecycle Management Manual for R&D Projects, which defines management standards, roles and responsibilities, and procedural requirements across the entire lifecycle of R&D projects—from project initiation and execution to acceptance and commercialization—thereby providing a solid foundation for the Company's innovation governance system.

夯实战略规划 Strengthening Strategic Planning

电投水电在水电等清洁能源、环保领域，推进技术研发，涵盖故障预警、智能系统、数据技术等，搭建相关模型与平台并推广，构建高效协同的创新生态与文化氛围，积极开展产学研合作，助力运营提效与创新。

SPIC Hydropower Co., Ltd. advances technology R&D across hydropower and other clean energy and environmental protection sectors, covering fault early warning, intelligent systems, and data-driven technologies. The Company develops and deploys relevant models and platforms, builds a highly efficient and collaborative innovation ecosystem, and promotes industry-academia-research collaboration to enhance operational efficiency and support innovation.

五凌电力 Wuling Power

- 开发新能源设备故障智能预警技术，构建风机降容、光伏组串低效等能效评估模型，为提升产业运营效率提供可靠支撑。

Developed intelligent fault early warning technologies for new energy equipment and established energy efficiency evaluation models for wind turbine derating and photovoltaic string underperformance, providing reliable support for improving operational efficiency.

- 自主研发新能源场站智能运维系统，实现集中式风电、光伏资产的远程巡检、全景监测、智能预警、专家分析、能效分析及设备状态评估，实现大规模推广应用，系统预警提前发现各类风电设备缺陷130余项，有效避免设备故障损失。

Independently developed an intelligent O&M system for new energy plants, enabling remote inspection, panoramic monitoring, intelligent early warning, expert analysis, energy efficiency analysis, and equipment condition assessment for centralized wind and photovoltaic assets. The system has been deployed at scale, identifying over 130 wind equipment defects in advance and effectively avoiding failure-related losses.

- 自主研发水机组状态在线监测系统，破除厂商数据解析壁垒；完成产销协同一体化平台业务蓝图及功能逻辑设计。

Independently developed an online condition monitoring system for hydropower units, removing barriers to proprietary data parsing; completed the business blueprint and functional architecture design for an integrated production-sales coordination platform.

- 如期完成“1455”项目年度建设任务，实现核心业务“四流合一”（业务流、资金流、信息流、价值流），让“纸上蓝图”转化为“实际成效”；推进“四化”（业务标准化、单据结构化、核算唯一化、准则格式化），以“层层穿透、环环可视、单单可查、数数可溯”的方式追溯业务源头，实现“敏捷化出表+穿透式监管”的双向价值闭环。

Completed the annual development targets of the “1455” program on schedule, achieving integration of the four core flows (business, capital, information, and value), and translating planning into operational outcomes. Advanced the “four transformations” (business standardization, document structuring, accounting unification, and standards formalization), enabling end-to-end traceability characterized by full transparency, process visibility, item-level traceability, and data traceability, and establishing a dual closed-loop mechanism of agile reporting and penetrative supervision.

远达环保
Yuanda Environmental Protection

- 打造“数字化智能环保预警分析系统”，推进工程项目管理系统、AI平台建设，制定推进计划并开展应用培训，搭建本土化生态环境管理信息系统，整合物联网、大数据技术构建动态监测网络。

Developed a “digital intelligent environmental protection early warning and analytics system”; advanced the construction of project management systems and AI platforms, implemented deployment plans and user training, and established a localized ecological environment management information system. Leveraging IoT and big data technologies, the Company built a dynamic monitoring network.

- 强化网络安全管理，签订所属单位网络安全责任书，完成科技研发远程办公系统漏洞整改，保障数字化科研与运营过程的信息安全。

Strengthened cybersecurity management by executing accountability agreements across subsidiaries and completing vulnerability remediation for remote R&D office systems, ensuring information security in digital research and operations.

长洲水电
Changzhou Hydropower

- 开发能源数据资源的采集和安全共享技术，为持续提升运营效率与效益筑牢数字基石。

Developed technologies for the collection and secure sharing of energy data resources, laying a solid digital foundation for continuously improving operational efficiency and performance.

- 与四川大学电气工程学院、广西大学机械工程学院开展产学研合作，为持续的技术创新与专业人才培养注入了新动力。

Conducted industry-academia-research collaboration with the School of Electrical Engineering of Sichuan University and the School of Mechanical Engineering of Guangxi University, providing sustained momentum for technological innovation and professional talent development.



五凌电力三板溪水电站首创柔性隔水幕墙技术，跨界融合水利、海洋与桥梁工程理念，通过“索塔浮箱+柔性幕布”系统动态调控水温，破解高坝低温水下泄难题。

Wuling Power pioneered a flexible impermeable curtain technology at the Sanbanxi Hydropower Station. By integrating concepts from hydraulic, marine, and bridge engineering, the system adopts a “cable tower-floating caisson + flexible curtain” configuration to dynamically regulate water temperature, effectively addressing the challenge of low-temperature discharge from high dams.

案例
CASE

五凌电力：基于“无人机+AI”的动态风机叶片巡检技术研究

Wuling Power: Dynamic Wind Turbine Blade Inspection Technology Based on “UAV + AI”

五凌电力“基于‘无人机+AI’的动态风机叶片巡检技术研究”成果从风电运维实际痛点出发，利用AI图像识别和动态航线规划技术实现在风机叶片运行下的自动缺陷检测，低成本化解风电“检—产冲突”，在国家电投集团首届人工智能创新应用技能竞赛中获个人三等奖。

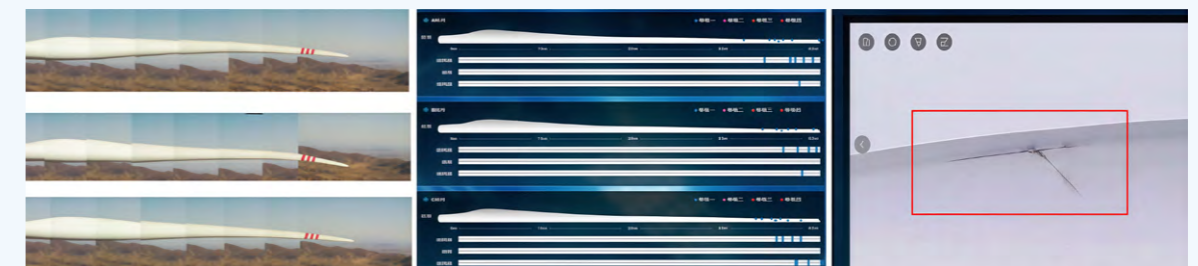
在风电规模化发展进程中，叶片巡检面临传统静态检测需停机、易遗漏隐形缺陷等痛点。攻关团队自主研发无人机动态航线规划算法，使无人机能在风机运行中自动纠偏，自主完成巡检图像采集，效率较人工提升94%。同时，基于风机缺陷图片构建高质量数据集，通过模型调优将缺陷识别准确率提升至近80%，并开发图像匹配算法自动生成含缺陷类型、位置及维修建议的检测报告。目前，该技术已在15个风电场应用，发现裂纹、雷击等缺陷45项，大幅降低停机需求，预计每年可节约巡检成本超1.5亿元，挽回发电损失2.2亿千瓦时，有效提升生产灵活性与运营安全性。

Wuling Power’s “Dynamic Wind Turbine Blade Inspection Technology Based on ‘UAV + AI’” is developed to address key pain points in wind power O&M. By leveraging AI-based image recognition and dynamic flight path planning, it enables automatic defect detection on turbine blades during operation, resolving the “inspection-production conflict” at low cost. The achievement won Third Prize (Individual) at the First Artificial Intelligence Innovation and Application Skills Competition of SPIC.

Amid the large-scale development of wind power, blade inspection traditionally requires shutdowns and is prone to missing latent defects. The project team independently developed a dynamic UAV flight path planning algorithm, enabling drones to automatically correct deviations during turbine operation and complete inspection image acquisition autonomously, improving efficiency by 94% compared with manual inspection. In addition, a high-quality dataset was established based on blade defect images, and model optimization increased defect recognition accuracy to nearly 80%. An image-matching algorithm was also developed to automatically generate inspection reports covering defect types, locations, and maintenance recommendations. The technology has been applied at 15 wind farms, identifying 45 defects such as cracks and lightning damage, significantly reducing downtime requirements. It is estimated to save over RMB 150 million in annual inspection costs and recover 220 million kWh of power generation losses, effectively enhancing operational flexibility and safety.

◆ **缺陷识别与定位：**采集的数据传入部署模型做识别，通过图像拼接技术高度还原叶片状态，定位缺陷位置。

Defect Identification and Localization: The collected data is fed into the intelligent model for recognition. Image stitching technology is used to highly restore the blade condition and locate defect positions.



龙山风机叶片拼接图
Longshan Wind Turbine Blade
Stitching Image

对应叶片缺陷位置总览
Overview of Corresponding Blade
Defect Locations

标注缺陷查看
View Annotated Defects

案例
CASE

五凌电力：面向水电及新能源场站周界防护的毫米波雷达视频融合技术及装备研究与应用
Wuling Power: Research and Application of Millimeter-Wave Radar-Video Fusion Technology and Equipment for Perimeter Protection of Hydropower and New Energy Stations

针对水电及新能源场站周界防护中误报率高、监控盲区多、响应不及时等痛点，五凌电力自主研发了毫米波雷达视频融合技术及预警装备，攻克了复杂环境下多目标跟踪、雷达与视频协同标定等难题，实现了7×24小时全天候、准确率98%以上的智能周界防护。

全链路智能化水电站泄洪禁区预警：采用相控阵雷达与Yolov6网络模型深度融合，实现入侵目标快速识别与定位，结合迁移学习构建样本集，识别准确率超98%。系统具备声光报警、短信推送等多重告警功能，形成从现场威慑到控制中心的完整处置链条，显著提升预警及时性。

低漏报率新能源场站入侵检测：采集沙尘、雨雾等极端天气下的多源数据，开发基于注意力机制的多模态融合算法，提升模型泛化能力，有效降低漏报率。系统可实时监控、精准告警并自动留存影像，便于事后追溯分析。

目前，该技术已在五凌电力管理的3个水电厂、20余座新能源场站及国家电投集团四川电力有限公司7座水电站推广应用，成果入选湖南省“智赋万企”十大应用场景典型案例及国家电投集团存量风电场智慧化改造推荐配置。

To address challenges in perimeter protection for hydropower and new energy stations—such as high false alarm rates, monitoring blind spots, and delayed response—Wuling Power independently developed millimeter-wave radar-video fusion technology and early-warning equipment. The solution overcomes technical challenges including multi-target tracking in complex environments and radar-video coordinated calibration, enabling 24/7 all-weather intelligent perimeter protection with an accuracy rate exceeding 98%.

tol center handling, significantly improving response timeliness.

•**Low-miss-rate intrusion detection for new energy stations:** By collecting multi-source data under extreme conditions such as sandstorms, rain, and fog, and developing a multimodal fusion algorithm based on attention mechanisms, the system enhances model generalization capability and effectively reduces missed detections. It enables real-time monitoring, precise alerts, and automatic image recording for post-event traceability and analysis.

This technology has been deployed at three hydropower plants and more than 20 new energy power stations managed by Wuling Power, as well as seven hydropower stations operated by SPIC Sichuan Electric Power Co., Ltd. It has been selected as one of the "Top 10 Typical Application Scenarios of 'Empowering Enterprises with Intelligence'" in Hunan Province and included in the recommended configurations for the smart retrofitting of operational wind farms within SPIC.

•**End-to-end intelligent early warning for hydropower station flood discharge restricted zones:** By deeply integrating phased-array radar with the YOLOv6 network model, the system enables rapid identification and positioning of intrusion targets. With transfer learning-based dataset construction, recognition accuracy exceeds 98%. The system supports multiple alert mechanisms, including audio-visual alarms and SMS notifications, forming a complete response chain from on-site deterrence to con-



案例
CASE

“碳”索之路：CCUS及二氧化碳加氢制甲醇
Exploring the "Carbon" Path: CCUS and CO₂ Hydrogenation to Methanol

“双碳”目标下，2025年，远达环保组建“CCUS及二氧化碳加氢制甲醇”突击队，打造具有电力领域特色的CCUS产业链。攻克胺液在线净化技术，开发一体化胺液在线净化装备，新开发的胺液在线净化装置可保障碳捕集装置长期稳定运行超2万小时，延长吸收剂寿命、恢复CO₂设计产量；优化混合胺吸收剂与复合节能工艺，燃气工况碳捕集系统再生热耗降至2.85GJ/tCO₂以下；依托自主开发设计的二氧化碳加氢制甲醇中试实证平台攻克加氢制甲醇技术，CO₂总转化率与甲醇选择性均超98%。三项核心技术破解行业痛点，为电力行业低碳转型、绿电转化及绿色甲醇产业发展提供强力支撑，引领行业节能可持续发展。

Under the "dual carbon" goals, Yuanda Environmental Protection established a dedicated task force in 2025 to advance "CCUS and CO₂ hydrogenation to methanol," aiming to build a CCUS industrial chain with distinct characteristics tailored to the power sector. The Company achieved breakthroughs in amine solution online purification technology and developed an integrated purification system. The newly developed system enables carbon capture facilities to operate stably for over 20,000 hours, extends absorbent service life, and restores CO₂ capture capacity to design levels. In parallel, optimization of blended amine absorbents and integrated energy-saving processes reduced regeneration energy consumption of carbon capture systems under gas-fired conditions to below 2.85 GJ/tCO₂. Leveraging a self-developed pilot-scale demonstration platform for CO₂ hydrogenation to methanol, the Company also achieved key technological breakthroughs in methanol synthesis, with both overall CO₂ conversion rate and methanol selectivity exceeding 98%. These three core technologies address critical industry bottlenecks, providing strong support for low-carbon transition in the power sector, green electricity conversion, and the development of the green methanol industry, while promoting energy efficiency and sustainable development across the industry.



• 二氧化碳加氢制甲醇中试装置
CO₂ Hydrogenation-to-Methanol Pilot Plant



远达环保碳捕集与利用技术亮相第三届大国工匠创新交流大会暨大国工匠论坛

Yuanda Environmental Protection Showcases Carbon Capture and Utilization Technologies at the 3rd Great Craftsman Innovation Exchange Conference and Great Craftsman Forum



案例
CASE

远达环保：打造光伏组件回收利用示范线

Yuanda Environmental Protection: Photovoltaic Module Recycling Demonstration Line

远达环保自主研发光伏组件工业化回收技术示范线，创新采用“低能耗光曝—机械分离”一体化工艺，90秒内即可完成单块组件拆解，能耗低于2千瓦时/块（较传统工艺节耗30%—40%），晶硅片、铝框等材料分类回收率超90%，全流程无二次污染。依托模块化移动工厂设计，建成国内首套年产能1万吨的可移动式光曝法光伏组件拆解示范线，可快速部署适配偏远、分散场景，降低运输成本与二次污染风险，树立“就近处理、全组分高值回收”的行业循环经济标杆。

Yuanda Environmental Protection has independently developed an industrial-scale demonstration line for photovoltaic (PV) module recycling, adopting an integrated process combining low-energy photothermal treatment and mechanical separation. The system can dismantle a single module within 90 seconds, with energy consumption below 2 kWh per module (30%—40% lower than conventional processes). The recovery rate of key materials, including crystalline silicon wafers and aluminum frames, exceeds 90%, with no secondary pollution throughout the process. Leveraging a modular mobile factory design, the Company has established China's first mobile PV module recycling demonstration line based on this technology, with an annual processing capacity of 10,000 tons. The system can be rapidly deployed in remote and dispersed locations, reducing transportation costs and minimizing the risk of secondary pollution. It establishes an industry benchmark for a circular economy model characterized by "localized processing and high-value recovery of all components".



光伏回收示范拆解线

Photovoltaic Module Recycling Demonstration Line

风险机遇管理

Risk and Opportunity Management

影响因素 Influencing Factors

核心技术研发与应用：在智慧能源、新型储能等清洁能源关键领域的技术先进性，直接决定公司的市场竞争力与长期发展潜力。

Core Technology Development and Application: Technological advancement in key clean energy fields such as smart energy and emerging energy storage directly determines the Company's market competitiveness and long-term growth potential.

行业竞争与商业模式：清洁能源行业技术迭代迅速，公司正从单一项目开发向“智慧能源解决方案”与“综合能源服务”提供商转型。

Industry Competition and Business Model: Amid rapid technological iteration in the clean energy sector, the Company is transitioning from a single-project developer to a provider of smart energy solutions and integrated energy services.

资源整合与协同能力：公司的技术发展深度依赖于内部产业协同、外部科研合作以及承担国家重大科技项目的能力。

Resource Integration and Synergy: Technological development is highly dependent on internal industrial coordination, external research collaboration, and the capability to undertake national key scientific and technological projects.

相关风险 Related Risks

技术转化与市场风险：前沿技术（如新型储能）从示范到大规模商业化存在不确定性，经济性需市场验证；业务增长依赖清洁能源装机规模与电力市场改革的进程。

Technology Commercialization and Market Risks: Uncertainty remains in scaling frontier technologies (e.g., emerging energy storage) from demonstration to large-scale commercialization, with economic viability subject to market validation; business growth depends on the expansion of clean energy installed capacity and the progress of power market reforms.

财务与投资风险：前沿科研项目资本开支大，回报周期长，对公司短期财务状况构成压力。

Financial and Investment Risks: Frontier R&D projects require substantial capital expenditure and have long payback periods, which may exert pressure on the Company's short-term financial performance.

技术实施与迭代风险：若科技创新成果转化滞后，在快速发展的市场中可能丧失技术先发优势，导致竞争力下降。

Technology Implementation and Iteration Risks: Delays in the commercialization of technological innovations may result in the loss of first-mover advantage in a rapidly evolving market, thereby weakening competitiveness.

潜在机遇 Potential Opportunities

政策与战略机遇：公司业务深度契合“双碳”目标与新型电力系统建设国家战略，易获政策支持；作为集团水电产业发展平台，能高效协同内外部资源，锁定优质市场。

Policy and Strategic Opportunities: The Company's business is closely aligned with national strategies such as the "dual carbon" goals and the development of a new-type power system, enabling access to policy support; as the Group's hydropower development platform, it can efficiently integrate internal and external resources and capture attractive market opportunities.

产业链与价值提升机遇：可通过风光水电一体化与综合能源服务延伸价值链；探索清洁能源设备循环利用，构建绿色产业链，提升ESG表现并吸引绿色投资。

Value Chain and Industry Opportunities: The Company can extend its value chain through the integrated development of wind, solar, and hydropower, and through integrated energy services; it can further advance the circular utilization of clean energy equipment to build a green value chain, enhance ESG performance, and attract green investment.

绩效与目标 Performance & Targets

科技创新是电投水电驱动产业升级、培育核心竞争力的首要动力。我们致力于构建高效的研发体系，持续加大创新投入，以关键技术的突破与转化，赋能水力发电及流域水电站新能源一体化等清洁能源与环保产业高质量发展，为公司的长远发展注入源源不断的智慧动能。未来，公司将持续强化科技创新战略引领，强化攻关目标，聚焦智慧能源、新型储能、环保新材料等前沿领域，力争在关键核心技术上取得新突破；完善科技成果转化机制，推动更多创新成果在运营提效、降本增收、新产业孵化中实现规模化应用；进一步拓展产学研合作的广度与深度，积极承担国家及集团重大科研任务，将公司的研发平台打造为行业技术策源地与高端人才聚集地，以科技创新的强大引擎驱动公司迈向世界一流。

Technological innovation serves as the primary driver for SPIC Hydropower Co., Ltd. to advance industrial upgrading and cultivate core competitiveness. The Company is building an efficient R&D system and continuously increasing investment in innovation, leveraging breakthroughs in and commercialization of key technologies to support the high-quality development of clean energy and environmental protection industries, including hydropower and integrated development of hydropower with new energy at the basin level. Looking ahead, the Company will further strengthen the strategic guidance of technological innovation, refine key research priorities, and focus on frontier areas such as smart energy, advanced energy storage, and new environmental materials, aiming to achieve new breakthroughs in critical core technologies. It will also enhance mechanisms for translating scientific and technological achievements into practical applications, accelerating the large-scale deployment of innovations in operational efficiency improvement, cost reduction, revenue enhancement, and new business incubation. In addition, the Company will continue to expand the breadth and depth of industry-academia-research collaboration, actively undertake major national and Group-level research projects, and further develop its R&D platforms into sources of technological innovation and hubs for high-end talent, thereby supporting its advancement toward becoming a world-class enterprise.

数读·2025 Data Insights-2025

创新投入与队伍：公司持续夯实创新根基，全年科技创新投入达**2.15**亿元；拥有一支规模达**369**人的专业研发团队，并通过**151**次科研培训活动，持续提升团队专业能力。

Innovation Investment and Talent: The Company reported total investment in technological innovation of RMB **215** million for the year. It maintained a professional R&D team of **369** personnel and conducted **151** research training sessions to enhance team capabilities.

研发产出与成果：报告期内，公司积极开展**168**个科技创新项目，研发活动硕果累累：截至2025年底，累计获得授权专利**987**件；牵头或参与制定技术标准**9**件；获得各类科技创新奖励**20**项，其中包括省部级及以上奖项**1**项，行业级奖项**14**项。

R&D Output and Achievements: During the reporting period, the Company carried out **168** technology innovation projects. By the end of 2025, a total of **987** patents had been granted. The Company led or participated in the development of **9** technical standards and received **20** science and technology awards, including **1** at the provincial or ministerial level or above and **14** at the industry level.

平台建设与合作：公司报告期内新增**3**个省级科技研发平台，并与**17**所高校及科研机构建立了紧密的产学研合作关系，构建了开放协同的创新生态。

Platform Development and Collaboration: The Company added **3** provincial-level R&D platforms during the reporting period and established collaborative relationships with **17** universities and research institutions, forming an open and coordinated innovation ecosystem.



合力协同

Collaborative Synergy

筑生态固根基

Building a Resilient Ecosystem

推进生态文明建设，实现人与自然和谐共生，是中央企业肩负的时代重任。电投水电坚定不移贯彻绿色发展理念，以“专业化、标准化、集约化、数字化、国际化”为实践纲领，致力于构建运营卓越、环境友好、本质安全的现代企业生态，持续筑牢高质量发展的绿色根基，为守护绿水青山、建设美丽中国贡献坚实力量。

Advancing ecological civilization and achieving harmonious coexistence between humans and nature is a core responsibility of central enterprises in the current era. SPIC Hydropower Co., Ltd. is committed to the principle of green development and, guided by the practice framework of "specialization, standardization, intensification, digitalization, and internationalization," strives to build a modern corporate ecosystem that is operationally excellent, environmentally friendly, and inherently safe. The Company continues to strengthen the green foundation for high-quality development, contributing solidly to the protection of clear waters and green mountains and to the construction of a beautiful China.

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应对气候变化

Responding to Climate Change

应对气候变化是关乎人类永续发展的时代命题，也是中央企业服务国家“双碳”目标、践行生态文明建设的必答题。电投水电心怀“国之大事”，将气候治理作为可持续、高质量发展的核心抓手，深度融入生产运营全链条，以更高站位、更实举措筑牢绿色低碳发展根基。

Addressing climate change is not only a pivotal challenge for the sustainable development of humanity but also a fundamental requirement for central enterprises in serving the national “dual carbon” goals and implementing ecological civilization. SPIC Hydropower Co., Ltd., guided by a sense of national mission, regards climate governance as a core lever for sustainable, high-quality development, integrating it deeply into the full value chain of production and operation, and building a solid foundation for green, low-carbon development through elevated perspectives and practical measures.

完善治理架构 Strengthening Governance Framework

电投水电将应对气候变化深度嵌入公司治理内核，构建了系统完备、运行有效的治理架构。

在决策层，董事会承担定战略、作决策、防风险的最终责任，负责审定公司应对气候变化的有关事项；党组织发挥把方向、管大局、保落实的领导作用，确保相关事项与国家部署同频共振。

在管理层，经理层负责具体谋划与执行，组织制定并实施减排路径与风险管理方案。

在执行层，综合管理部、规划与发展部、财务与资本部、生产技术部、工程管理部、安全环保部等各职能部门，依据权责清单将气候因素融入战略规划、投资决策、生产运营、工程建设与资本运作全流程；平台所属单位作为经营责任主体，具体落实提升能效、生态保护与防灾减灾等各项措施。

此外，公司以涵盖8大板块的全方位制度框架为坚实保障，旨在通过科学的董事会授权机制、权责清单及相关管理制度，明确各层级权限与界面，确保应对行动规范、协同、高效。

SPIC Hydropower Co., Ltd. has embedded climate change response deeply into its governance structure, establishing a systematic and operationally effective framework.

At the decision-making level, the Board of Directors holds ultimate responsibility for setting strategy, making decisions, and managing risks, and is responsible for reviewing and approving matters related to the Company's climate change response. The Party organization exercises leadership by setting the direction, overseeing the overall situation, and ensuring implementation, so that relevant actions resonate with national policies.

At the management level, the executive team is responsible for detailed planning and execution, organizing the formulation and implementation of emission reduction pathways and risk management plans.

At the execution level, functional departments—including General Management, Planning and Development, Finance and Capital, Production and Technology, Engineering Management, and Safety and Environmental Protection—integrate climate factors into strategic planning, investment decisions, operations, engineering projects, and capital management according to the responsibility matrix. Platform subsidiaries, as operational entities, implement measures to improve energy efficiency, protect ecosystems, and strengthen disaster prevention and mitigation.

In addition, the Company relies on a comprehensive framework covering eight key areas. Through a structured Board authorization mechanism, a clear responsibility matrix, and relevant management systems, authority and interfaces across all levels are clarified, ensuring that climate action is standardized, coordinated, and effective.

夯实战略规划 Strengthening Strategic Planning

电投水电将应对气候变化视为核心战略机遇，其行动深度融入国家电投集团“建设世界一流清洁能源企业”的愿景和公司“专业化、标准化、集约化、数字化、国际化”的发展方向，具体聚焦三大战略支柱：

SPIC Hydropower Co., Ltd. regards addressing climate change as a core strategic opportunity. Its initiatives are closely aligned with SPIC's vision of “building a world-class clean energy company” and the Company's development principles of “specialization, standardization, intensification, digitalization, and internationalization,” with a focus on three strategic pillars:

● 筑牢能源安全与气候韧性防线

Fortifying the Energy Security and Climate Resilience Frontline

立足水电主业，将应对极端气候、保障能源稳定供应置于首位。我们深耕流域特性，如五凌电力成功应对三板溪、托口建库以来最大洪水，防洪度汛工作获得高度肯定；长洲水电公司依托长洲水利枢纽，在发电、防汛、压咸补淡等方面发挥综合效益。公司系统提升本质安全，发布实施水电、风电、光伏本质安全评价技术标准，建设智能安防可视化平台，并通过全覆盖的安全培训与应急演练，构建“人、物、环、管”一体化的风险防控体系，显著增强资产在气候多变环境下的稳健性。

Building on its hydropower business, the Company prioritizes responding to extreme weather and ensuring stable energy supply. It leverages basin-specific characteristics—for example, Wuling Power successfully managed the largest flood since the establishment of the Sanbanxi and Tuokou reservoirs, receiving high recognition for its flood control and water management efforts. Changzhou Hydropower Company, relying on the Changzhou Water Conservancy Hub, has delivered comprehensive benefits in power generation, flood prevention, and salinity control. The Company systematically enhances intrinsic safety, issuing and implementing technical standards for hydropower, wind, and solar power intrinsic safety evaluation, and developing an intelligent security visualization platform. Through comprehensive safety training and emergency drills, it has established an integrated risk prevention and control system encompassing personnel, equipment, environment, and management, significantly strengthening asset resilience in a variable climate environment.



● 五凌电力托口电站防洪度汛

Wuling Power Tuokou Hydropower Station Flood Control and Reservoir Operation

案例
CASE

五凌电力：电力“满格”护航两会
Wuling Power: "Full-Power" Operations to Support the Two Sessions

2025年全国两会期间，五凌电力圆满完成保电任务。会前公司健全保供组织与工作机制，层层压实责任，集控中心24小时值班，水电远程开停机323台次成功率100%；五强溪电厂以智能巡检机器人实现故障精准预判。两会期间，五凌电力实现发电量1.14亿千瓦时，以“技术+”“协同+”“责任+”构建能源供应体系。

During the 2025 National Two Sessions, Wuling Power successfully fulfilled all power supply assurance tasks. Prior to the sessions, the Company improved its power security organization and work mechanisms, reinforced responsibilities at every level, and maintained 24-hour staffing at the centralized control center. Hydropower units were remotely started and stopped 323 times with a 100% success rate, while Wuqiangxi Hydropower Plant used intelligent inspection robots to accurately predict equipment faults. During the sessions, Wuling Power generated 114 million kWh, building an energy supply system through "Technology+," "Collaboration+," and "Responsibility+ approaches.



● 集控中心全面部署
Centralized Control Center Full Deployment



● 五强溪电厂智能巡检机器人
Wuqiangxi Hydropower Plant Intelligent Inspection Robots

• 扩大绿色能源供给与生态价值

Expanding Green Energy Supply and Ecological Value

坚定不移地做大做强水力发电及流域水电站新能源一体化等清洁能源基本盘。截至2025年底，管理资产已实现100%为清洁能源。我们不仅是“西电东送”的主通道支持电源点，更积极探索融合发展新模式；围绕存量水电集约开发周边新能源，推动“水风光一体化”协同发展。同时，公司积极参与绿色市场，五凌电力在绿电、绿证交易区域领先，年售电量超百亿千瓦时，将绿色电力转化为实实在在的环境价值。

The Company steadfastly strengthens its core clean energy portfolio, encompassing hydropower and integrated new energy development at river-basin hydropower stations. By the end of 2025, all managed assets were clean energy. The Company not only serves as a key power source for the West-to-East Electricity Transmission main corridor, but also actively explores new integrated development models. It promotes intensive development of surrounding new energy resources at existing hydropower sites, advancing coordinated hydro-wind-solar integration. At the same time, the Company actively participates in the green energy market: Wuling Power leads the region in renewable electricity and green certificate trading, with annual electricity sales exceeding 10 billion kWh, effectively converting green power into tangible environmental value.

风险机遇管理 Risk and Opportunity Management

风险和机遇类别 Risk/Opportunity Category	风险描述 Risk Description	应对措施 Mitigation Measures
急性风险-洪水 Acute Risk - Floods	愈发频繁的洪水灾害可能会损坏主要生产基地的建筑物、工厂、设施和设备 Increasingly frequent floods may damage buildings, factories, facilities, and equipment at key production sites.	投入防洪设备，编制完善防洪应急预案； 加强对建筑物、生产设备、电路线缆的巡察工作。 Install flood control equipment and develop comprehensive flood emergency response plans; strengthen inspections of buildings, production equipment, and power lines.
物理风险 Physical Risks	慢性风险-降水模式变化 Chronic risk - Changes in precipitation patterns	暴雨频繁的增加可能导致停工停产、产能下降 The increasing frequency of heavy rainfall may cause work stoppages, production interruptions, and reduced capacity.
	慢性风险-水资源短缺 Chronic Risk - Water Scarcity	主要生产基地的水资源紧张可能导致市政供水价格上涨 Water scarcity at major production sites may lead to increased municipal water supply costs.
		提高经营韧性，减少极端天气对生产及交货的影响，提高海外成品仓物流灵活调度能力； 成立应急管理组织，编制气候变化应急预案。 Enhance operational resilience to minimize the impact of extreme weather on production and deliveries; improve logistical flexibility for overseas finished goods warehouses. Establish an emergency management organization and develop a climate change contingency plan.
		开展节水行动，实施节水改造，深耕替代水源项目。 Implement water-saving initiatives, carry out water-efficiency retrofits, and develop alternative water source projects.

风险机遇管理

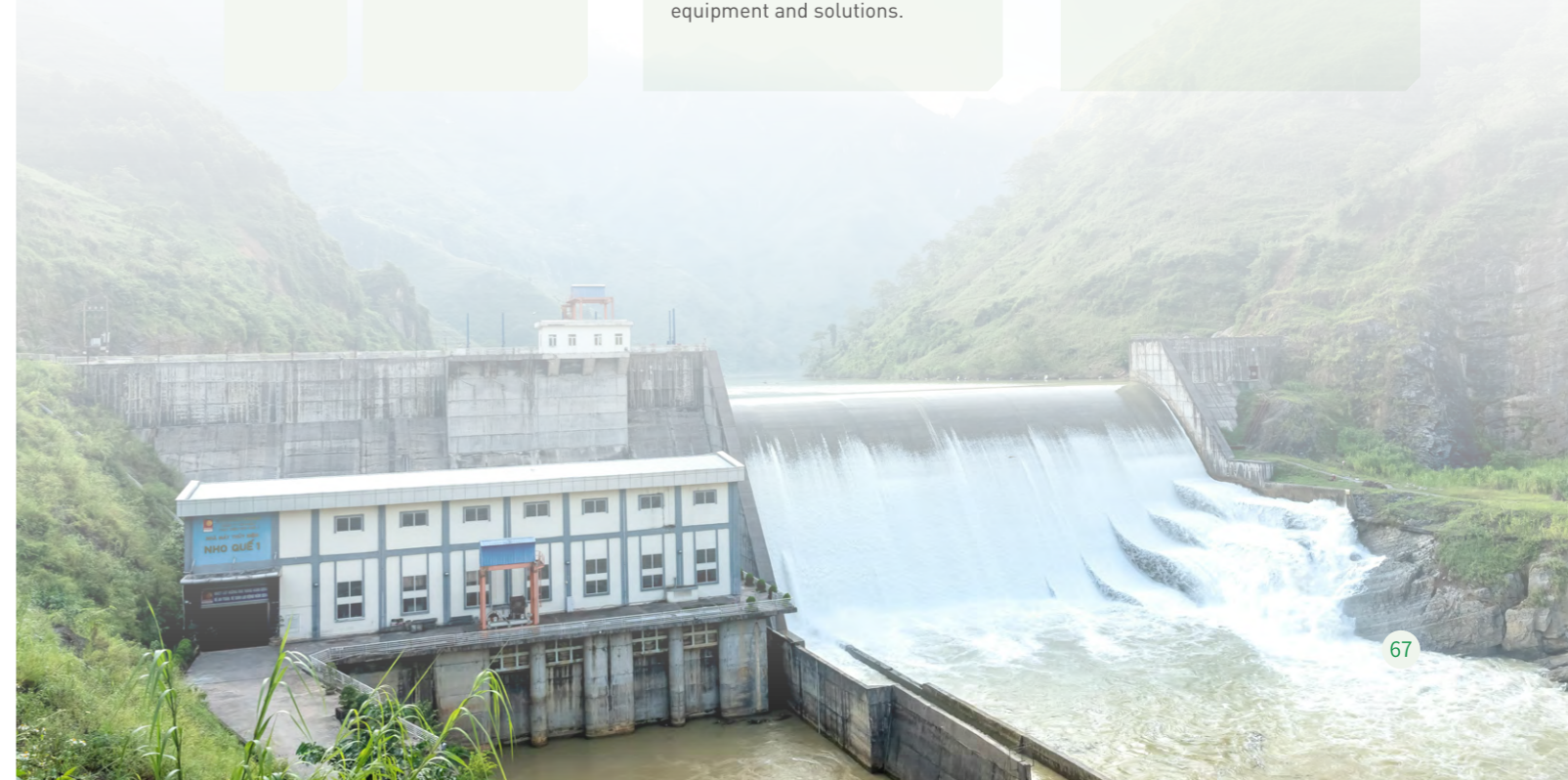
Risk and Opportunity Management

风险和机遇类别 Risk/Opportunity Category	风险描述 Risk Description	应对措施 Mitigation Measures
转型 风险 Transition Risks	政策法规风险- 碳市场与碳定价 Policy and Regulatory Risk – Carbon Market and Carbon Pricing	发电行业纳入国内碳交易市场提升电价 Inclusion of the power generation sector in the domestic carbon trading market may increase electricity costs. 加强能源管理，提升能源利用效率，降低电单耗；推动CO ₂ 纳入配额管理，提前适应碳市场机制 Strengthen energy management, improve energy efficiency, reduce electricity consumption per unit of output; promote the inclusion of CO ₂ in quota management to proactively adapt to carbon market mechanisms.
	市场风险- 容量电价 Market Risk – Capacity-Based Electricity Pricing	明确我国建立煤电容量电价机制，将现行煤电单一制电价调整为两部制电价 China is establishing a capacity-based pricing mechanism for coal-fired power, adjusting the current single-tariff system to a two-part tariff. 积极跟进不同地区制定的容量电价政策；积极争取因环保不达标不能享受容量电价机制的煤电机组特许经营项目 Actively monitor capacity pricing policies in different regions; proactively pursue concessions for coal-fired units that are ineligible for capacity payments due to environmental non-compliance.
	声誉风险- 利益相关方期望 Reputational Risk – Stakeholder Expectations	日益严格的环境表现披露要求增加维持或提升声誉的相关合规成本 Increasingly stringent requirements for environmental performance disclosure raise compliance costs to maintain or enhance reputation. 监测各地市场监管要求和披露要求，开展合规工作；开展产品碳足迹测算和认证。 Monitor local market regulations and disclosure requirements and carry out compliance work; conduct carbon footprint calculations and certification for products.

风险机遇管理

Risk and Opportunity Management

风险和机遇类别 Risk/Opportunity Category	风险描述 Risk Description	应对措施 Mitigation Measures
气候 机遇 Climate Op- portunities	产品/服务机遇- 绿色产品赛道 Product/Service Opportunity – Green Solutions Track	“绿电+绿氢”的解决方案带来新的业务增长机会点 “Green electricity + green hydrogen” solutions present new business growth opportunities. 不断拓展应用场景，探索多行业的解决方案；依托碳捕集技术优势，实现碳资源商业化利用；加大对氢能的技术研发。 Continuously expand application scenarios and explore solutions across multiple industries; leverage carbon capture technology to commercialize carbon resources; increase investment in hydrogen technology R&D.
	市场机遇- 电气化 Market Opportunity – Electrification	各行业的电气化转型及绿色电力消费需求提高增加了对可再生能源装备和解决方案的需求 The electrification transition across industries and growing demand for green electricity increase the need for renewable energy equipment and solutions. 持续监测市场需求，调整产能；加大对可再生能源解决方案的研发投入。 Continuously monitor market demand and adjust capacity; increase R&D investment in renewable energy solutions.



绩效与目标 Performance & Targets

电投水电积极应对气候变化，将绿色低碳发展纳入核心战略。通过优化能源结构、提升清洁能源比重、强化碳资产管理及推动运营数字化智能化，我们致力于减少自身碳足迹，提升气候韧性。2025年，公司应对气候变化工作取得积极进展。未来，我们将持续完善气候变化治理与风险管理体系，设定并践行更积极的减排目标，深入参与碳市场建设，探索全生命周期碳足迹管理，致力于成为低碳转型的引领者。

SPIC Hydropower Co., Ltd. actively responds to climate change by integrating green and low-carbon development into its core strategy. Through optimizing its energy structure, increasing the share of clean energy, strengthening carbon asset management, and promoting digitalized and intelligent operations, the Company is committed to reducing its carbon footprint and enhancing climate resilience. In 2025, significant progress was made in advancing climate change initiatives. Looking ahead, the Company will continue to refine its climate governance and risk management systems, set and pursue more ambitious emission reduction targets, actively participate in carbon market development, and explore full life-cycle carbon footprint management, striving to become a leader in the low-carbon transition.

数读·2025 Data Insights·2025

清洁能源结构：公司发电类资产中清洁能源装机占比**100%**。

Clean Energy Portfolio: 100% of the Company's power generation assets are installed with clean energy capacity.

运营能效提升：五凌电力通过优化调度与精细化管理，全年实现水能利用率提升约**8%**；生产类费用成本较年度目标节约数千万元。

Operational Efficiency Improvements: Wuling Power enhanced hydropower utilization by approximately 8% over the year through optimized scheduling and refined management. Production-related costs were reduced by several tens of millions of yuan compared with the annual targets, reflecting significant efficiency gains.

生态环保行动：五凌电力和长洲水电成功应对多次流域性洪水考验，防洪度汛工作获得肯定；远达环保支持集团多家电厂实现固体废弃物合规处置率**100%**。

Environmental and Ecological Initiatives: Wuling Power and Changzhou Hydropower successfully managed multiple basin-wide floods, earning recognition for their flood control and emergency response efforts; Yuanda Environmental Protection supported several Group power plants in achieving 100% compliance in solid waste disposal.

完善环境管理

Enhancing Environmental Management

电投水电始终坚守生态环保责任，严格遵循国家及地方生态环境保护相关法律法规，构建全方位、全流程的环境管理体系，有效管控环境风险。

SPIC Hydropower Co., Ltd. consistently upholds its ecological and environmental responsibilities. The Company strictly complies with national and local environmental protection laws and regulations, and has established a comprehensive, end-to-end environmental management system to effectively control environmental risks.

责任行动·2025 Actions & Responsibilities · 2025

五凌电力制定环境保护工作规定、生态环保责任制、奖惩、监督检查、碳排放管理、建设项目环境保护、水土保持、文物保护等8项生态环境管理制度。

Wuling Power has established eight environmental management systems covering environmental protection work regulations, ecological and environmental responsibilities, rewards and penalties, supervision and inspection, carbon emission management, environmental protection for construction projects, soil and water conservation, and cultural heritage protection.

远达环保通过党委会专题研究生态环境保护相关议题，压实各单位环保管理责任，常态化开展生态环保自查自纠工作提升环境管理效能。

Yuanda Environmental Protection, through specialized discussions by its Party Committee, strengthens the environmental management responsibilities of all units and routinely conducts self-inspections and corrective actions to enhance environmental management effectiveness.

长洲水电修订完善《环境保护管理办法》《生态环保奖惩实施办法》《环境保护督查及考核实施办法》《2025年生态环保责任制》等制度。

Changzhou Hydropower has revised and improved its management documents, including the *Environmental Protection Management Measures, Implementation Measures for Ecological and Environmental Rewards and Penalties, Implementation Measures for Environmental Supervision and Assessment*, and the 2025 Ecological and Environmental Responsibility System.



数读·2025 Data Insights-2025

生态环保投入**56,721.30**万元

Environmental protection investment: RMB **567.213** million

绿色低碳转型投入**5,843.66**万元

Green and low-carbon transition investment: RMB **58,436,600**

环保培训次数**800**次，参与人次**15,355**人次，培训小时数**3,924**小时

Environmental training: **800** sessions, **15,355** participants, **3,924** training hours

环保隐患排查**360**次，共整改**1,303**项问题

Environmental hazard inspections: **360** times, with a total of **1,303** issues rectified



2025年6月，远达环保召开生态环保问题“边督边改”整改推进专题会议，从严从实开展问题闭环整改，确保问题清零

In June 2025, Yuanda Environmental Protection convened a special meeting on the “supervise-and-correct” initiative for ecological and environmental issues, rigorously implementing closed-loop rectification to ensure all identified problems were fully resolved.

推行绿色运营

Promoting Green Operations

电投水电坚持环境友好导向，将绿色发展理念深度融入生产经营、运营管理全流程，力求在经营中兼顾环境责任与发展效益。

SPIC Hydropower Co., Ltd. adheres to an environmentally friendly approach, integrating the concept of green development deeply into the entire production, operation, and management process, striving to balance environmental responsibility with business performance.

严格污染排放 Strict Pollution Control

电投水电聚焦污染防治重点领域，所属远达环保结合自身环保业务优势，持续优化环境治理举措，严格管控生产经营过程中的污染物排放，确保各项排放指标符合国家及地方标准；五凌电力组织各单位制定年度危险废弃物管理计划，委托有资质单位对各单位产生的危险废弃物进行集中合法转运处置；长洲水电建立专门的封闭式危险废弃物暂存库，库房划分为3个储存区进行分类管理，对危险废弃物（废铅蓄电池、废油漆桶、废油及其包装物等）及其容器、包装物按规定设置危险废弃物识别标志，严格控制各类排放。

The Company focuses on key areas of pollution prevention. Leveraging the environmental protection expertise of its subsidiary Yuanda Environmental Protection, it continuously optimizes environmental governance measures and strictly controls pollutant emissions throughout production and operations, ensuring compliance with national and local standards. Wuling Power organizes its units to develop annual hazardous waste management plans and commissions qualified organizations to centrally and legally transport and dispose of generated hazardous waste. Changzhou Hydropower has established a dedicated closed hazardous waste storage facility, divided into three storage zones for classification management. Hazardous wastes—including waste lead-acid batteries, paint drums, waste oil, and their packaging—are labeled according to regulations, with strict controls over all types of emissions.

数读·2025 Data Insights-2025

废气污染物排放总量**9.24**吨

Total air pollutant emissions: **9.24** tons

废水污染物排放总量**564,908.89**吨

Total wastewater pollutant discharge: **564,908.89** tons

所产生有害废弃物总量**2,806.10**吨，均全部处理处置

Total hazardous waste generated: **2,806.10** tons, all treated and disposed of

固体废弃物处置总量**219.93**万吨

Total solid waste disposed: **2.1993** million tons



废水 Wastewater

各业务板块针对不同类型废水构建了“分类处理+达标排放”的治理体系。

Each business segment has established a “classified treatment + compliant discharge” system tailored to different types of wastewater.

- ▶ **火电厂脱硫脱硝业务**废水经沉淀、絮凝反应、旋流澄清等工艺处理，净水需满足GB8978-1996一级标准后复用或规范排放，不达标则循环处理；

Flue gas desulfurization and denitrification at thermal power plants: Wastewater is treated through sedimentation, flocculation, and cyclone clarification processes, with the treated water required to meet the GB 8978-1996 Class I Standard for reuse or compliant discharge; non-compliant water is recirculated for further treatment.

- ▶ **污水处理业务**采用“预处理+生化处理+深度处理”工艺，经多环节处理及紫外消毒后，外排至地方河流；

Sewage treatment operations: Employ the “pre-treatment + biochemical treatment + advanced treatment” process, followed by multi-step processing and UV disinfection, before discharging into local rivers.

- ▶ **催化剂业务**废水通过“絮凝+沉淀+生物池+活性炭吸附”工艺处理，达到GB8978-1996三级标准后排入园区污水管网。

Catalyst operations: Wastewater is treated through the “flocculation + sedimentation + biological pool + activated carbon adsorption” process and discharged into the park’s sewage network after meeting the GB 8978-1996 Class III Standard.



废气 Waste Gas

废气治理聚焦多污染物协同控制，实现全流程净化排放。

Air emissions are managed through coordinated multi-pollutant control to ensure full-process purification.

- ▶ **火电厂**采用石灰石—石膏湿法脱硫工艺和SCR尿素水解法脱硝工艺；

Thermal power plants: Limestone-gypsum wet flue gas desulfurization and SCR urea hydrolysis denitrification processes are used.

- ▶ **污水处理业务**对生化处理及污泥处理产生的恶臭气体，经密闭收集后通过催化氧化设备处理再排放；

Sewage treatment operations: Odorous gases from biochemical and sludge treatment are collected in sealed systems and treated via catalytic oxidation before discharge.

- ▶ **催化剂业务**针对粉尘、氨气等污染物，分别采用除尘器、氨洗涤塔处理，均通过15米高排气筒达标排放。

Catalyst operations: Dust and ammonia are controlled using dust collectors and ammonia scrubbing towers, with treated emissions released through 15-meter-high exhaust stacks in compliance with standards.



固体废弃物 Solid Waste

固废治理坚持“资源化利用+规范处置”相结合的原则。

Solid waste management follows a “resource utilization + compliant disposal” approach.

- ▶ **火电厂**脱硫副产品石膏储存待外运综合利用；

Desulfurization by-product gypsum from thermal power plants is stored on-site pending offsite comprehensive utilization.

- ▶ **污水处理业务**的栅渣定期清运，剩余污泥脱水后委外处置，无机砂粒资源化利用或安全处置；

Screenings from the sewage treatment business are regularly removed, and the remaining sludge is dewatered and sent offsite for disposal; inorganic sand is either reused or safely disposed of.

- ▶ **催化剂业务**的边角料及不合格品研磨后回收复用，废旧包装材料、废金属边框分类回收，除尘灰、硫酸铵委外规范处置。

Scraps and nonconforming products from the catalyst business are ground and recycled; waste packaging materials and metal frames are separately collected for recycling, while dust and ammonium sulfate are sent offsite for compliant disposal.

- ▶ 强化现场管理，规范固废临时堆放流程，避免因堆放不当产生扬尘污染，推动一般工业固废实现减量化、资源化。

On-site management is strengthened, and temporary storage procedures for solid waste are standardized to prevent dust pollution from improper stacking, while promoting waste reduction and resource recovery for general industrial solid waste.



危险废弃物 Hazardous Waste

建立全流程闭环管控体系，确保危险废弃物合规处置。危险废弃物类型涵盖废催化剂、废润滑油、废矿物油、含重金属污泥、废弃药剂包装等，各业务板块均设置专用危险废弃物储存区域（或暂存间），实行分类收集、台账管理。所有危险废弃物均委托具备相应资质的单位转运处置，全过程符合危险废弃物管理相关规定。

A full-process closed-loop management system has been established to ensure compliant disposal of hazardous waste. Hazardous waste types include spent catalysts, used lubricating oil, waste mineral oil, heavy-metal-containing sludge, and discarded chemical packaging. Each business unit has designated hazardous waste storage areas (or temporary storage rooms) for classified collection and ledger-based management. All hazardous waste is entrusted to qualified service providers for transport and disposal, with the entire process in full compliance with relevant hazardous waste management regulations.



远达环保自主研发的旋流式气液传质构件在淮南平圩发电四期7号百万千瓦机组烟气脱硫项目中成功“上岗”，标志着该技术在大型燃煤机组高效清洁排放领域实现重要突破

Yuanda Environmental Protection's self-developed cyclone gas-liquid mass transfer module was successfully commissioned in the flue gas desulfurization project of Unit 7, Phase IV, Huainan Pingwei Power Plant (1 million kW), marking a significant breakthrough for this technology in achieving high-efficiency, clean emissions from large coal-fired units.

提升资源效率 Enhancing Resource Efficiency

电投水电坚守集约高效、循环共生的资源利用理念，所属远达环保构建光伏组件、废旧电池等废弃物回收、处理、再造闭环体系，实现资源价值再生；推行精细物料管理，优化采购、存储、消耗全流程管控，精准匹配供需、减少物料损耗，提升资源利用效率。

SPIC Hydropower Co., Ltd. adheres to the principles of intensive, efficient, and circular resource utilization. Its subsidiary, Yuanda Environmental Protection, has established a closed-loop system for the recycling, treatment, and remanufacturing of wastes such as photovoltaic modules and spent batteries, realizing the regeneration of resource value. The Company implements refined material management, optimizing the full processes of procurement, storage, and consumption, precisely matching supply with demand, reducing material losses, and improving overall resource efficiency.

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总耗水量 **12125559.10** 吨

Total water consumption: 12125559.10 tons

循环水量 **11895534.19** 吨

Recycled water volume: 11895534.19 tons

公司本部总用电量 **1.030.845** 千瓦时

Total electricity consumption at Company headquarters: 1,030,845 kWh

能源消耗总量 **11552.67** 吨标煤

Total energy consumption: 11552.67 tons of standard coal equivalent (tce)

所产生发电副产品总量 **172.51** 万吨，发电副产品资源循环利用量 **174.91** 万吨（包含以前年度存量副产品循环利用）

Total power generation by-products: 1.7251 million tons; recycled power generation by-products: 1.7491 million tons (including recycled stock from previous years).

关于远达环保所属水务公司下属公司 2025 年度受到行政处罚的情况说明

Administrative Penalties for Subsidiaries of Yuanda Environmental Protection's Water Services Companies in 2025

2025年，远达环保所属水务公司下属两家企业共收到3项环保行政处罚，累计55万元：昌图远达水务因2025年1月现场检查发现除臭风机未运行，被罚款20万元；凌源远达水务因2024年12月和2025年6月两次排放数据超标，分别被罚15万元和20万元。

昌图公司问题源于运行人员巡检不到位，未能及时发现环保设施停运。整改措施包括修订规程、加强巡检考核，并将设备接入智慧水务平台，实现实时监控，此后未再出现类似问题。

凌源公司两次超标均因受高浓度进水冲击，超出系统处理能力。对此，公司联合环保部门开展污染源溯源，强化上游排污监管，同时加强内部运行管理和应急培训，有效提升了应对能力，整改后未再发生超标排放事件。

In 2025, two subsidiaries of Yuanda Environmental Protection's water services companies received a total of three environmental administrative penalties, with cumulative fines of RMB 550,000: Changtu Yuanda Water was fined RMB 200,000 after an on-site inspection in January 2025 found that the deodorizing fan was not in operation; Lingyuan Yuanda Water exceeded emission limits twice—once in December 2024 and again in June 2025—resulting in fines of RMB 150,000 and RMB 200,000, respectively.

The issue at Changtu was caused by insufficient inspection by operational personnel, who failed to detect the shutdown of environmental protection equipment in a timely manner. Corrective measures included revising operational procedures, strengthening inspection assessments, and integrating equipment into the intelligent water management platform for real-time monitoring. No similar issues occurred afterward.

The Lingyuan exceedances were due to high-concentration influent shocks that exceeded the system's treatment capacity. In response, the Company worked with environmental authorities to trace the pollution sources, strengthened upstream discharge supervision, and enhanced internal operational management and emergency training. Following these measures, no further exceedances occurred.



远达环保“光曝法”技术亮相2025中国风光设备循环利用产业年会，并作《远达环保对能源企业光伏回收及资源化利用路径探索》报告

Yuanda Environmental Protection's "Photolysis Exposure" technology was showcased at the 2025 China PV Equipment Recycling Industry Annual Conference, where it delivered a presentation titled *Yuanda Environmental Protection's Exploration of PV Recycling and Resource Utilization Pathways for Energy Enterprises*.

倡导低碳风尚 Advocating a Low-Carbon Lifestyle

倡导绿色风尚，培育生态文化，是电投水电作为央企上市公司的内在追求与责任延伸。我们深知，绿色发展不仅体现于主力电源点的清洁能源输出，更应融入企业运营的每一个细节、每一位员工的行为自觉。公司致力于将绿色低碳理念从生产端延伸至管理端与生活端，通过制度化约束、常态化倡导与全员化参与，系统构建节约适度、绿色环保的工作与生活方式，让生态文明建设在办公场所、出行选择、公益行动与意识提升中蔚然成风，凝聚起助力“双碳”目标、共建美丽中国的基层实践与广泛共识。

Promoting green practices and fostering an ecological culture are intrinsic pursuits and extended responsibilities of SPIC Hydropower Co., Ltd. as a central enterprise listed company. We recognize that green development is not only reflected in the clean energy output of our main power generation units, but should also be embedded in every detail of corporate operations and the conscious behaviors of every employee. The Company is committed to extending low-carbon concepts from production to management and daily life. Through institutionalized constraints, normalized advocacy, and all-staff participation, we systematically promote a culture of moderation, resource efficiency, and environmental protection. This enables ecological civilization to flourish in workplaces, commuting choices, public welfare initiatives, and awareness enhancement, building broad consensus and grassroots practices that support China's dual-carbon goals and contribute to a beautiful China.

数读·2025 Data Insights-2025

温室气体排放总量**34,285.33**吨二氧化碳当量，其中范围一排放量**1,594.82**吨二氧化碳当量，范围二排放量**32,690.50**吨二氧化碳当量

Total greenhouse gas (GHG) emissions: **34,285.33** tonnes CO₂ equivalent (CO₂e), of which Scope 1 emissions: **1,594.82** tons CO₂e, Scope 2 emissions: **32,690.50** tons CO₂e

参与绿证交易规模**1,241,916**张，参与绿证交易产生的收入**489.24**万元

Green certificate trading volume: **1,241,916** certificates, with revenue from green certificate trading: RMB **4,892,400**

参与绿色电力交易规模**171,630,318**千瓦时，参与绿色电力交易产生的收入**1,187.82**万元

Green power trading volume: **171,630,318** kWh, with revenue from green power trading: RMB **11,878,200**

绿色办公 Green Office Practices

- 五凌电力每日开展办公检查，关闭不需用设备设施电源，推行日常服务节能降耗，节假日大楼电梯、暖通等设备减半运行等举措。

Wuling Power conducts daily office inspections, powers down unused equipment, promotes energy-saving measures in routine services, and implements half-capacity operation of elevators, HVAC, and other equipment during holidays.

- 长洲水电强化办公用品采购管理，少用或不用一次性办公用品，提倡员工双面打印、黑白打印，减少硒鼓、墨盒等使用消耗。

Changzhou Hydropower strengthens office supplies procurement management, minimizes or eliminates single-use items, encourages double-sided and black-and-white printing, and reduces consumption of toner cartridges and ink.

绿色出行 Green Commuting

- 五凌电力发布低碳出行倡议，鼓励员工尽量选择使用公共交通工具及共享单车，从身边小事践行低碳生活。

Wuling Power issues low-carbon commuting initiatives, encouraging employees to prioritize public transportation and shared electric bikes, practicing low-carbon living through everyday actions.

- 长洲水电将厉行节约、反对浪费、绿色出行融入企业文化，将俭朴生活、节约水电、低碳出行、节约粮食等各种标识广泛运用于办公场所，加大宣传力度，在公司上下掀起人人讲节约、事事唯节俭、处处见行动、全员深度参与的热潮。

Changzhou Hydropower incorporates frugality, anti-waste, and green commuting into corporate culture. Posters and signage promoting thrifty living, energy and water saving, low-carbon commuting, and food conservation are widely used in office areas, fostering a company-wide culture where everyone participates, practices frugality in all things, and translates awareness into action.

环保活动
Environmental Activities

- 远达环保组织开展“映山红·环保爱心行”植树志愿服务活动，为群众讲解国家环保有关政策；组织团员青年积极参加“映山红·治沙公益林”公益志愿活动。

Yuanda Environmental Protection organizes volunteer tree-planting events under the “Yingshan-hong – Environmental Care” initiative, educating the public on national environmental policies. It also mobilizes youth league members to participate in the “Azalea – Sand Control Public Welfare Forest” volunteer program.

- 长洲水电积极响应梧州市生态环境局号召，开展“美丽中国我先行”主题环境宣传活动，通过设立咨询台、摆放宣传展板、发放环保手册等多样化形式开展环保宣传，通过向过往市民发放环保手册、讲解宣传展板，系统普及环保法律法规。

Changzhou Hydropower actively responds to calls from the Wuzhou Ecology and Environment Bureau, carrying out the “I Lead in a Beautiful China” campaign. Activities include consultation booths, display panels, and distribution of environmental handbooks to the public, systematically raising awareness of environmental laws and regulations.

环保培训
Environmental Training

- 五凌电力举办环保监管人员专题培训班，组织相关人员参加集团培训；各单位定期分厂级、部门级和班组级开展生态环保培训。

Wuling Power organizes specialized training for environmental compliance staff and participates in group-level training programs; each unit also conducts regular plant-, department-, and team-level ecological and environmental training.

- 远达环保开展固定污染源自动监测设备“实操”培训、管理人员“专业化能力提升”专项培训。

Yuanda Environmental Protection provides practical training on fixed pollution source automatic monitoring equipment and specialized training to enhance management personnel’s professional capabilities.

- 长洲水电组织线下开展生态环保大讲堂活动，提升全员生态环保意识。

Changzhou Hydropower conducts offline “Ecological and Environmental Lecture Halls” to raise environmental awareness among all employees.

案例
CASE

长洲水电开展生态环保大讲堂

Changzhou Hydropower Conducts “Ecological and Environmental Protection Lecture Series”

为深入贯彻国家生态环境保护工作要求，进一步提升全员环保意识与专业管理能力，长洲水电创新开展“生态环保大讲堂”培训。培训聚焦生态环保管理核心要点，内容涵盖环保政策法规解读、项目“全周期”环保合规管理、风险防控措施及典型案例分析等，旨在帮助参训人员全面掌握生态环保管理要点，确保项目“全周期”符合国家及上级单位的环保标准。培训采用“法规讲解+实务指导”模式，讲师针对生产运营中的环保难点现场答疑，帮助参训人员厘清环保责任边界，提升风险预判与处置能力，为后续生态环保工作规范化、标准化开展提供了清晰指引。

To thoroughly implement national ecological and environmental protection requirements and further enhance the environmental awareness and professional management capabilities of all staff, Changzhou Hydropower has innovatively launched the “Ecological and Environmental Protection Lecture Series” training program. The training focuses on the core aspects of ecological and environmental management, covering interpretation of environmental policies and regulations, full-cycle project compliance management, risk prevention measures, and analysis of typical cases. Its aim is to enable participants to comprehensively master key points of ecological and environmental management, ensuring that projects comply with national and higher-level environmental standards throughout their entire lifecycle. The training adopts a “regulation explanation + practical guidance” approach. Instructors provide on-site answers to challenges encountered in production

and operations, helping participants clarify the boundaries of environmental responsibilities and improve their ability to anticipate and manage risks. The program offers clear guidance for the standardized and systematic implementation of subsequent ecological and environmental protection work.



【图说环保】五凌电力：践行“双碳”从身边开始

[Visual Highlights of Environmental Protection] Wuling Power: Practicing “Dual-Carbon” Goals Starts with Everyday Actions



- 办公区及生活区绿化

Greening of Office and Living Areas



- 在办公区域张贴节能环保小贴士

Energy-Saving Tips in Workspaces



开展环保公益活动

Environmental Public Welfare Activities

保护绿色生态
Protecting Green Ecosystems

生态优先、绿色发展。电投水电将生态保护融入经营发展全流程，聚焦生态修复与生物多样性保护。在污染场地、湿地等关键区域，通过科学治理技术推进生态修复，改善区域生态基底，不断优化项目建设与运营中的生态保护方案，减少对动植物栖息地的影响，助力构建人与自然和谐共生的绿色生态环境。

Guided by the principle of ecological priority and green development, SPIC Hydropower Co., Ltd. integrates ecological protection throughout the entire business and operational lifecycle, with a focus on ecological restoration and biodiversity conservation. In key areas such as contaminated sites and wetlands, the Company applies scientific remediation technologies to advance ecosystem restoration and improve the ecological baseline. It continuously optimizes ecological protection plans in project construction and operation, minimizes impacts on habitats of flora and fauna, and contributes to building a green ecosystem where humans and nature coexist in harmony.

案例
CASE

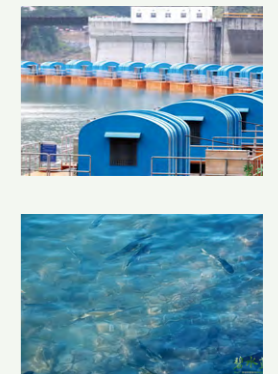
保护生物多样性：五凌电力为鱼儿拉起温暖屏障
Biodiversity Protection: Wuling Power Builds a "Thermal Barrier" for Fish

五凌电力三板溪水电站因水库水温分层，底层低温水下泄导致下游鱼类产卵期水温低于18°C，鲤鱼、铜鱼等关键鱼种群数量下降30%。五凌电力历时十年，突破性首创“深海渔网+悬索桥”跨界技术，建成6.4万平方米的柔性隔水幕墙，实现随水位自动升降精准取水。2023年投运后，下泄水温最大提升4.5°C，5—6月鱼类关键产卵期升温1.0—1.8°C，5月水温达18°C以上，满足鱼类产卵需求。

三板溪低温水治理工程，打破了“环保必亏”的认知，作出了生态效益和经济效益的“双赢答卷”，获得了36项专利，为全球300余座同类高坝提供可复制经验，为全球已建水库生态修复提供了“中国方案”。

At the Sanbanxi Hydropower Station operated by Wuling Power, thermal stratification in the reservoir caused the discharge of low-temperature bottom water, resulting in downstream water temperatures during fish spawning seasons falling below 18°C. This led to a 30% decline in populations of key species such as carp and copper fish. Over a period of ten years, Wuling Power achieved a breakthrough by pioneering an interdisciplinary technology integrating a "deep-water fishing net + suspension bridge" system. A 64,000 m² flexible water-retaining curtain was constructed, capable of automatically adjusting with water levels to enable precise water intake. Since its commissioning in 2023, the project has increased downstream discharge temperatures by up to 4.5°C. During the critical spawning period from May to June, water temperatures rose by 1.0–1.8°C, with May temperatures exceeding 18°C—meeting the requirements for fish reproduction.

The Sanbanxi low-temperature water management project has overturned the conventional notion that "environmental protection projects must incur losses," delivering a win-win outcome in both ecological and economic benefits. It has secured 36 patents and provides replicable experience for more than 300 similar high-dam projects worldwide, offering a "China solution" for ecological restoration of existing reservoirs globally.



案例
CASE

生态治理：远达环保“光伏+治沙”技术显成效，乌兰布和沙漠生态治理创新突破
Ecological Restoration Innovation: Application of Yuanda Environmental Protection's "PV + Desertification Control" Technology in the Ulan Buh Desert Demonstration Project

远达环保深化“光伏+”沙漠生态治理技术应用，在乌兰布和生态沙产业示范区的实证平台取得显著成效。通过优化物理固沙与生态治沙相结合的综合技术，项目成功筛选出花棒、杨柴、沙拐枣等低耗水植物，年用水量不超过74吨/亩，实现了节水目标；生态治理效果突出，植物种植成活率达到78%以上，示范区综合植被盖度提升至68%以上，有效遏制了风沙，改善了当地生态环境。这些创新举措不仅展示了远达环保在生态治理修复领域的技术实力，也为后续大规模推广应用和相关标准制定奠定了坚实基础。

Yuanda Environmental Protection has deepened the application of its "PV+" desert ecological restoration technologies, achieving significant results on the pilot platform of the Ulan Buh Ecological Desert Industry Demonstration Zone. By optimizing an integrated approach that combines physical sand stabilization with ecological restoration techniques, the project successfully identified and deployed low water-consumption plant species, including Hedysarum scoparium, Caragana korshinskii, and Calligonum mongolicum. Annual water usage has been controlled at no more than 74 tons per mu, meeting stringent water conservation targets. The ecological outcomes have been notable: plant survival rates have exceeded 78%, while overall vegetation coverage in the demonstration zone has increased to over 68%. These improvements have effectively curbed wind-blown sand and contributed to a measurable enhancement of the local ecological environment. These innovative practices not only demonstrate Yuanda Environmental Protection's technical capabilities in ecological restoration, but also lay a solid foundation for large-scale replication and the development of relevant technical standards.



严守安全生产

Strictly Ensuring Workplace Safety

安全生产是经济高质量发展的基石。电投水电坚守生命至上、安全第一、预防为主、综合治理的安全发展理念，系统推进安全生产各项工作，不断夯实安全应急管理体系、提升安全管理效能，以严标准、实举措筑牢安全生产的保障屏障，2025年，实现安全生产零事故、零伤亡。

Workplace safety is the cornerstone of high-quality economic development. Adhering to the safety philosophy of "life first, safety foremost, prevention-oriented, and comprehensive management," SPIC Hydropower Co., Ltd. systematically advances workplace safety efforts, continuously strengthens its safety emergency management system, and enhances safety management effectiveness. Through rigorous standards and concrete actions, it has built a strong safeguard for workplace safety. In 2025, the Company achieved zero accidents and zero fatalities in workplace safety.

完善治理架构 Strengthening Governance Framework

电投水电严格落实“第一议题”制度，将习近平安全生产重要论述纳入理论学习重点内容，切实强化领导班子及全体党员干部的安全责任意识。

SPIC Hydropower Co., Ltd. strictly implements the "First Agenda" mechanism, integrating General Secretary Xi Jinping's key directives on workplace safety into its core theoretical learning agenda, and thereby reinforcing safety accountability awareness across the leadership team and all Party members and officials.

五凌电力 Wuling Power

- 制定发布公司《本质安全型企业建设2025年重点任务》，各项任务全部按计划推进落实。
Formulated and issued the *2025 Key Tasks for the Development of an Inherently Safe Enterprise*, with all tasks advanced and implemented as scheduled.

远达环保 Yuanda Environmental Protection

- 制定发布《本质安全型企业建设2025年重点任务》，构建“领导划片负责+网格管理”的监管模式，建立三级责任边界与网格化管控模式，通过本部例会、三级单位日调度会层层压实责任。
Issued the *2025 Key Tasks for Building an Inherently Safe Enterprise*, establishing a supervision model that combines area-based leadership accountability with grid-based management. A three-tier responsibility framework and corresponding grid-based control system have been put in place, with accountability clearly cascaded and reinforced through regular headquarters meetings and daily coordination meetings across all three organizational tiers.

- 推行本部工程与生产日调度例会机制，每日督导现场高风险作业措施落实，确保各级人员履职尽责，推动安全生产管理制度落地见效。
Established a daily coordination mechanism covering both engineering and production operations at the headquarters level, ensuring continuous oversight of high-risk on-site activities, effective implementation of control measures, clear accountability at every level, and rigorous enforcement of workplace safety management systems.

夯实战略规划 Strengthening Strategic Planning

电投水电严格履行安全生产主体责任，以系统化、常态化、精细化思路统筹推进安全生产各项工作，全方位构建权责清晰、防控有效、运行顺畅的本质安全管理体系，切实防范化解各类安全生产风险，为公司生产经营平稳有序开展筑牢坚实的安全保障。

SPIC Hydropower Co., Ltd. rigorously fulfills its primary responsibility for workplace safety, advancing all safety-related initiatives through a systematic, normalized, and refined approach. It has established a comprehensive intrinsically safe management system characterized by clearly defined responsibilities, effective risk control, and smooth operational coordination, thereby effectively preventing and mitigating safety risks and providing a strong foundation for stable and orderly business operations.

• 筑牢安全根基

Strengthening Safety Foundations

电投水电深刻认识到，安全生产与环境保护是企业永续发展的生命线，是践行央企责任的底线要求。我们以“时时放心不下”的责任感，将安全工作融入生产经营全过程，旗下各单位协同发力：五凌电力精准施策，优化新能源功率预测与检修部署，最大限度保障清洁能源稳发满发；远达环保雷霆出击，深入开展专项排查整治，全力推进各级环保督察问题清仓见底；长洲水电未雨绸缪，完善应急预案与预警机制，筑牢水电核心资产安全防线；通过体系化防控、精细化管理和常态化整改，我们不断压实主体责任，提升本质安全水平与生态环保绩效，以扎实行动守护绿水青山，为高质量发展构筑坚实屏障。

SPIC Hydropower Co., Ltd. fully recognizes that workplace safety and environmental protection are the lifelines of sustainable development and the baseline requirements for fulfilling the responsibilities of a centrally administered enterprise. With a constant sense of responsibility, it integrates safety management throughout the entire production and operational process, with all subsidiaries working in coordination: Wuling Power adopts targeted measures to optimize new energy output forecasting and maintenance scheduling, ensuring the stable and maximum utilization of clean energy generation; Yuanda Environmental Protection takes decisive action by conducting in-depth special inspections and rectification campaigns, and by comprehensively addressing issues identified through environmental inspections at all levels; Changzhou Hydropower adopts a proactive approach by improving emergency response plans and early warning mechanisms, strengthening the safety protection of its core hydropower assets. Through systematic risk control, refined management, and regularized rectification, the Company continues to reinforce primary responsibilities, enhance intrinsic safety and environmental performance, and safeguard ecological sustainability, thereby building a solid foundation for high-quality development.



• 公司领导项目现场调研及检查

On-Site Inspection and Field Research by Company Leadership

案例
CASE

五凌电力：五强溪电厂以多维安全管理体系实现长周期稳定运行

Wuling Power: Wuqiangxi Hydropower Plant Achieves Long-Term Stable Operation through a Multi-Dimensional Safety Management System

截至2025年10月12日，五强溪电厂连续安全运行1,1000天、8年无非计划停运，保持国内大中型水电安全运行纪录。电厂以管理机制创新为动力，构建特色多维安全管理体系，总结“421”工作法，从安全生产责任、管理、技术、文化四方面持续改进，以党建和考核激励为保障、人才培养为支撑，筑牢安全生产与隐患排查的管理根基。

As of 12 October 2025, Wuqiangxi Hydropower Plant has achieved 11,000 consecutive days of safe operation and eight years without unplanned outages, maintaining a leading safety performance record among large and medium-sized hydropower plants in China. Driven by management innovation, the plant has established a distinctive multi-dimensional safety management system and developed the “4-2-1” working approach. Continuous improvements are carried out across four dimensions—safety responsibility, management, technology, and culture—supported by Party building and performance-based incentives, with talent development as a key enabler, thereby reinforcing the management foundation for safe production and risk identification.



远达环保召开安全生产“雷霆行动”专项工作动员部署会

Yuanda Environmental Protection Holds Mobilization Meeting for the “Thunder Action” Special Campaign on Work Safety

强化科技兴安

Strengthening Safety through Technological Empowerment

赋能智慧运维，筑牢安全防线。电投水电积极拥抱数字化转型，将大数据、人工智能、工业互联网等前沿技术深度融合入安全生产与设备运维管理体系，致力于推动安全管理从“人防”向“技防”升级，实现从被动处置到主动预警的根本转变。五凌电力强化智慧运维，依托智能运维系统和大数据分析平台，推进设备状态预检预修，积极开展风机大部件预警信息分析，形成闭环管理机制，及时消除隐患；远达环保推进“工业互联网+安全生产”平台建设和应用，平台构建25个安全环保管理模块，实现“数据采集—在线监管—动态处置”全流程管控，提升安全环保履职效能，降低管控成本，截至目前，平台使用率均达90%以上。

Empowering intelligent operations and maintenance to reinforce safety defenses. SPIC Hydropower Co., Ltd. actively embraces digital transformation, deeply integrating advanced technologies such as big data, artificial intelligence, and the industrial internet into its work safety and equipment O&M management systems. The Company is committed to upgrading safety management from human-based controls to technology-driven safeguards, enabling a fundamental shift from passive response to proactive risk warning. Wuling Power has strengthened intelligent O&M by leveraging smart operation platforms and big data analytics to advance condition-based predictive maintenance. It actively conducts early warning analysis of key wind turbine components, establishes closed-loop management mechanisms, and promptly eliminates potential hazards. Yuanda Environmental Protection has advanced the development and application of an “Industrial Internet + Work Safety” platform, comprising 25 safety and environmental management modules. The platform enables full-process control across “data acquisition – online supervision – dynamic response,” enhancing the effectiveness of safety and environmental management while reducing control costs. To date, platform utilization rates have exceeded 90%.

案例
CASE

五凌电力：铜山岭风电场深入开展智慧化改造，筑牢安全防线

Wuling Power: Tongshanling Wind Farm Strengthens Safety through Intelligent Upgrading

五凌电力新能源分公司铜山岭风电场以智慧化改造赋能安全生产，破解传统运维与安全管理痛点。风电场接入新能源智能运维系统，以能效分析、设备诊断等功能实现预防性维护，精准识别并处理各类设备异常，大幅减少故障停机台次，显著提升无故障风机占比，获评“百日无故障风电场”，从设备端筑牢生产安全基础。同时，摒弃传统人工盯防的安全管理模式，围绕“人、物、环、管”构建智慧化安全管控体系，通过智能门禁与工作票、操作票系统联动，严格管控人员进入风险区域的准入关口，提升本质安全水平。智慧化改造也让设备巡检效率大幅提升，实现安全生产与运营效能双提升，为新能源场站安全生产提供实践样本。

Tongshanling Wind Farm, operated by Wuling Power’s New Energy subsidiary, has leveraged intelligent upgrading to enhance work safety and address longstanding challenges in traditional operation and maintenance as well as safety management. By integrating into a smart O&M system for new energy, the wind farm utilizes functions such as energy efficiency analysis and equipment diagnostics to enable predictive maintenance, accurately identify and address equipment anomalies, significantly reduce failure-related shutdowns, and increase the proportion of fault-free turbines. It has been recognized as a “100-Day Fault-Free Wind Farm,” strengthening the safety foundation from the equipment level. At the same time, the wind farm has moved beyond traditional manual supervision, establishing an intelligent safety management system structured around “personnel, equipment, environment, and management.” Through the integration of smart access control with work permit and operation ticket systems, it strictly controls access to high-risk areas, enhancing intrinsic safety. The intelligent transformation has also significantly improved inspection efficiency, achieving dual gains in operational performance and safety management, and providing a practical model for safe operations at new energy facilities.

开展安全培训

Conducting Safety Training

电投水电各单位积极开展安全生产月活动，通过线上线下相结合的方式开展多元化培训。五凌电力组织编制三级安全教育培训教材，制作三级安全教育培训视频课程，同时修订《安全教育培训管理办法》，将承包商安全培训纳入等同化管理；远达环保组织安全管理能力考试，组织各单位相关人员围绕法律法规、岗位职责、风险隐患管理等内容进行能力测试；长洲水电每年开展职业健康培训，并在三级教育培训中增加针对供应商的职业健康知识培训，提升全员安全环保履职能力。

All units of SPIC Hydropower Co., Ltd. actively carried out Work Safety Month initiatives and delivered diversified training programs through a combination of online and offline approaches. Wuling Power organized the development of three-tier safety education and training materials and produced corresponding video courses. It also revised the *Administrative Measures for Safety Education and Training*, incorporating contractor safety training into standardized, equivalent management. Yuanda Environmental Protection conducted safety management competency examinations, organizing relevant personnel across all units to undertake assessments covering laws and regulations, job responsibilities, and risk and hazard management. Changzhou Hydropower conducts annual occupational health training and has incorporated occupational health modules for suppliers into its three-tier safety education system, thereby enhancing the safety and environmental performance capabilities of all personnel.



五凌电力：各单位启动2025年“安全生产月”活动

Wuling Power: Launch of the 2025 “Work Safety Month” Campaign Across Units

2025年6月，五凌电力下属清水江公司、凌津滩电厂、资江总厂等单位启动2025年“安全生产月”活动。清水江公司组织开展主题签名活动，扎实推进安全检查和隐患排查治理，及时消除事故隐患。凌津滩电厂宣读了活动方案，要求进一步树牢安全发展理念，立足岗位安全环保职责，深化隐患排查治理，推动设备改造消缺。资江总厂制定专项方案，在各场站和红旗一号置入项目开展培训、警示教育、隐患辨识、应急演练等系列行动。

In June 2025, multiple subsidiaries of Wuling Power, including Qingshuijiang Company, Lingjintan Power Plant, and Zijiang General Plant, launched the 2025 “Workplace Safety Month” campaign. Qingshuijiang Company organized a themed signature campaign and advanced safety inspections and hazard identification and rectification efforts, promptly eliminating potential hazards. Lingjintan Power Plant presented and promoted the campaign plan, emphasizing the need to strengthen the concept of safe development, fulfill position-specific safety and environmental responsibilities, deepen hazard identification and rectification, and promote equipment upgrading and defect elimination. Zijiang General Plant developed a dedicated implementation plan and carried out a series of initiatives across its sites and the Hongqi No.1 retrofit project, including training sessions, awareness and warning activities, hazard identification, and emergency drills.



远达环保：催化剂公司沉浸体验+智慧管理，开启安全教育新范式

Yuanda Environmental Protection: Catalyst Company Pioneers a New Safety Training Model through Immersive Experience and Smart Management

催化剂公司立足业务风险特点，创新打造集沉浸式体验与智慧化管理于一体的“安全教育培训中心”，培训中心以“理论+实践”“认知+体验”为核心设计理念，构建了多维度、立体化的安全教学空间，重点布局“多功能伤害体验装置区”“临时用电体验区”“心肺复苏急救体验区”“消防器材认知区”四大功能体验区。除硬件设施外，同步上线“安全培训准入管理系统”，该系统整合了学员信息管理、培训课程安排、考核评估记录等功能，可根据岗位风险等级与培训需求，自动生成个性化培训方案，实时追踪培训进度与考核结果，形成“培训—考核—反馈—改进”的闭环管理，为优化培训策略、提升培训质效提供数据支撑，推动安全教育培训从“全覆盖”向“精准化”升级，从“阶段性”向“常态化”转变。

Based on its operational risk profile, the Catalyst Company has innovatively established a “Safety Education and Training Center” integrating immersive experience with intelligent management. Guided by the core design philosophy of “theory + practice” and “cognition + experience,” the center features a multi-dimensional and immersive safety training environment, including four key functional zones: a multi-functional injury simulation area, a temporary electricity safety experience zone, a CPR first-aid training area, and a fire safety equipment awareness zone. In addition to physical facilities, the Company has launched a “Safety Training Access Management System,” integrating trainee information management, course scheduling, and assessment records. The system automatically generates personalized training plans based on job risk levels and training needs, tracks training progress and assessment results in real time, and forms a closed-loop management mechanism of “training – assessment – feedback – improvement.” This provides data support for optimizing training strategies and enhancing training effectiveness, driving the transition of safety training from full coverage to precision-based delivery, and from periodic implementation to normalization.



长洲水电开展多样化安全主题培训
Diversified Safety Training at Changzhou Hydropower



● 承包商安全管理提升行动项解读

Interpretation of Contractor Safety Management Improvement Measures



● AED科普培训

AED Awareness Training



● 隐患排查治理知识培训

Hazard Identification and Rectification Knowledge Training



● 安全生产知识考试

Workplace Safety Knowledge Examination



风险机遇管理 Risk and Opportunity Management

影响因素
Influencing Factors

人员生命健康与作业环境：现场作业（如高空、有限空间、设备安装调试）密集且风险多样，直接关系到员工及承包商的生命安全与职业健康。

Personnel Health and Working Environment: On-site operations (e.g., working at heights, confined spaces, equipment installation and commissioning) are intensive and involve diverse risks, directly affecting the life safety and occupational health of employees and contractors.

相关风险
Related Risks

生产风险：若作业现场管控疏漏易引发安全事故，导致项目延期、成本超支。此外，项目点多面广、周期与参与方多样，易出现安全管理标准在现场执行层层衰减，对承包商及分包商的“等同管理”若不到位，将成为主要风险源。

Operational Risks: Lapses in on-site control may trigger safety incidents, causing project delays and cost overruns. With widespread and complex project sites, long durations, and multiple stakeholders, safety management standards may degrade layer by layer during implementation. Failure to ensure “equivalent management” of contractors and subcontractors constitutes a key risk source.

合规风险：新能源产业竞争日趋激烈，业主单位及监管部门对项目安全标准要求不断提高，若公司运营未及时适配新要求，可能面临行政处罚、项目准入受限等风险。

Compliance Risks: As competition in the new energy sector intensifies, project owners and regulatory authorities increasingly raise safety standards. Failure to promptly adapt operations to new requirements could result in administrative penalties or restricted project access.

潜在机遇
Potential Opportunities

数字化机遇：新能源行业智慧安全管控需求不断扩容，为公司提升安全生产管理水平、拓展相关业务提供了广阔空间。利用物联网、AI视频识别、大数据平台等数字化工具，可实现风险智能预警与远程监控，大幅提升对“散、小、远”项目的管控效率与精准性。

Digitalization Opportunities: The growing demand for intelligent safety management in the new energy sector provides significant room for enhancing safety oversight and expanding related services. Leveraging IoT, AI video recognition, and big data platforms can enable intelligent risk alerts and remote monitoring, greatly improving the efficiency and precision of managing dispersed, small-scale, and remote projects.

风险机遇管理 Risk and Opportunity Management

影响因素 Influencing Factors

公共安全：公司运营的脱硫脱硝、污水处理等环保设施，其稳定运行是防止二次污染的关键。任何生产安全事故都可能导致环保设施非计划停运或污染物泄漏，违背企业环保初衷并影响社区安全。

Public Safety: The stable operation of environmental protection facilities, such as desulfurization, denitrification, and wastewater treatment systems, is critical to preventing secondary pollution. Any production safety incident could lead to unplanned shutdowns or pollutant leakage, undermining the Company's environmental objectives and impacting community safety.

相关风险 Related Risks

自然灾害等外部事件引发的连锁风险：环保项目分布地域广，极端天气、地质灾害等可能冲击现场作业与运营设施安全。

External Event Risks: Broad geographic distribution of environmental projects exposes operations to extreme weather, geological hazards, and other external events, which may impact on-site safety and facility operations.

项目履约与经营成本风险：安全生产事故将直接导致项目停工、整改，延误重大工程工期，同时产生赔偿、修复等额外成本，影响项目利润。

Project Performance and Cost Risks: Safety incidents can directly cause work stoppages and corrective actions, delaying major projects and generating additional costs for compensation or repairs, thereby affecting project profitability.

潜在机遇 Potential Opportunities

输出优质的安全管控模式及产品服务：将经过验证的精细化安全管理体系进行方法论总结，为同行或业主单位提供安全管理咨询服务或培训；同时，有望将特定领域的安全管理经验，转化为行业标准或最佳实践，提升话语权。

Exporting Proven Safety Management Models and Services: Verified, refined safety management systems can be codified as methodologies to provide safety consulting or training to peers and project owners. Additionally, domain-specific safety management experience can be transformed into industry standards or best practices, enhancing influence and thought leadership.

绩效与目标 Performance & Targets

2025年，电投水电安全生产工作以“零事故、零伤害”为目标，深化本质安全型企业建设，全面压实安全责任。通过体系化防控、常态化排查与智能化赋能，我们有效保障了生产经营的安全与稳定，为公司高质量发展筑牢了基石。全年安全生产形势总体平稳，未发生重大及以上安全事故。未来，公司将持续完善安全生产治理体系，加大数字化、智能化管控投入，强化全员安全能力建设与承包商一体化管理，推动安全管理向事前预防转型，为公司长期可持续发展提供坚实保障。

In 2025, SPIC Hydropower Co., Ltd. focused its safety production work on achieving “zero accidents, zero injuries”, deepening the construction of an intrinsically safe enterprise and fully enforcing safety responsibilities. Through systematic risk control, regular inspections, and intelligent enablement, the Company effectively safeguarded the safety and stability of production and operations, laying a solid foundation for high-quality development. The overall safety situation remained stable throughout the year, with no major or higher-level safety incidents reported. Looking ahead, the Company will continue to improve its safety governance system, increase investment in digital and intelligent control, strengthen safety capability building for all personnel, and integrate contractor management, promoting a shift in safety management toward proactive prevention to ensure long-term sustainable development.

数读·2025 Data Insights-2025

安全投入：安全生产投入总额**22,608.97**万元；安全专项培训投入**210**万元

Safety Investment: Total safety production investment amounted to RMB **226.0897** million; investment in specialized safety training reached RMB **2.10** million.

隐患治理：累计开展隐患排查**570**次，发现并录入系统问题**12,895**个，已完成整改**12,762**个，整改完成率**99%**

Hazard Management: Conducted **570** hazard inspections, identified and recorded **12,895** issues in the system, and completed **12,762** corrective actions, achieving a **99%** rectification rate.

应急能力：组织应急演练**1,260**次，累计时长**2,095.5**小时，参与**16,371**人次

Emergency Preparedness: Organized **1,260** emergency drills totaling **2,095.5** hours, with **16,371** participants.

培训赋能：开展各类安全培训**2,423**次，累计**79,129.5**小时，覆盖**51,318**人次。其中，组织承包商安全培训**6,763**次，累计**34,359**小时

Training and Capability Building: Conducted **2,423** safety training sessions totaling **79,129.5** hours, covering **51,318** personnel. Among these, **6,763** sessions were provided to contractors, totaling **34,359** hours.

同心同行

United in Action

担使命显担当

Fulfilling Our Mission with Responsibility

电投水电始终将履行经济、社会、环境综合责任视为企业生存的根本价值与应尽之责。我们将社会责任理念深度融入运营实践，通过输出专业能力促进行业共同进步，通过健全机制保障员工全面发展与福祉，通过构建责任生态引领供应链协同共赢，并通过精准投入支持乡村振兴与社区繁荣。我们以切实行动践行中央企业的政治责任与社会责任，在服务国家大局、助力社会和谐、增进民生福祉中，彰显“国之重器”的使命感担当。

SPIC Hydropower Co., Ltd. always regards the fulfillment of economic, social, and environmental responsibilities as the fundamental value and duty of the enterprise. We deeply integrate the concept of social responsibility into operational practice, promoting industry-wide progress through professional expertise, safeguarding comprehensive employee development and well-being through robust mechanisms, leading supply chain collaboration and mutual benefit by building a responsible ecosystem, and supporting rural revitalization and community prosperity through targeted initiatives. Through concrete actions, we fulfill the political and social responsibilities of a central enterprise, demonstrating our mission as a "pillar of the nation" while serving the national agenda, contributing to social harmony, and enhancing public welfare.

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助力行业发展

Promoting Industry Development

电投水电积极开展对外战略合作，深化与当地政府、行业头部企业、各类高校的协同，拓展业务合作网络，助推市场发展；积极参与行业及国家标准制修订工作，引领和推动行业标准化建设。

SPIC Hydropower Co., Ltd. actively pursues external strategic partnerships, strengthening collaboration with local governments, leading industry players, and universities to broaden its business network and stimulate market growth. The Company also takes a proactive role in developing and revising industry and national standards, driving and shaping the standardization of the sector.

开展交流合作

Promoting Collaboration and Partnerships

电投水电积极开展对外战略合作，深化合作伙伴协同，构建共赢产业生态。五凌电力与中南大学、湖南大学、长沙理工大学等高校建立长期稳定合作，联合攻关水气象大数据、风力设备维护等重点课题，确保自身业务发展始终紧跟行业前沿；远达环保深化与行业头部企业战略合作，与北京控股、新疆能源循环产业等单位签署战略合作协议，共同推进CCUS、能源循环废弃物治理等领域技术合作和业务拓展；长洲水电坚持“公平合作、诚信共赢”原则，与上下游合作伙伴建立规范、透明的沟通合作机制，兼顾商业利益与社会责任，推动产业链协同发展。

SPIC Hydropower Co., Ltd. actively pursues external strategic cooperation, deepening collaboration with partners to build a mutually beneficial industrial ecosystem. Wuling Power has established long-term, stable partnerships with Central South University, Hunan University, and Changsha University of Science & Technology, jointly tackling key topics such as hydrometeorological big data and wind turbine maintenance, ensuring that its business development remains at the forefront of the industry. Yuanda Environmental Protection has strengthened strategic cooperation with leading industry players, signing agreements with Beijing Enterprises and Xinjiang Energy Recycling Industry, among others, to advance technical collaboration and business expansion in areas such as CCUS and energy waste management. Changzhou Hydropower, adhering to the principles of fair cooperation and shared integrity, has established standardized and transparent communication mechanisms with upstream and downstream partners, balancing commercial interests with social responsibility to promote coordinated development across the industry chain.

制定行业标准

Developing Industry Standards

电投水电积极参与标准制修订，取得突出成果。2025年标准制定总数9项，其中国家级标准6项，团体标准2项，企业标准1项。

SPIC Hydropower Co., Ltd. actively participates in the development and revision of industry standards, achieving remarkable results. In 2025, a total of nine standards were formulated, including six national standards, two group standards, and one corporate standard.

五凌电力

Wuling Power

- 制定《水电厂标识系统编码导则》《灯泡贯流式水轮发电机组检修规程》《水电厂发电设备智能巡检技术导则》《光伏电站应急管理规范》《水电站平面控制网北斗测量技术要求》《水电站边坡北斗自动化变形监测技术要求》等标准，助力水电产业发展。

Developed standards such as *Guide for hydropower plant identification system*, *Maintenance regulation for bulb hydro-turbine generating units*, *Guide for smart routine inspection of hydropower generation equipment*, *Specification of emergency management for photovoltaic power station*, *Beidou Surveying Technical Requirements for Hydropower Plant Planar Control Networks*, and *Automated Beidou-Based Slope Deformation Monitoring Technical Requirements for Hydropower Plants*, contributing to the development of the hydropower industry.

- 牵头申报的国家标准《蜂窝式烟气脱硝催化剂》修订计划获批立项。

Led the proposal for the revision of the national standard Honeycomb-type DeNO_x catalysts, which has been approved for project initiation.

- 参与编制国家电投集团标准《火力发电厂烟气二氧化碳捕集系统性能验收试验规范》（已发布，Q/SPI 258-2025）、参与修订国家标准《烟气脱硝催化剂化学成分分析方法》（已发布，GB/T 31590-2025）、参与编制的已发布国家标准《烟气脱硝催化剂化学成分分析方法》（GB/T 31590-2025）、《二氧化碳捕集 燃烧后二氧化碳捕集系统通用要求》（GB/T 46877-2025）。

Participated in drafting the SPIC Group standard *Technical specifications of energy consumption measurement for flue gas CO₂ capture system in thermal power plants* (published as Q/SPI 258-2025), contributed to revising the national standard *Analytical method of chemical composition for flue gas DeNO_x catalysts* (published as GB/T 31590-2025), and participated in drafting national standards including *Analytical method of chemical composition for flue gas DeNO_x catalysts* (GB/T 31590-2025) and *Carbon dioxide capture—General requirements for post-combustion CO₂ capture system* (GB/T 46877-2025).

- 组织完成《火电厂化学吸收法烟气碳捕集装置运行规程》等行业、团体和集团共三项标准的专家审查，推动其中一项行业标准完成立项申报。

Organized expert reviews for three standards—covering industry, group, and corporate levels—such as *Operating Procedures for Chemical Absorption-Based Flue Gas Carbon Capture in Thermal Power Plants*, and facilitated the initiation of one industry standard project.

远达环保

Yuanda Environmental Protection

保障员工权益

Protecting Employee Rights

电投水电持续加强人才梯队建设，构建科学规范的选育用留与薪酬激励体系，切实维护员工合法权益。公司完善培训体系，拓宽职业发展通道，并通过开展健康管理、组织文体赛事等方式，增强员工的获得感与幸福感，提升团队向心力。

SPIC Hydropower Co., Ltd. continuously strengthens its talent pipeline and implements a systematic, standardized approach to recruitment, development, retention, and compensation, effectively safeguarding employees' lawful rights and interests. The Company has enhanced its training system, expanded career development pathways, and reinforced employees' sense of fulfillment and well-being through health management programs and the organization of cultural and sports activities, thereby fostering stronger team cohesion.

员工管理 Employee Management

电投水电致力于构建合规雇佣体系，坚持平等雇佣原则，杜绝各类歧视与强迫劳动，依法规范劳动合同管理；健全薪酬福利制度，提升员工获得感；通过职代会、提案征集及工会会议等机制推进民主管理，切实维护员工权益。

SPIC Hydropower Co., Ltd. is committed to establishing a compliant employment system, upholding the principle of equal opportunity, and prohibiting all forms of discrimination and forced labor. Labor contracts are managed strictly in accordance with applicable laws and regulations. The Company has developed a comprehensive remuneration and benefits framework to enhance employees' sense of fulfillment, and advances democratic management through mechanisms such as employee representative meetings, proposal submissions, and union gatherings, thereby ensuring the effective protection of employee rights.

合规雇佣 Compliant Employment

坚持平等雇佣原则，确保在招聘选拔、薪酬核定、晋升发展等人力资源管理全流程中贯彻公开、公平、公正准则，坚决杜绝任何形式的就业歧视与职场骚扰行为，严格防范和禁止强迫劳动及雇佣童工，致力于构建健康、平等、尊重的职场文化环境。

SPIC Hydropower Co., Ltd. adheres to the principle of equal opportunity, ensuring transparency, fairness, and impartiality throughout all HR management processes, including recruitment, salary determination, promotion, and career development. The Company strictly prohibits all forms of employment discrimination and workplace harassment, rigorously prevents forced labor and child labor, and is committed to fostering a healthy, equitable, and respectful workplace culture.

严格依据《中华人民共和国劳动法》《中华人民共和国劳动合同法》和《公司劳动合同管理办法》等要求，规范劳动合同管理，依法签订和履行劳动合同，保护员工的合法权益。

Labor contracts are managed in strict accordance with the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China*, and the *Company's Labor Contract Management Procedures*. All contracts are signed and fulfilled in full compliance with legal requirements, ensuring effective protection of employees' lawful rights and interests.

薪酬福利 Compensation and Benefits

制定并遵守《职工福利费管理办法》《薪酬管理办法》《绩效管理办法》《员工休假管理实施办法》等涉及员工薪酬福利待遇的制度，提升职工获得感和幸福感。

SPIC Hydropower Co., Ltd. has established and adheres to systems covering employee remuneration and welfare, including the *Measures for the Administration of Staff Welfare Funds*, the *Salary Management Measures*, the *Performance Management Measures*, and the *Implementation Measures for Employee Leave*. These measures are designed to enhance employees' sense of fulfillment and overall well-being.

民主管理 Democratic Management

坚持落实职代会（职工大会）制度，广泛征集职工提案，将“我为职工办实事”落到实处。

The Company implements the system of employee representative conferences (general staff meetings), widely collects staff proposals, and ensures that initiatives aimed at serving employees are effectively carried out.

远达环保坚持开展合理化建议征集办理工作，积极征集办理职工合理化建议，定期组织召开工会委员会，重点研究改革发展中涉及员工切身利益事项；长洲水电灵活开展工会小组活动、民主管理会、班务会等，营造民主氛围。

Yuanda Environmental Protection consistently conducts the collection and review of rationalization proposals, actively addressing employees' suggestions, and regularly convenes union committee meetings to focus on matters affecting employees' vital interests during reform and development. Changzhou Hydropower flexibly organizes union group activities, democratic management meetings, and team meetings to foster a participatory and open organizational culture.

数读·2025 Data Insights-2025

员工总数**4,456**人，其中女性员工**963**人

Total employees: **4,456**, including **963** female employees

董事会女性人数**3**人，占比**27.27%**

Female members on the Board of Directors: **3**, accounting for **27.27%**

新增员工人数**172**人

New hires: **172**

员工总体流失人数**56**人

Total employee turnover: **56**

社会保险覆盖率**100%**

Social insurance coverage: **100%**

员工人均带薪休假天数**5.54**天

Average paid leave days per employee: **5.54** days

召开职工代表大会**1**次

Number of employee representative congresses held: **1** times



● 电投水电召开第一次职工大会暨年度工作会

SPIC Hydropower Co., Ltd. Holds First Employee Representative Conference and Annual Work Meeting



● 五凌电力召开六届三次职代会暨年度工作会议

Wuling Power Holds the 6th Session of the 2nd Employee Representative Conference and Annual Work Meeting



● 远达环保召开二届五次职代会暨年度工作会议

Yuanda Environmental Protection Holds the 2nd Session of the 4th Employee Representative Conference and Annual Work Meeting

员工成长
Employee Development

电投水电深入实施人才强企战略，加大员工培训力度，各单位有针对性地开展毕业生培训计划、员工职业培训活动、员工专业技能培训、员工资源小组、管理层领导力培训等课程，为公司高质量发展储备坚实、多元的人才力量。五凌电力编制《五凌电力“十五五”人才队伍建设专项计划》《人才队伍培养体系建设方案》，构建“四航”梯次培养体系；远达环保制定《远达环保“十五五”人才队伍建设专项计划》《国家电投集团远达环保股份有限公司青年专业人才三年发展规划行动方案》及《关于强化远达环保“两支队伍”建设的工作方案》；长洲水电制定2026年度高校毕业生招聘预控计划，打造员工晋升发展的畅通道。

SPIC Hydropower Co., Ltd. has been thoroughly implementing its talent-driven enterprise strategy, intensifying employee training, and carrying out targeted programs across its units, including graduate training plans, career development activities, professional skills training, employee resource groups, and leadership development courses, thereby building a diverse and robust talent pool to support the Company's high-quality growth. Wuling Power has developed the 15th Five-Year Plan for Talent Team Development of Wuling Power and the Talent Team Development System Plan, establishing the "Four-Stage" progressive cultivation system. Yuanda Environmental Protection has formulated the 15th Five-Year Plan for Talent Team Development of Yuanda Environmental Protection, the Three-Year Development Plan for Young Professionals of SPIC Yuanda Environmental Protection Co., Ltd., and the Work Plan for Strengthening Yuanda Environmental Protection's Two Talent Teams. Changzhou Hydropower has prepared its 2026 university graduate recruitment pre-control plan to ensure smooth career progression and promotion pathways for employees.

数读·2025 Data Insights-2025

培训支出费用**2,119.67**万元

Training Expenditure: RMB 21.1967 million

员工培训时数**326,416.5**小时

Total Training Hours: 326,416.5 hours

培训总人次**132,262**人次

Total Training Participants: 132,262 people



建立多元化员工培训计划 Establishing a Diversified Employee Training Program

毕业生培训计划 Graduate Training Programs

- 五凌电力开展2025年新员工（应届毕业生）入职培训计划（上海交大国家电投智慧能源创新学院组织协调）、新员工跟班培训计划。

Wuling Power carried out the 2025 onboarding training program for new employees (fresh graduates) (coordinated by the College of Smart Energy launched by Shanghai Jiao Tong University and State Power Investment Corporation), as well as on-the-job shadowing programs for new hires.

- 远达环保组织应届毕业生参加入职培训，所属各单位开展入职技术技能培训，并制定见习培养计划，开展导师带徒培养，并开设网络学院新员工入职培训学习专题。

Yuanda Environmental Protection organized onboarding training for fresh graduates, with each affiliated unit conducting technical skills induction programs, formulating internship development plans, implementing mentorship training, and offering specialized onboarding courses through the Online Academy.

- 长洲水电制定2025年应届毕业生实习培养方案，组织新员工参加国家电投集团2025年新员工入职培训。

Changzhou Hydropower formulated the 2025 internship development plan for fresh graduates and organized new employees to participate in the SPIC 2025 onboarding training program.

员工职业培训活动 Employee Career Development Activities

- 五凌电力与问方、安蚁企业服务公司等机构联合举办2025年“远航”培训及相关课程。

Wuling Power co-organized the 2025 "Voyage Forward" training program and related courses in collaboration with Wenfang and Anyi Enterprise Services, among other institutions.

- 远达环保对接华为培训中心、清华大学继续教育学院及其他外部培训机构等资源，策划开班三期年轻干部轮训班。

Yuanda Environmental Protection coordinated with resources such as the Huawei Training Center, Tsinghua University School of Continuing Education, and other external training providers to organize three consecutive rotation training sessions for young cadres.

- 长洲水电开展产业工人培训、技术监督网络成员取证培训等课程。

Changzhou Hydropower conducted training courses for industrial workers and certification programs for members of the technical supervision network.

员工专业技能培训 Employee Professional Skills Training

- 五凌电力开展员工继电保护培训。

Wuling Power conducted employee training on relay protection.

- 远达环保常态化开展本部大讲堂、网络专题培训，各部门定期开展专业管理培训，项目部常态化开展技能培训。

Yuanda Environmental Protection regularly held headquarters lectures and online specialized training, with departments conducting periodic professional management training and project sites providing routine skills training.

- 长洲水电开展合规管理及决策议题公文培训、招标采购流程培训、应急预案培训等。

Changzhou Hydropower carried out training on compliance management and decision-related official documents, procurement processes, and emergency response plans.

员工资源小组 Employee Resource Groups

- 五凌电力开展2025年工程硕士、博士培养项目和区域化管控模式下新能源人才培训体系的创新与实践活动。

Wuling Power implemented the 2025 graduate-level (Master's and PhD) engineering training program and carried out innovative and practical activities under a regionalized management model for new energy talent development.

- 远达环保成立脱硫石膏资源化利用（建材）项目专项工作组、火电环保设施智慧运营能力提升专项工作组，推动专业领域相关工作开展。

Yuanda Environmental Protection established special working groups for desulfurized gypsum resource utilization (building materials) and for enhancing intelligent operation capabilities of thermal power environmental facilities, promoting work in specialized areas.

管理层领导力培训 Management Leadership Training

- 五凌电力举办首期“续航”培训班，落实“启航、续航、远航、领航”人才培养工程，通过政治素养等四模块培训及研讨提升业务骨干能力。

Wuling Power launched the first "Sustain" training program, implementing the "Start, Sustain, Advance, Lead" talent development initiative, enhancing key staff capabilities through four training modules including political literacy and seminars.

- 远达环保针对管理层开展安全生产管理人员取证培训，安全生产主题授课，安全生产关键岗位安全管理能力调考、基层主要管理人员安全管理能力抽考。

Yuanda Environmental Protection provided certification training for safety management personnel, delivered safety-themed lectures, and conducted assessments of safety management competencies for key positions and frontline managers.

- 长洲水电开展2025年科级干部领导力培训、梧州市直机关党组织书记能力提升培训班等。

Changzhou Hydropower carried out leadership training for section-level cadres in 2025 and held programs to enhance the capabilities of Party organization secretaries in Wuzhou municipal agencies.

案例
CASE

五凌电力在沅江公司举办2025年继电保护技能培训
Wuling Power Conducts 2025 Relay Protection Skills Training at Yuanjiang Company

2025年9月，五凌电力在沅江公司举办2025年继电保护技能培训。本次培训聚焦继电保护人员在日常运维与故障处理中的实际需求，以“强理论、重实操、提能力”为核心目标，精心设计课程体系，融合理论讲授、案例分析与全流程实操训练，旨在全面提升学员的专业技能和现场应对能力。五凌电力继电保护专家、第十六届“全国技术能手”“国家电投大工匠”莫凡应邀授课，结合个人参赛经验，围绕继电保护原理、装置校验、故障排查等关键环节展开深入讲解。下一步，五凌电力将继续加强高技能人才队伍建设，持续开展专业化、实战化培训，为电力生产安全稳定运行提供坚实人才支撑。



In September 2025, Wuling Power held the 2025 relay protection skills training at Yuanjiang Company. The training focused on the practical needs of relay protection personnel in daily operations and fault handling, with the core objectives of “strengthen theory, emphasize practice, and enhance capability.” A meticulously designed curriculum integrated theoretical lectures, case analyses, and full-process hands-on exercises, aiming to comprehensively improve participants’ professional skills and on-site response abilities. Mo Fan, Wuling Power relay protection expert, 16th “National Technical Expert,” and “SPIC Master Craftsman,” was invited to teach, drawing on his personal competition experience to provide in-depth explanations of key areas including relay protection principles, device calibration, and fault troubleshooting. Moving forward, Wuling Power will continue to strengthen its high-skilled talent pool and carry out professional, practical training to provide solid personnel support for safe and stable power production.

案例
CASE

长洲水电选派两名科级干部参加市直机关党组织书记能力提升培训班
Changzhou Hydropower Sends Two Section-Level Cadres to Municipal Party Organization Secretary Leadership Training

为持续强化党务干部队伍建设，推动党建工作与生产经营深度融合，长洲水电积极响应梧州市直机关工委培训安排，精心选派两名科级干部参加2025年梧州市直机关党组织书记能力提升培训班。此次培训于7月21日至25日在广州举办，参训人员认真学习党建专业知识，积极与各单位交流借鉴先进经验，把学习成果转化为工作实效，进一步提升公司基层党组织建设水平，为长洲水电高质量发展筑牢人才根基。

To continuously strengthen the Party affairs cadre team and promote deep integration of Party building and business operations, Changzhou Hydropower actively responded to the Wuzhou Municipal Committee’s training arrangements, selecting two section-level cadres to attend the 2025 municipal Party organization secretary leadership training from July 21 to 25 in Guangzhou. Participants diligently studied Party building knowledge, actively exchanged experiences with other units, and applied learning outcomes to their work, further enhancing the company’s grassroots Party organization capacity and laying a solid talent foundation for Changzhou Hydropower’s high-quality development.

案例
CASE

远达环保举办2025年第二期“青马工程”培训班暨年轻干部轮训班及第二期青年专业人才轮训班
Yuanda Environmental Protection Holds Second 2025 “Qingma Project” Training Program and Young Talent Rotation Classes

为赋能年轻梯队，远达环保于2025年7月底举办第二期“青马工程”培训班暨年轻干部轮训班及第二期青年专业人才轮训班。联合众妙三家培训机构，精心策划，设置政治领航、管理精进、专业赋能等多方面课程，旨在全方位提升年轻干部的政治素养和综合能力。培训内容既涵盖党的理论建设与廉洁警示教育，也引入标杆企业的管理实践及财务、安全等实战技能，旨在全面提升学员的综合素养。

To empower its young talent pipeline, Yuanda Environmental Protection held the second 2025 “Qingma Project” training program and young talent rotation classes at the end of July 2025. Collaborating with three training institutions, the program offered carefully designed courses covering political guidance, management improvement, and professional skill enhancement, aiming to comprehensively strengthen the political literacy and overall capabilities of young cadres. The training included Party theory and integrity education, as well as management practices from benchmark enterprises and practical skills in finance, safety, and other areas, fully improving participants’ overall competence.



员工关爱
Employee Care

电投水电坚持“发展依靠员工、发展为了员工、发展成果与员工共享”。2025年，我们聚焦员工成长需求与急难愁盼，持续完善关怀机制，精心组织丰富的文体活动，积极营造温暖、进取、共享的职场氛围。通过实施精准化、常态化的关爱举措，着力疏通员工反映的各类问题，不断增强员工的归属感、获得感与幸福感，凝聚起推动公司发展的强大合力。全年累计投入员工关爱与帮扶资金425.29万元，组织各类关爱活动76次，切实将组织的温暖传递到每一位奋斗者身边。

SPIC Hydropower Co., Ltd. adheres to the principle of “development relies on employees, development is for employees, and development achievements are shared with employees.” In 2025, the Company focused on employees’ growth needs and urgent concerns, continuously improving its care mechanisms, thoughtfully organizing diverse cultural and sports activities, and actively fostering a warm, progressive, and inclusive workplace atmosphere. By implementing targeted and regular care initiatives, the Company addressed various employee concerns, enhancing their sense of belonging, fulfillment, and well-being, and consolidating strong collective momentum to drive the Company’s development. Throughout the year, SPIC Hydropower Co., Ltd. invested RMB 4.2529 million in employee care and assistance, organizing 76 care activities to ensure the Company’s support reached every dedicated staff member.

帮扶救助“暖心” Assistance and Relief “Heartwarming”

- 按照职工所需、工会所能，积极帮扶特重病职工，安排专项救助资金。

According to employees' needs and the union's capacity, the Company actively supports employees with severe illnesses and allocates dedicated relief funds.

- 工会每年坚持到基层一线“送温暖”“送清凉”，把公司关怀和慰问送到一线职工群众。

Every year, the union conducts frontline visits to “deliver warmth” and “send coolness,” bringing the Company's care and regards directly to frontline employees.

女职工关爱“温心” Care for Female Employees “Considerate”

- 签订女职工专项劳动保护合同。

Special labor protection contracts for female employees are signed.

- 在“三八节”期间，各级工会组织开展丰富多样的庆祝活动，为女职工购买女职工特殊疾病保险，组织开展女职工家庭教育相关的知识讲座，帮助女职工更好地照顾家庭。

During International Women's Day, unions at all levels organize diverse celebratory activities, purchase special illness insurance for female employees, and conduct knowledge lectures on family education, helping female employees better balance work and family responsibilities.

心理辅导“贴心” Psychological Counseling “Thoughtful”

- 扎实推进职工心理健康服务工作，加强对关键岗位、重点人群、家庭突发意外职工关心关爱，开展职工交流座谈，关注其心理健康状况，并帮助其解决实际难题。

The Company steadily advances employee mental health services, paying special attention to key positions, critical groups, and employees experiencing family emergencies. Employee forums are held to monitor psychological well-being and assist in solving practical problems.

文体活动“燃心” Cultural and Sports Activities “Invigorating”

- 举办职工足球、篮球、迷你马拉松、电竞等比赛活动，以赛促交流，以赛聚人心，为公司发展注入强劲动力。

The Company organizes football, basketball, mini-marathon, e-sports, and other competitions to promote interaction, strengthen team cohesion, and inject vitality into the Company's development.

办好实事“用心” Addressing Practical Needs “Attentive”

- 工会为所属单位围绕职工关切的职工小家建设、就医通道、医疗保障、子女托管等方面办理实事，切实解决职工特殊时期子女照看难题，消除后顾之忧。

Unions handle practical matters related to employees' concerns, including workplace amenities, medical access, healthcare coverage, and childcare arrangements, effectively resolving issues such as childcare during special periods and relieving employees' worries.



职工迎新春趣味运动会

Employee Spring Festival Fun Games



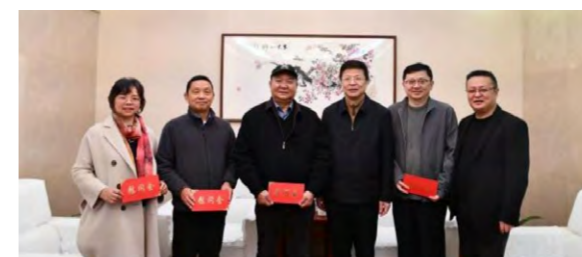
五凌电力开设职工心理咨询室

Wuling Power has set up a staff psychological counseling room.



欢庆三八妇女节

International Women's Day Celebrations



远达环保领导走访慰问劳模、退休老干部、老同志

Yuanda Environmental Protection Leadership Visits Model Workers, Retired Senior Staff, and Veteran Colleagues



长洲水电职工运动会

Changzhou Hydropower Employee Sports Games

员工职业健康 Employee Occupational Health

电投水电始终将员工职业健康置于企业发展的基础性地位，建立健全职业健康防护长效机制，系统保障员工身心健康与安全生产。五凌电力制定《职业健康和劳动保护管理规定》，督促各下属单位按要求开展职业健康管理工作；远达环保定期组织职业健康专项培训，在施工现场布置职业健康危害告知书；长洲水电组织开展员工职业健康体检，开展职业危害因素检测，为一线及特殊岗位员工配备劳动防护用品，构建起员工职业健康与安全的长效保障。

SPIC Hydropower Co., Ltd. consistently places employee occupational health at the foundation of corporate development, establishing long-term mechanisms for occupational health protection to systematically safeguard employees' physical and mental well-being as well as safe production. Wuling Power has formulated the Occupational Health and Labor Protection Management Regulations, ensuring that all subordinate units carry out occupational health management as required; Yuanda Environmental Protection regularly organizes specialized occupational health training and posts occupational hazard notices at construction sites; Changzhou Hydropower conducts employee health check-ups, monitors occupational hazard factors, and provides labor protection equipment for frontline and special-position employees, thereby building a long-term system for occupational health and safety.

数读·2025 Data Insights-2025

员工体检覆盖率¹93%

Employee health check-up coverage: 93%



长洲水电取得职业健康管理体系认证

Changzhou Hydropower Achieves Certification for Occupational Health Management System

¹本年度员工体检覆盖率未达100%，主要因部分员工长期驻外及因公外出工作，未能及时参与公司安排的统一体检。

¹The employee health check-up coverage for this fiscal year fell short of 100%. This was primarily due to long-term overseas assignments and business travel, which prevented some staff members from attending the centralized medical check-ups organized by the company in a timely manner.

案例 CASE

远达环保构建职业健康综合防控体系，守护员工健康安全

Yuanda Environmental Protection Builds a Comprehensive Occupational Health Prevention System to Safeguard Employee Health and Safety

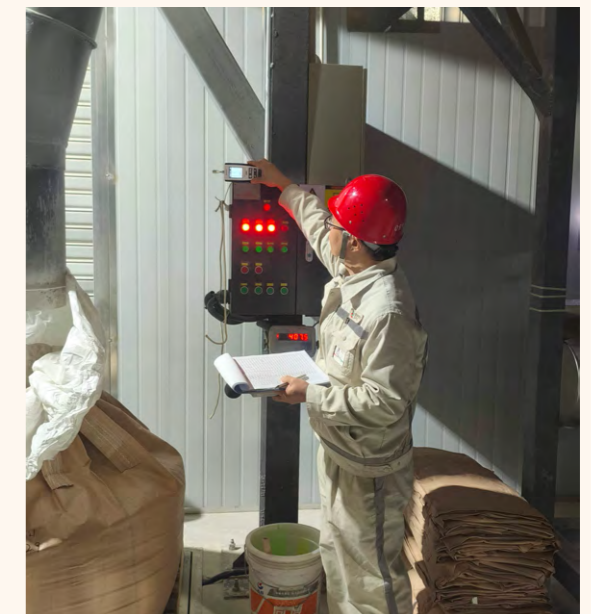
远达环保催化剂公司高度重视职业健康管理，通过系统化的环境监测有效防控职业病风险。引入粉尘检测系统，持续监测工作场所颗粒物浓度，确保其始终符合国家安全标准，从源头预防尘肺病的发生；噪声检测仪广泛应用于各生产区域，精准测量噪声水平，及时识别并治理超标点位，显著降低噪声对员工听力的潜在损害；使用氨气检测仪实现对氨气浓度的快速监测，有效预防泄漏引发的急性中毒，保障员工呼吸系统安全；坚持每季度开展全面自主检测，主动识别职业病危害因素，并为制定针对性防护措施提供科学依据。通过持续监测与闭环管理，催化剂公司成功构建更安全、更健康的工作环境，有效提升员工满意度与健康水平，同时减少生产损失与法律风险，为可持续发展筑牢安全防线。

Yuanda Environmental Protection's Catalyst Company attaches great importance to occupational health management and effectively mitigates occupational disease risks through systematic environmental monitoring. A dust detection system is deployed to continuously monitor particulate matter concentrations in the workplace, ensuring compliance with national safety standards and preventing pneumoconiosis at the source. Noise detectors are widely used across production areas to precisely measure noise levels, promptly identify and address exceedances, and significantly reduce potential hearing damage to employees. Ammonia detectors provide rapid monitoring of ammonia concentrations, effectively preventing acute poisoning from leaks and protecting employees' respiratory health. The company also conducts comprehensive self-inspections quarterly, proactively identifying occupational hazards and providing scientific evidence for targeted protective measures. Through continuous monitoring and closed-loop management, the Catalyst Company has successfully created a safer, healthier work environment, enhancing employee satisfaction and health while minimizing production losses and legal risks, thereby laying a solid safety foundation for sustainable development.



控制室噪声检测

Control Room Noise Monitoring



磨制间粉尘浓度检测

Dust Concentration Monitoring in Grinding Room

打造责任供应链

Building a Responsible Supply Chain

电投水电将供应链管理深度融入公司治理与可持续发展体系，视其为防范运营风险、传递责任价值、共建产业生态的关键环节。公司发布并严格执行《供应链管理规定》，系统性强化采购计划与全流程管控，持续提升供应链的韧性、效率与合规水平，为构建绿色、可靠、负责任的价值链奠定了坚实基础；践行公平合作理念，在供应链与合作中平等对待所有中小企业，构建和谐供应链生态和公平公正的市场合作环境。

SPIC Hydropower Co., Ltd. integrates supply chain management into corporate governance and sustainable development, regarding it as a critical link for mitigating operational risks, delivering responsible value, and co-creating an industrial ecosystem. The Company has issued and strictly implements the *Supply Chain Management Regulations*, systematically strengthening procurement planning and full-process oversight, continuously enhancing the resilience, efficiency, and compliance of the supply chain, and laying a solid foundation for building a green, reliable, and responsible value chain. The Company upholds the principle of fair and equitable cooperation, ensuring equal treatment of all small and medium-sized enterprises across its supply chain and business partnerships, thereby fostering a harmonious supply chain ecosystem and promoting a fair and transparent market collaboration environment.

供应商管理 Supplier Management

电投水电持续推进供应商动态评价与分级管理，引导资源向优质伙伴倾斜；主动开展ESG理念与实践培训，促进供应链上下游责任共识与能力共建；着力完善供应链安全与合规管理体系，防范潜在运营与道德风险。

SPIC Hydropower Co., Ltd. continuously promotes dynamic evaluation and tiered management of suppliers, guiding resources toward high-quality partners. The Company actively conducts ESG concept and practice training to foster shared responsibility and capacity-building across the supply chain, while focusing on improving supply chain safety and compliance management systems to prevent potential operational and ethical risks.

数读·2025 Data Insights-2025

供应商总数 **2,173** 家

Total number of suppliers: **2,173**



- 在供应商管理制度方面已尝试推进供应商绩效评价，通过统计供应商绩效评价得分，作为采购环节评价依据。

Has piloted supplier performance evaluation within the supplier management system, using aggregated performance scores as a basis for assessment in procurement processes.

- 向供应商下发诚信经营和商业道德资料，开展宣贯和培训。

Distributes materials on integrity and business ethics to suppliers and conducts related awareness campaigns and training.

- 高度重视供应链安全管理，在《供应链管理规定》中增加风险管理章节，规范供应链风险评估和管理工作，制订风险管理指标、风险处置规则及风险处置指引等，建立贯穿供应链全链条业务流程的风险管控体系。

Places strong emphasis on supply chain safety management; the *Supply Chain Management Regulations* have been updated to include a dedicated chapter on risk management, standardizing supply chain risk assessment and control processes, and establishing risk management indicators, response rules, and guidelines to build a comprehensive risk control system across the entire supply chain.

- 升级供应商风险管理系统，新增开发投标文件查重、投标人资质核验、签约风险核查、履约风险跟踪等功能模块，为供应链管理提供辅助决策。

Upgraded the supplier risk management system by adding modules for bid document duplication checks, bidder qualification verification, contract risk assessment, and performance risk tracking, providing decision-support capabilities for supply chain management.

远达环保
Yuanda Environmental Protection

- 建立覆盖182个品类、943家供应商的特色供应商资源库，通过精准遴选与协同培育，创新运用供应链管理专业方法实施供应商分级分类管理。

Established a specialized supplier resource database covering 182 categories and 943 suppliers, implementing tiered and categorized supplier management through precise selection and collaborative development, and innovatively applying professional supply chain management methods.

- 针对工程施工质量下滑、弃标弃场等问题，主动开展供应商问卷调查与访谈，调研形成《公司工程供应商调查报告》，提出规范结算流程时效、标准化供应商资质设置、采购策略调整等8项整改建议。

In response to issues such as declining construction quality and bid withdrawal or abandonment, proactively conducted supplier surveys and interviews, compiling the *Company Engineering Supplier Survey Report* and proposing eight corrective recommendations, including standardizing settlement process timelines, setting standardized supplier qualifications, and adjusting procurement strategies.

负责任采购
Responsible Procurement

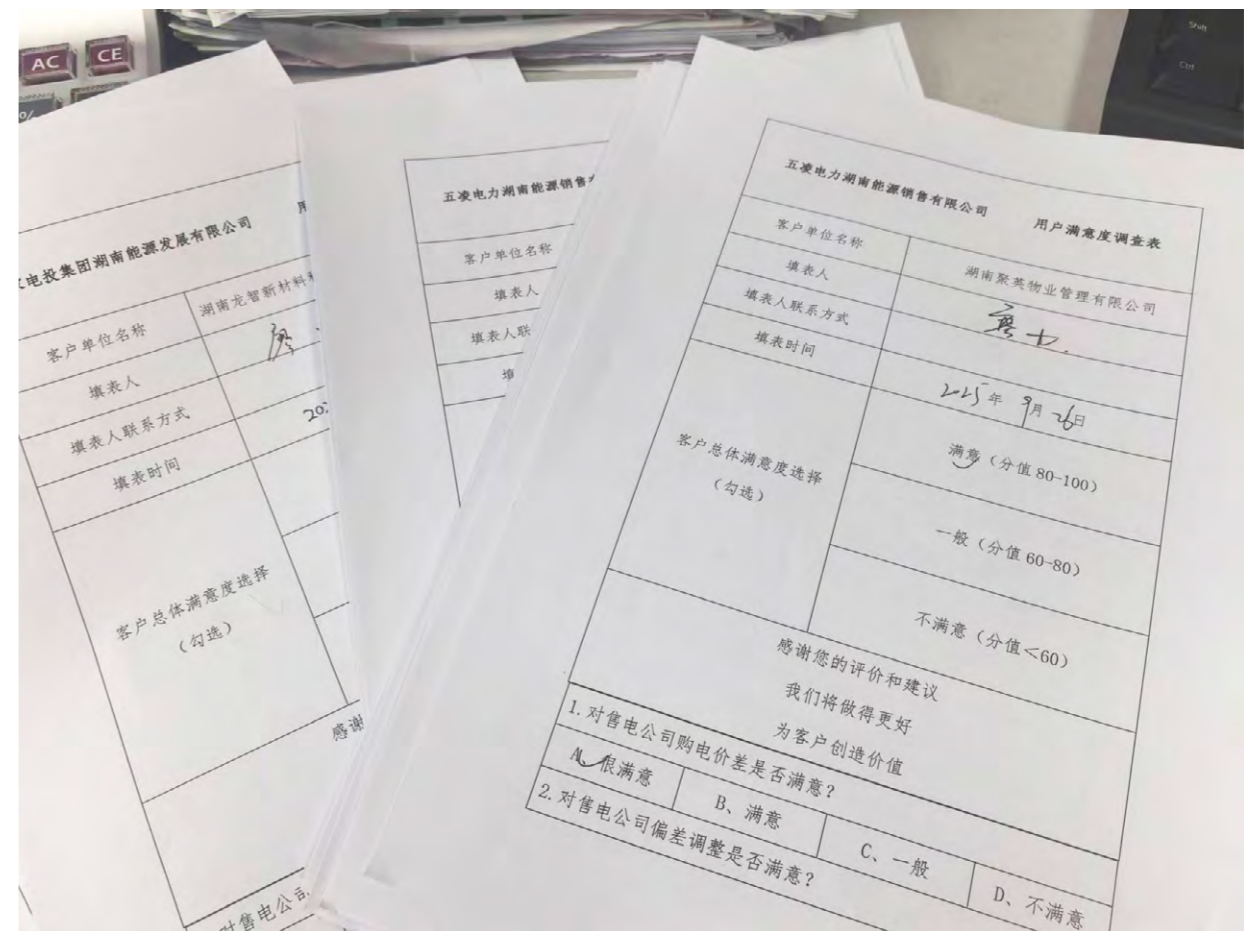
电投水电坚守廉洁、诚信的合作底线，明确反对任何形式的不正当竞争与商业欺诈；开通供应商违规投诉渠道，坚决防范和杜绝一切违背诚信廉洁准则的行为，维护公平公正的商业环境。五凌电力物资管理实现“需求—采购—履约—结算”全链条贯通，精密运行采购管理系统，提升业务效率；远达环保制定发布《采购与招标管理办法》《承揽类项目采购管理办法》等六项制度，并在系统内组织集中培训宣贯和物资与采购人员轮岗及能力提升专项行动，持续提升采购与供应链管理的能力，发布采购合规主体责任清单（2025版），定期发布采购与供应链管理简报，针对问题制定整改方案并督促整改；长洲水电开展采购与供应链相关培训，有效提升采购业务合规性和效率。

SPIC Hydropower Co., Ltd. upholds integrity and honesty as the baseline for cooperation, explicitly opposing any form of unfair competition or commercial fraud. A dedicated channel for supplier compliance complaints has been established to proactively prevent and eliminate any behavior that violates principles of integrity, thereby safeguarding a fair and just business environment. Wuling Power achieves end-to-end integration of material management across the “demand—procurement—performance—settlement” chain, operating its procurement management system with precision to enhance business efficiency. Yuanda Environmental Protection has issued six management regulations, including the *Procurement and Bidding Management Measures* and *Procurement Management Measures for Contracted Projects*. The Company organizes centralized system-based training, job rotation, and targeted capacity-building initiatives for procurement and materials personnel to continuously improve procurement and supply chain management capabilities. A 2025 version of the procurement compliance responsibility list has been published, periodic procurement and supply chain management bulletins are released, and corrective actions are formulated and monitored for any identified issues. Changzhou Hydropower conducts procurement and supply chain-related training to effectively enhance the compliance and efficiency of its procurement operations.

客户服务
Customer Service

电投水电始终以客户为中心，致力于提供卓越的产品与服务，定期通过问卷调查等方式开展客户满意度测评，范围覆盖工程建设、运营维护、产品销售等项目，满意度评价指标主要由产品、供货、安装，以及设计、设备、施工控制和运行维护、沟通交流、服务满意度中二至四项组成。2025年，参与满意度调查的客户数量243家，调查结果全部为满意，充分彰显电投水电用心做服务的责任初心。

SPIC Hydropower Co., Ltd. consistently places customers at the center of its operations, striving to deliver outstanding products and services. Customer satisfaction is regularly assessed through surveys covering projects in engineering construction, operations and maintenance, and product sales. Key satisfaction indicators include product quality, supply, installation, as well as design, equipment, construction control, operational maintenance, communication, and service satisfaction across two to four sub-indicators. In 2025, all 243 participating customers reported satisfaction, fully reflecting SPIC Hydropower Co., Ltd.’s responsible commitment to attentive and high-quality service.



- 五凌电力发放客户满意度调查问卷

Wuling Power Distributes Customer Satisfaction Survey Questionnaires

增进民生福祉

Enhancing Community Well-Being

电投水电始终将企业自身成长融入经济社会发展全局，积极履行企业公民责任，通过系统开展公益慈善、精准实施乡村振兴，致力于与运营所在地社区共建共享、协同发展，以实际行动诠释央企服务国家战略、增进民生福祉的使命担当。

SPIC Hydropower Co., Ltd. consistently integrates its corporate growth into the broader economic and social development framework, actively fulfilling its corporate citizenship responsibilities. By systematically engaging in public welfare and philanthropy and implementing targeted rural revitalization initiatives, the Company strives to build a shared and collaborative relationship with the communities in which it operates, demonstrating its commitment as a central enterprise to serving national strategies and enhancing public well-being.

志愿公益慈善 Volunteerism and Philanthropy

电投水电立足社会所需、企业所能，构建常态化、多元化的公益志愿服务体系，持续擦亮国家电投“映山红”青年志愿服务品牌，联动内外部力量，组织开展无偿献血、爱心捐赠、节能知识普及、义务植树等形式多样的公益活动，形成长效服务机制，将温暖与关爱切实传递至社区。

SPIC Hydropower Co., Ltd. bases its initiatives on societal needs and corporate capabilities, establishing a regular and diversified volunteer service system. It continuously strengthens the SPIC "Yingshanhong" Youth Volunteer Service brand, mobilizing both internal and external resources to organize a wide range of activities—including voluntary blood donation, charitable contributions, energy-saving awareness campaigns, and tree-planting initiatives. These efforts form a long-term service mechanism, effectively delivering warmth and care to local communities.

责任行动·2025 Actions & Responsibilities · 2025

参加西南区域团青协作区青年志愿服务活动，到重庆市爱心庄园开展“‘电’亮童心、绿色‘童’行”志愿服务活动，通过公益课堂和手工互动，科普安全用电和环保知识，关爱困难家庭儿童成长。

Participated in youth volunteer service activities organized by the Southwest Regional Youth League Collaboration Zone, carrying out the "Electrifying Childhood, Green Journey" volunteer program at Chongqing Charity Manor. Through public welfare classes and hands-on interactive activities, volunteers promoted electrical safety and environmental protection knowledge while supporting the growth of children from disadvantaged families.

组织参加爱心无偿献血活动，为贫困山村村民更换节能灯具、普及节能知识；为贫困山区儿童捐赠衣物，奉献温暖爱心。

Organized and participated in voluntary blood donation events, replaced energy-saving lamps and promoted energy conservation knowledge for residents in impoverished mountain villages, and donated clothing to children in underprivileged areas, spreading warmth and care.

青年志愿者走进公司暑假爱心托管班，让职工子女了解公司文化，掌握生活环保小知识，从小树立正确的生态环保观念。

Youth volunteers joined the company's summer charity care classes, helping employees' children learn about company culture and acquire basic environmental protection knowledge, instilling eco-friendly awareness from an early age.

数读·2025 Data Insights·2025

对外捐赠总投入**369.18**万元

Total external donations amounted to RMB 3.6918 million

其中定点帮扶捐赠**145**万元

Including RMB 1.45 million for targeted support

公益教育捐赠**214.18**万元

RMB 2.1418 million for public education

社会公共福利事业捐赠**10**万元

RMB 100,000 for social welfare initiatives

开展公益活动**46**次

A total of 46 public welfare activities were carried out

累计参与**253**人次

Engaging 253 participants

服务总时长达**1,915**小时

Totaling 1,915 service hours.



五凌电力沅江公司“映山红”公益行动

Wuling Power Yuanjiang Company "Yingshanhong" Public Welfare Initiative



远达环保“热血践初心 奉献显担当”无偿献血志愿服务活动

Yuanda Environmental Protection "Passion in Practice, Dedication in Action" Voluntary Service and Blood Donation Events



长洲水电与团梧州市委联合开展以“‘植’此青绿，‘树’立未来”为主题的青年植树活动

Changzhou Hydropower, in collaboration with the Wuzhou Municipal Youth League Committee, carried out a youth tree-planting activity themed "Planting Green Today, Building the Future"

助力乡村振兴 Supporting Rural Revitalization

电投水电将服务乡村振兴战略作为履行社会责任的重要抓手，坚持“输血”与“造血”相结合，在产业扶持、基础设施、民生改善等领域精准发力。2025年，公司累计投入乡村振兴专项资金426.9万元，实施帮扶项目惠及群众1,356人，有效促进了帮扶地区可持续发展与企地关系和谐。

SPIC Hydropower Co., Ltd. regards supporting the Rural Revitalization Strategy as a key lever for fulfilling its corporate social responsibility, adhering to the principle of combining “blood transfusion” with “self-sustaining development” and making targeted efforts in industrial support, infrastructure construction, and livelihood improvement. In 2025, the Company invested a total of RMB 4.269 million in dedicated rural revitalization funds, implementing assistance projects that benefited 1,356 residents and effectively promoting sustainable development in supported areas while strengthening harmonious company-community relations.



案例 CASE

长洲水电：深耕社区民生互动，践行惠民服务承诺

Changzhou Hydropower: Deepening Community Engagement and Fulfilling Commitments to Public Service

长洲水电秉持“发电为民、服务民生”理念，以发电项目为纽带，深化与周边社区、居民的沟通共建，主动回应民生关切问题，解决实际问题，构建“厂社同心”的和谐关系。

建立社区常态化沟通机制，在涉及岛上居民通行、库区灌溉、道路维修等社区利益的工作中，广泛征集居民的意见建议并加以优化落实，通过社区委员会初审、公开公司邮箱等方式处理意见并反馈结果；在乡村振兴帮扶区域，为进泗洲岛游玩旅客提供坝面通行便利，支持岛上旅游业发展；优先雇佣本地劳动力，提供安保、运维、后勤等岗位，助力群众增收，赋能区域经济发展。

Changzhou Hydropower upholds the philosophy of “Generating Power for the People, Serving the People’s Livelihood,” using its power generation projects as a bridge to strengthen communication and collaboration with surrounding communities and residents. The company proactively addresses community concerns, resolves practical issues, and fosters a harmonious “plant-community unity” relationship.

A regularized community communication mechanism has been established. For matters affecting community interests—such as island residents’ access, reservoir-area irrigation, and road maintenance—residents’ opinions and suggestions are widely collected, optimized, and implemented. Feedback is processed through community committee preliminary review and a publicly available company email. In rural revitalization support areas, the company facilitates access across dam surfaces for tourists visiting Sizhou Island, supporting local tourism development. Local labor is prioritized for positions in security, operations, and logistics, helping residents increase their income and empowering regional economic development.



案例 CASE

五凌电力乡村振兴工作队——产业赋能，通路暖心

Wuling Power Rural Revitalization Task Force — Empowering Industries, Improving Access and Livelihoods

2025年，五凌电力扎实做好黄龙山村定点帮扶工作，持续完善基础设施，制定光伏电站扩容方案，用实际行动助力当地发展。

In 2025, Wuling Power carried out focused support in Huanglongshan Village, continuously upgrading infrastructure and formulating an expansion plan for the photovoltaic power station to actively contribute to local development.

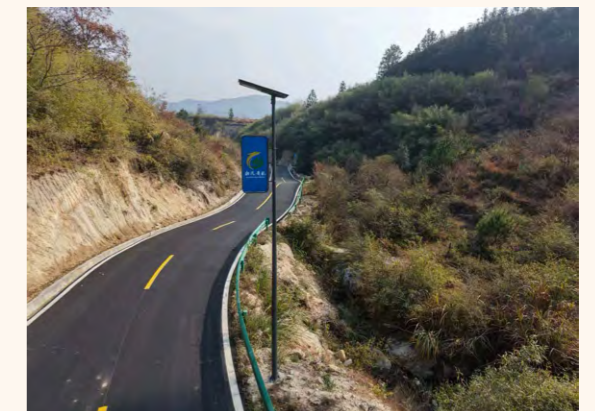
- 充分发挥黄龙山村海拔较高的区位优势，因地制宜引进广东朗姿赛尔公司，投入75万元建设520平方米无土天麻栽培生产车间并投运。同时，发挥五凌电力清洁能源开发优势，制定光伏电站扩容方案，捐赠100千瓦光伏组件建成投运。“光伏+天麻”预计每年为村民提供10余个就业岗位，增加集体收入35万元。

Leveraging Huanglongshan Village’s high-altitude location, Wuling Power introduced Guangdong Ronscell Co., Ltd., investing RMB 750,000 to build and operate a 520 m² soilless Tall Gastrodia Tuber cultivation production facility. At the same time, Wuling Power utilized its clean energy development expertise to expand the photovoltaic power station, donating 100 kW of photovoltaic modules that were installed and put into operation. The combined “Photovoltaics + Tall Gastrodia Tuber” initiative is expected to provide over 10 local jobs annually and increase the village’s collective income by RMB 350,000.



- 黄龙山村原进村道路虽已硬化，但路面狭窄，通行能力严重受限，影响村民生产生活。为切实提升基础设施、凝聚发展合力，驻村工作队于2025年组织实施了2公里通村道路拓宽改造工程，并于9月顺利竣工。道路改造完成后，通行条件显著改善：收割机、货运车辆顺畅进村，实现了粮食机械化收割和农产品便捷外运；客运班车也可直达村内，村民出行更加便利。

Although the original access road to Huanglongshan Village had been paved, its narrow width severely limited traffic capacity, affecting villagers’ daily life and production activities. To effectively improve infrastructure and consolidate development efforts, the village support team organized a 2-kilometer road widening and renovation project in 2025, which was successfully completed in September. Upon completion, traffic conditions were significantly enhanced: harvesters and cargo vehicles could smoothly enter the village, enabling mechanized grain harvesting and convenient transportation of agricultural products; passenger buses could also reach the village directly, making travel much more convenient for residents.



强基固本

Strengthening Foundations

树标杆谋长远

Setting Benchmarks for Long-Term Growth

卓越的治理能力与现代化的治理体系，是电投水电实现基业长青、迈向世界一流的保障。我们以打造国际一流产业专业化管理平台、高效能投融资平台、高素质人才培养平台、高标准改革示范平台为战略愿景，将坚持和加强党的全面领导贯穿始终，持续完善法人治理结构，筑牢全面风险管理与合规经营防线，深化与各利益相关方的互信沟通。我们致力于构建一套系统完备、科学规范、运行高效的现代企业制度体系，以一流治理护航高质量发展，为成就百年基业树立坚实的治理标杆。

Excellent governance capability and a modern governance system form the fundamental guarantee for us at SPIC Hydropower Co., Ltd. to achieve enduring business success and move toward world-class status. With the strategic vision of building an internationally leading specialized industrial management platform, a high-efficiency investment and financing platform, a high-quality talent development platform, and a high-standard reform demonstration platform, we integrate the full leadership of the Party throughout our operations, continuously improve our corporate governance structure, strengthen comprehensive risk management and compliance defenses, and deepen trust-based communication with all stakeholders. We are committed to establishing a systematic, scientifically standardized, and efficiently operating modern enterprise system, ensuring first-class governance supports high-quality development and sets a solid benchmark for a century-long enterprise.

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加强党建引领
Strengthening Party
Leadership

守法合规治理

Ensuring Legal Compliance

电投水电聚焦关键领域，筑牢合规防线，将合规要求贯穿经营全流程，严守法律法规与监管规定，为公司重组转型与稳健运营筑牢法治根基。

SPIC Hydropower Co., Ltd. focuses on key areas to strengthen compliance defenses, embedding compliance requirements throughout the entire operational process, and strictly adhering to laws, regulations, and supervisory provisions, thereby laying a solid legal foundation for corporate restructuring, transformation, and stable operations.

深化法治建设 Strengthening Rule of Law

电投水电坚定维护习近平法治思想，坚决落实第一责任人职责，健全履职机制，定期开展法治合规专项汇报，完成法治建设年度工作，强化法治考核机制，严控考核标准，针对问题及时开展督导整改，层层压实责任，推动法治建设水平整体提升。

SPIC Hydropower Co., Ltd. firmly upholds Xi Jinping's thought on the rule of law and fully implements the responsibilities of the first-in-charge. Performance accountability mechanisms have been improved, special reports on legal compliance are conducted regularly, annual rule-of-law development tasks are completed, the rule-of-law assessment system is strengthened, assessment standards are strictly controlled, issues are promptly supervised and rectified, and responsibility is enforced at all levels, thereby continuously enhancing the overall level of legal governance.



远达环保2025年法治工作会议

Yuanda Environmental Protection 2025 Rule-of-Law Work Conference

强化合规管理 Enhancing Compliance Management

电投水电健全完善以风险管理为导向、合规管理为重点、内控建设为基础的一体化管理体系，确保合规管理体系规范运作；通过专项培训与全员文化宣贯，将合规意识内化为全员行动。2025年，公司共开展法律合规培训24次，培训时长44.5小时，共参与1,163人次。

SPIC Hydropower Co., Ltd. has established and refined an integrated management system guided by risk management, focused on compliance, and grounded in internal controls, ensuring the compliance management system operates in a standardized manner. Through targeted training and company-wide culture promotion, compliance awareness has been fully embedded into employees' daily practices. In 2025, the company conducted 24 legal and compliance training sessions, totaling 44.5 hours and involving 1,163 participants.

责任行动·2025 Actions & Responsibilities · 2025

五凌电力面向全公司法律、合规、合同人员开展《中小企业支付保障条例》专项培训；开展党委中心组《中华人民共和国能源法》专项培训，向领导班子成员宣贯能源法精神；开展法律合规风险内控专题培训，培训法律部分主要介绍民事诉讼程序及应对建议。

Wuling Power conducted targeted training on the *Regulations on Payment Protection for Small and Medium Enterprises* for all legal, compliance, and contract personnel; organized special training on the *Energy Law of the People's Republic of China* for the Party Committee's central study group, promoting the spirit of the Energy Law to company leadership; and held specialized training on legal and compliance risk internal controls, with the legal module focusing on civil litigation procedures and response strategies.

远达环保通过党委中心组学习习近平法治思想；组织各单位开展法律风险内控合规培训经验分享及交流。

Yuanda Environmental Protection studied Xi Jinping's thought on the rule of law through the Party Committee's central study group and organized experience-sharing sessions on legal risk and compliance training across all units.

长洲水电关注招标采购、合同管理、业务支出及履职待遇等方面存在的风险及合规问题，开展合规巡查。

Changzhou Hydropower paid close attention to risks and compliance issues related to tendering and procurement, contract management, business expenses, and performance-related benefits, and carried out compliance inspections accordingly.

案例 CASE

五凌电力在“合规最强音”普法短视频大赛中获多项荣誉

Wuling Power Wins Multiple Honors in the "Strongest Voice of Compliance" Legal Awareness Short Film Competition

2025年12月，国家电投集团举办“宪法宣传周”暨“合规宣传周”活动，组织开展“合规最强音”普法短视频大赛。五凌电力微电影《最后一班渡船》（清水江公司创作），以总分第一的成绩获评一等奖；《初入职场有你》（资江发电总厂创作）获评优秀奖，五凌电力同时获评“优秀组织单位”。

此次获奖是对公司合规文化建设成效及组织工作的充分肯定。五凌电力将以此次表彰为契机推动合规理念深度融入生产经营环节，健全合规管理体系，筑牢企业高质量发展法治根基。

In December 2025, SPIC organized the "Constitution Publicity Week" and "Compliance Publicity Week" events, including the "Strongest Voice of Compliance" short film competition to promote legal awareness. Wuling Power's microfilm *The Last Ferry* (produced by Qingshuijiang Company) won first prize with the highest total score, while *Starting Your Career* (produced by Zijang Power Plant) received the Excellence Award. Wuling Power was also recognized as an "Outstanding Organizing Unit."

These awards fully affirm the Company's achievements in building a compliance culture and organizing related activities. Wuling Power will leverage this recognition to further embed compliance concepts into its operations, enhance its compliance management system, and strengthen the legal foundation for high-quality corporate development.

遵守商业道德 Adhering to Business Ethics

电投水电高度重视商业道德和反贪腐建设，严格遵守相关法律法规及业界公认的行为准则，坚决反对任何形式的腐败、贿赂、欺诈等不正当行为，并监督合作伙伴的商业行为，致力于营造诚信、公平、廉洁、和谐的运营环境。

SPIC Hydropower Co., Ltd. places great emphasis on business ethics and anti-corruption initiatives, strictly complying with relevant laws, regulations, and industry-recognized codes of conduct. The Company firmly opposes all forms of corruption, bribery, fraud, and other improper behaviors, while monitoring the business practices of its partners, aiming to foster an operational environment characterized by integrity, fairness, transparency, and harmony.

数读·2025 Data Insights-2025

向员工提供的反贪污培训**165**次，时长**339**小时

Anti-corruption training provided to employees: **165** sessions, totaling **339** hours

参加反贪污培训的员工**3,054**人，参与人员**10,334**人次

Employees participating in anti-corruption training: **3,054**, with a total of **10,334** attendance instances

诚信经营 Integrity in Business Operations

- 高度重视信用建设，持续规范合同履行，并按照法律规定与合同约定行使权利、履行义务，努力营造诚实守信的市场营商环境。

We attach great importance to credit and trust-building, continuously standardize contract performance, and exercise our rights and fulfill our obligations in accordance with laws and contractual agreements, striving to cultivate an honest and trustworthy business environment.

廉洁从业 Ethical Practice

- 严格遵守《中华人民共和国刑法》《中华人民共和国公司法》等法律法规，坚持不懈纵深推进反腐倡廉建设，健全防治腐败滋生蔓延的体制机制，加强廉洁宣贯和警示教育，增强全员拒腐防变意识。

We strictly comply with the *Criminal Law of the People's Republic of China*, the *Company Law of the People's Republic of China*, and other relevant laws and regulations, persistently promoting anti-corruption and integrity initiatives, improving institutional mechanisms to prevent the emergence and spread of corruption, and strengthening education on integrity and warning awareness to enhance all employees' anti-corruption vigilance.

- 深入贯彻中央八项规定精神学习教育，组织集中学习、专题研讨等活动。

We thoroughly implement the spirit of the Central Eight-Point Regulation through concentrated study sessions, focused discussions, and other learning activities.

- 全力配合中央巡视整改“回头看”，纵深推进监督向一线穿透，集中整治违规吃喝，严守“六个一律”红线。

We fully cooperate with the "Follow-up Review" of the central inspection rectification, promoting supervisory oversight down to frontline operations, addressing irregularities such as unauthorized banquets, and strictly adhering to the "Six Absolute Prohibitions" red lines.

反垄断与反不正当竞争 Anti-Monopoly and Anti-Unfair Competition

- 坚决抵制垄断及不正当竞争行为，严禁利用自身在相关领域的市场支配地位，实施高价销售商品或服务，或者以不公平低价购买商品或服务的行为。

We resolutely oppose monopolistic and unfair competition practices, strictly prohibiting the abuse of market dominance to sell goods or services at inflated prices or to procure goods or services at unfairly low prices.

举报者保护

Whistle-blower Protection

对信访举报件进行科学分流处理，设立举报电话、举报信箱以及廉洁邮箱，配备专门接待场所。

We scientifically categorize and manage petitions and reports, providing dedicated reporting channels including hotline, mailbox, and integrity email, with designated reception facilities.

建立反贪腐举报途径，设有公开举报邮箱及电话，并对举报人及举报内容严格保密。

Anti-corruption reporting channels are established, including publicly available reporting email and hotline, with strict confidentiality maintained for both whistleblowers and reported information.



五凌电力董事长、党委书记夏刚在中央八项规定精神学习教育读书班发表讲话并提出要求
Xia Gang, Chairman and Party Secretary of Wuling Power, Delivers Speech and Sets Requirements at the Study Session on the Central Eight-Point Regulation



五凌电力到湖南省委党校全面从严治党教育中心开展警示教育

Wuling Power Conducts Warning-Education at Hunan Provincial Party School's Center for Strict Party Governance

国家市场监督管理总局

经营者集中反垄断审查 不实施进一步审查决定书

国市监反垄断〔2025〕314号

五凌电力有限公司、国家电投集团水电股份有限公司：
根据《中华人民共和国反垄断法》第三十五条规定，经初步审查，认为你等申报的经营者集中行为不具有排除、限制竞争效果，依法可以不实施进一步审查。你等自即日起可以实施集中，无需申报。经营者集中反垄断审查不实施进一步审查，不影响经营者集中行为的法律效力。



公司重大资产重组项目主动开展经营者集中反垄断审查

Proactively Conducts Merger Control Review for Major Asset Restructuring Project

防范管理风险

Preventing and Managing Risks

电投水电构建起全业务、全周期的风险防控网络，持续提升风险管理水平，统筹风险防控与发展机遇，为公司转型与可持续发展提供坚实保障。

SPIC Hydropower Co., Ltd. has established a comprehensive, full-cycle risk prevention and control network, continuously enhancing its risk management capabilities and integrating risk mitigation with growth opportunities, thereby providing a solid foundation for the Company's transformation and sustainable development.

风险管理 Risk Management

电投水电聚焦防控投资经营重大风险，加强对重大投资项目的全过程、全链条经济性评估与合规性审查，建立风险预警机制，指导所属单位合理对冲经营风险，确保发展行稳致远。

SPIC Hydropower Co., Ltd. focuses on preventing and controlling major operational and investment risks. The Company strengthens economic and compliance reviews throughout the entire process and full chain of major investment projects, establishes risk early-warning mechanisms, and guides subsidiaries in effectively hedging operational risks, ensuring steady and sustainable development.



案例
CASE

远达环保多点发力，精准管理多项业务风险

Yuanda Environmental Protection Takes Multi-Pronged Approach to Precisely Manage Various Business Risks

- **境内项目风险管理：**健全两级协同监督机制，开展工程项目保险、融资担保风险自查，精准识别风险敞口，及时协调、优化完善管理机制，实现风险闭环；加强重点领域风险管控，以“风险预警、成果转化”为导向，推动问题风险“早发现、早预警、早处置”；修订发布《经营类业务市场开发负面清单》《市场营销管理规定》等制度，开展制度执行检查及培训，构建项目开发至执行的全流程风险闭环管理。

Domestic Project Risk Management: We have established a two-tier collaborative supervision mechanism, conducted self-inspections on engineering project insurance and financing guarantee risks, accurately identified risk exposures, and promptly coordinated and optimized management processes to achieve closed-loop risk management. Key risk areas are tightly controlled, guided by the principles of "risk early-warning and outcome transformation," enabling issues to be "identified early, warned early, and addressed early." We revised and issued institutional regulations such as the *Negative List for Market Development of Operating Businesses* and the *Marketing Management Regulations*, conducted compliance inspections and training, and built a full-cycle risk management system from project development to execution.

- **境外项目风险管理：**修订境外业务相关制度，新增境外工程承包项目备案要求；梳理风险清单及应对举措，加强沟通汇报。

Overseas Project Risk Management: Relevant overseas business regulations were revised, including new filing requirements for overseas engineering contracting projects. Risk lists and response measures were reviewed and clarified, and communication and reporting were strengthened.

- **应收账款风险管理：**下发专项管理通知，推动风险管控落地；全面梳理全业务领域、全合同周期应收账款，识别客户信息及信用风险；完善预警机制，按风险等级实行一至五星分类管理，定期按时准确填报风险情况表，持续提升应收账款风险管理效能。

Accounts Receivable Risk Management: Special management notices were issued to drive risk mitigation in practice. A comprehensive review of accounts receivable across all business areas and contract cycles was conducted to identify client information and credit risks. Early-warning mechanisms were improved, with one- to five-star classification implemented according to risk level. Risk reports were accurately submitted on schedule, continuously enhancing the effectiveness of accounts receivable risk management.

内控审计 Internal Control Audit

电投水电全面落实习近平总书记对审计工作的重要指示要求，紧密围绕国资监管“增强核心功能、提升核心竞争力”的核心目标，锚定内部管理巩固提升任务，扎实履行经济监督职能，为公司合规发展筑牢审计防线。

Power Investment Hydropower fully implemented General Secretary Xi Jinping's important directives on audit work. Closely aligned with the core objectives of state-owned asset supervision—"enhancing core functions and improving core competitiveness"—it focused on consolidating and elevating internal management tasks. It diligently fulfilled its economic oversight responsibilities, building a robust audit defense line for the company's compliant development.

- 以培促建，开展审计追责专项培训，邀请内外部专家进行授课，聚焦当前审计形势、投资后评价、审计整改追责等重点内容进行分享交流。

Strengthened capability development through training, delivering specialized sessions on audit accountability with contributions from internal and external experts, covering current audit developments, post-investment evaluation, and audit rectification and accountability.

- 以审代训，选派业务骨干参与国家发展改革委和国家电投集团专项审计，抽调公司发展、工程等领域多名骨干参与重点审计项目。

Enhanced professional competence through hands-on audit engagement, assigning key personnel to special audits organized by the National Development and Reform Commission and SPIC, and deploying experienced staff from development, engineering and other functions to major audit projects.

- 以赛促学，选派6名审计骨干单独组队参加中电联审计知识竞赛，完成两轮赛前专项集训，团队成绩位列国家电投集团第一。

Promoted learning through competition by forming a dedicated team of six audit professionals to participate in the CEC Audit Knowledge Competition; after two rounds of intensive pre-competition training, the team ranked first within SPIC.

五凌电力 Wuling Power



远达环保
Yuanda Environmental Protection

- 坚持强化审计监督组织保障，党委全面领导审计工作，董事会及审计与风险委员会指导审计计划制定、成果验证及反馈优化，形成“指导—验证—优化”闭环的审计工作。

Continued to strengthen organizational support for audit oversight. The Party Committee exercises overall leadership over audit work, while the Board of Directors and the Audit and Risk Committee guide audit planning, results validation, and feedback optimization, forming a closed-loop audit mechanism featuring “guidance-validation-optimization.”

- 聚焦经济责任审计与重点业务监督，推进全周期审计及整改闭环管理，健全责任追究机制，深化业审协同与成果转化，加强审计队伍建设，全面发挥审计监督保障作用。

Focused on economic responsibility audits and oversight of key business areas, advancing full-cycle audit coverage and closed-loop management of audit rectification. The company has strengthened accountability mechanisms, deepened coordination between audit and business functions and the application of audit outcomes, enhanced the development of audit teams, and ensured the full effectiveness of audit oversight as a safeguard.

长洲水电
Changzhou Hydropower

- 组织相关人员通过视频形式参加经济责任审计及内部审计技能培训，聚焦新能源项目跟踪审计实务、经济责任审计实务与案例两大核心。

Organized relevant personnel to participate in training on economic responsibility audits and internal audit skills via video sessions, with a focus on two core areas: practical approaches to follow-up audits of new energy projects, and practical methodologies and case studies in economic responsibility auditing.

保护股东权益

Protecting Shareholder Interests

电投水电持续提升披露信息的及时性、准确性、完整性与可读性，持续与投资者保持良好的互动，通过多维度的沟通，精准传递公司战略价值与发展潜力。

SPIC Hydropower Co., Ltd. continues to enhance the timeliness, accuracy, completeness, and readability of its information disclosure, maintains sound interaction with investors, and, through multi-dimensional communication, effectively conveys its strategic value and development potential.

完善信息披露 Improving Information Disclosure

电投水电始终将股东权益保护作为治理核心，严格遵循《中华人民共和国公司法》等法律法规及公司章程规定，规范决策程序与信息披露机制。先后修订公司章程、《信息披露管理办法》等制度，确保股东依法享有资产收益、参与重大决策和选择管理者等权利，及时、准确、完整披露年度报告、重大事项等信息，保障股东知情权与参与权。积极搭建多元化沟通平台，通过股东会、股东方沟通会倾听股东诉求，保障股东对电投水电重大事项的参与权和监督权，切实维护全体股东的合法权益，推动电投水电与股东实现长期共赢发展。

2025年，公司累计发布临时公告98个，覆盖重大资产重组进展、经营动态、重要合作等关键事项；按期披露定期报告4次，系统呈现公司经营业绩、财务状况及战略规划，有效维护资本市场对公司的信任和认同。电投水电坚持“业绩+价值”双轮驱动，实现市值稳步增长，夯实盈利基础，强化投资者关系管理，向资本市场动态传递持续健康发展积极信号，为市值稳定提供坚实支撑。截至2025年底，市值稳步攀升至近600亿元，稳居重庆上市公司前列。

SPIC Hydropower Co., Ltd. consistently places the protection of shareholders' rights and interests at the core of its governance. In strict compliance with applicable laws and regulations, including the Company Law of the People's Republic of China, as well as its Articles of Association, the company standardizes its decision-making procedures and information disclosure mechanisms. It has successively revised the Articles of Association and internal policies such as the Information Disclosure Management Measures, ensuring that shareholders lawfully enjoy rights including returns on assets, participation in major decision-making, and the selection of management. Annual reports and material information are disclosed in a timely, accurate, and complete manner, safeguarding shareholders' rights to information and participation. The company actively builds diversified communication platforms, including shareholders' meetings and shareholder communication sessions, to listen to shareholders' concerns, ensure their participation and oversight in major matters, effectively protect the legitimate rights and interests of all shareholders, and promote long-term win-win development between the company and its shareholders.

In 2025, a total of 98 ad hoc announcements were released, covering key matters such as the progress of major asset restructuring, operational updates, and important collaborations. Four periodic reports were disclosed on schedule, systematically presenting the company's operating perfor-

mance, financial position, and strategic plans, thereby effectively maintaining trust and recognition in the capital market. SPIC Hydropower Co., Ltd. adheres to a dual-driven approach of “performance + value,” achieving steady growth in market capitalization, consolidating its profitability foundation, strengthening investor relations management, and continuously conveying positive signals of sustained and healthy development to the capital market, providing solid support for market value stability. By the end of 2025, its market capitalization had steadily increased to nearly RMB 60 billion, ranking among the leading listed companies in Chongqing.



- 电投水电开展港交所与上交所两地信息披露及合规政策专题培训

Thematic Training on Cross-Market Information Disclosure and Compliance Requirements for the Hong Kong and Shanghai Stock Exchanges

董事会建设 Board Development

电投水电时刻保持对资本市场相关法律法规的高度关注，及时更新与完善公司章程和各单位股东会、董事会议事规则；注重独立董事专业性，通过制度有效保障独立董事履职尽责；充分发挥董事会各专门委员会的专业、科学决策作用，持续推动公司可持续健康发展；深化董事实地调研，组织公司董事实地考察重点项目和重大事项，助力科学决策；强化董事培训赋能，针对董事、高管履职需求，分层组织新任高管参加各类专项培训，夯实履职能力基础。

电投水电规范董事会会议运作，严格保障决策合规，2025年共召开14次董事会、6次股东会及8次董事长专题会。

SPIC Hydropower Co., Ltd. consistently maintains close attention to laws and regulations relevant to the capital market, promptly updating and improving the company's Articles of Association and the rules of procedure for shareholders' and board meetings across its subsidiaries. We emphasize the professional competence of independent directors and ensure, through formal mechanisms, that they can effectively fulfill their duties. The specialized committees of the board are fully leveraged to provide professional and evidence-based decision-making, continuously promoting the company's sustainable and healthy development. Directors are engaged in on-site research, with organized visits to key projects and major matters to support informed decision-making. Board training and empowerment are strengthened,

with tailored programs for directors and senior executives according to their duties, solidifying their capability to perform effectively.



公司获评2025年“上市公司董事会典型实践案例”

Yuanda Environmental Protection was awarded the "Typical Practice Case of Listed Company Board of Directors in 2025"



公司获评2025年同花顺“最具人气上市公司TOP300”

The Company was ranked among the "Top 300 Most Popular Listed Companies" by Tonghuashun for 2025



组织召开董事会

Convening the Board of Directors Meeting



加强党建引领

Strengthening Party Leadership

电投水电以习近平新时代中国特色社会主义思想为指引，紧扣国家电投集团“均衡增长战略”，以“七抓七创”推动党的建设，以高质量党建引领保障高质量发展，将党建优势转化为发展胜势，夯实治理根基。

Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, SPIC Hydropower Co., Ltd. closely aligns with the "Balanced Growth Strategy" of SPIC. We drive Party building through the "Seven Focuses and Seven Initiatives" approach, leading high-quality development with high-quality Party construction, transforming Party building advantages into development strengths, and solidifying the foundation of governance.

强化政治引领 Strengthening Political Guidance

电投水电始终坚持不懈用党的创新理论凝心铸魂，扎实组织学习宣传党的二十届四中全会精神，以更高站位、更实举措抓好全会精神贯彻落实；坚持“两个一以贯之”，持续巩固党委在公司治理中的法定地位，切实发挥党委把方向、管大局、保落实的领导作用；着力加强领导班子政治建设，不断提高“政治三力”，锻造忠诚干净担当的领导集体。

SPIC Hydropower Co., Ltd. persistently uses the Party's innovative theory to unify thought and strengthen spirit. We organize robust study and dissemination of the Fourth Plenary Session of the 20th Central Committee of the Party, ensuring its implementation with a higher perspective and more practical measures. Adhering to the principle of "two integrally maintained," we continuously consolidate the statutory role of the Party Committee in corporate governance, ensuring it leads in setting direction, managing overall operations, and overseeing implementation. Efforts focus on strengthening the political construction of leadership teams, enhancing the "three political capabilities," and building a loyal, clean, and responsible leadership collective.

深化党业融合 Deepening Integration of Party and Business

电投水电高起点推动党建工作，深化党建与业务工作融合，把党建优势更好地转化为战略执行和组织动员能力，把党的建设战略蓝图细化为可落地、可检验的扎实举措。

SPIC Hydropower Co., Ltd. advances Party building from a high starting point, deepening integration between Party and business operations. We convert Party building advantages into strategic execution and organizational mobilization capabilities, translating the Party building strategic blueprint into actionable and verifiable measures.



案例
CASE

五凌电力：筑牢战斗堡垒，以“党建+”融合实践、深挖效益
Wuling Power: Strengthening the Combat Fortress through "Party Building+" Integration and Efficiency Maximization

新能源分公司湘南党支部围绕新田20兆瓦分布式光伏项目电价补贴申领，以“揭榜挂帅”破题，将2022年底发现的补贴未到账问题列为攻坚课题挂牌，党员主动揭榜组建党员突击队，形成“党委统筹、支部牵头、突击队攻坚”推进机制。党支部深化联建共建，与省财政厅、发改委等主管部门建立沟通联动机制，突击队党员主动对接，通过政策解读、案例说明争取支持，推动各级部门完成核查复核，最终获得8项支持性批复，推动1,014.51万元补贴全额到账，为项目补充了流动资金、降低了财务费用。

The Xiangnan Party Branch of the New Energy subsidiary focused on the application for electricity subsidies for the 20 MW distributed photovoltaic project in Xintian. Using a "challenge-driven responsibility" approach, a subsidy shortfall identified at the end of 2022 was listed as a key tackling task. Party members proactively formed a task force, creating a "Party Committee coordination, branch leadership, task force execution" mechanism. The branch deepened joint and collaborative Party building, establishing communication and coordination channels with the Provincial Department of Finance and Development and Reform Commission. Task force members actively engaged with authorities, using policy interpretations and case explanations to secure

support. Ultimately, eight approvals were obtained, ensuring full receipt of subsidies totaling RMB 10.1451 million, supplementing project liquidity and reducing financial costs.



案例
CASE

党建突击队：开启新征程，整装再出发
Party Building Task Forces: Embarking on a New Journey and Setting Out Anew

2025年2月，远达环保举办新春开工仪式，领导班子出席。仪式始自庄严的升国旗环节，全体人员齐唱国歌，传递发展信心。开工当日，领导班子走访各部门送上新春祝福，暖心问候凝聚团队士气。仪式核心环节中，正式成立“红旗一号”、大火电工程建设及特许经营、CCUS及二氧化碳加氢制甲醇、光伏组件与电池资源循环利用6大攻坚突击队，主要领导亲自授旗，传递责任与使命。此次仪式吹响了公司环保产业的转型发展号角，全体员工将以昂扬斗志攻坚克难，全力实现高质量转型发展，践行“创造绿色价值”的企业使命。

In February 2025, Yuanda Environmental Protection held its Spring Commencement Ceremony, attended by the leadership team. The ceremony began with a solemn flag-raising, followed by all personnel singing the national anthem, conveying confidence in development. On the day of commencement, the leadership team visited each department to deliver New Year greetings, boosting team morale. At the core of the ceremony, six key "Red Flag No.1" task forces were formally established: the Major Thermal Power Engineering and Concession Operations Task Force, the CCUS and CO₂-to-Methanol Task Force, and the Photovoltaic Module and Battery Resource Recycling Task Force, among others. Key leaders personally presented the flags, symbolizing responsibility and mission. The ceremony sounded the clarion call for the company's environmental industry transformation. All employees are committed to tackling challenges with high morale, striving for high-quality transformation and development, and fulfilling the corporate mission of "Creating Green Value."



案例
CASE

长洲水电：党建引领聚合力品牌赋能强管理
Changzhou Hydropower: Party Building Drives Cohesion and Empowers Strong Management

长洲水电坚持以“红色党建”引领“绿色发展”，聚力打造“红星绿能·多元桂东”党建品牌，把党建优势转化为推动公司高质量发展的强大动力，推动党建与安全生产、经营管理深度融合，凝聚全员奋进合力。明晰党委治理权责，打造2个宣传阵地、建立3级责任机制、开展4项创效活动，同时优化组织架构，切实增强党务力量；通过政企联建推动多个新能源项目落地，以“党建+”模式优化物资采购流程、降低采购成本；围绕生产重点设立11个党员责任区、6个示范岗，开展多项技术攻关。党员牵头组建QC小组攻关8项课题，各责任区精准施策降本增效，公司所属党支部均获评标准化支部。

Changzhou Hydropower adheres to the principle of "Red Party Building" guiding "Green Development," focusing on creating the "Red Star Green Energy · Diversified Guidong" Party Building brand. The company transforms Party Building advantages into a strong driver for high-quality development, deeply integrating Party work with safety production and business management to unite all employees in a common effort. The company clarifies the governance responsibilities of the Party Committee, establishes two publicity platforms, implements a three-level accountability mechanism, and carries out four performance-enhancing initiatives, while optimizing organizational structure to strengthen Party affairs capacity. Through government-enterprise joint initiatives, multiple new energy projects have been successfully launched. The "Party Building +" model has optimized material procurement processes and reduced procurement costs. Focusing on key production areas, 11 Party member responsibility zones and

six model posts have been set up to carry out various technical breakthroughs. Party members lead QC teams to tackle eight key projects, and each responsibility zone implements precise measures to reduce costs and improve efficiency. All Party branches under the company have been recognized as standardized branches.



夯实组织基础
Strengthening Organizational Foundations

电投水电聚焦基层党组织全面进步、全面过硬，持续巩固组织根基。引进政治素质过硬、专业技术精湛、管理能力突出的高素质干部人才，充实核心骨干团队；以重实干、重实绩、重担当为导向，加大年轻党员培养力度，为公司实现创一流目标筑牢人才根基；积极探索与所属单位干部人才常态化轮岗交流机制，促进经验互通、能力互补，全面提升干部人才队伍的综合素质与专业水平，厚植干事创业沃土，为党建工作夯实组织基础。

SPIC Hydropower Co., Ltd. focuses on achieving comprehensive progress and overall excellence of grassroots Party organizations, continuously consolidating the organizational foundation. High-caliber cadres with strong political qualities, outstanding professional expertise, and excellent management capabilities are introduced to strengthen the core team. Guided by a focus on practical work, tangible results, and a sense of responsibility, efforts are intensified to cultivate young Party members, laying a solid talent foundation for achieving first-class company objectives. The company actively explores a regular rotation mechanism for cadres and talents across subsidiaries to promote experience sharing and complementary capabilities, comprehensively enhancing the overall quality and professional competence of the cadre team and creating fertile ground for initiative and entrepreneurship, thereby solidifying the organizational basis for Party Building.



远达环保与四川公司联合举办的2025年党支部书记培训班暨党建骨干人才培训班圆满结业

The 2025 Training Program for Party Branch Secretaries and Training Program for Core Party Building Talents, jointly organized by Yuanda Environmental Protection and SPIC Sichuan Electric Power, Successfully Concluded



五凌电力召开2025年度党组织书记抓基层党建工作述职评议会

Wuling Power Held the 2025 Annual Appraisal Meeting for Party Organization Secretaries' Performance Reports on Grassroots Party Building Work



长洲水电运行党支部上榜集团公司第二批基层示范党支部

The Operations Party Branch of Changzhou Hydropower Was Named Among the Group Company's Second Batch of Model Grassroots Party Branches



五凌电力各支部党员干部分批到湖南省委党校全面从严治党教育中心开展警示教育

Wuling Power Branch Party Members and Cadres Batch Visits to Hunan Provincial Party School's Comprehensive Strict Party Governance Education Center for Disciplinary Education



远达环保组织公司领导、中层干部、关键岗位人员等40余人前往渝北区人民法院旁听职务犯罪案件庭审，切实增强党员干部廉洁自律意识和拒腐防变能力

Yuanda Environmental Protection Sending Over 40 Leaders, Mid-Level Managers, and Key Personnel to Observe Duty-Related Crime Trials at Yubei District People's Court to Strengthen Integrity and Anti-Corruption Capabilities

严抓作风建设
Strengthening Work Style

电投水电坚决贯彻落实党中央全面从严治党新精神新部署，对标对表“五个进一步到位”重要要求，持续巩固拓展深入贯彻中央八项规定精神学习教育成果，锲而不舍纠治“四风”，弘扬求真务实、担当作为、勤俭节约的优良作风，认真履行全面从严治党“两个责任”，强化纪律教育与刚性约束，引导党员干部知敬畏、守底线，推动公司全面从严治党向纵深发展。

SPIC Hydropower Co., Ltd. resolutely implements the Party Central Committee's new guidelines and new arrangements for exercising strict self-governance in every respect. Aligning with the key requirements of the "Five Further Improvements," the company continuously consolidates and expands the achievements of in-depth study and implementation of the Central Party leadership's eight-point decision on improving work conduct, persistently rectifying the "Four Malfeasances". The company promotes the fine work ethos of seeking truth from facts, taking responsibility, and practicing diligence and frugality. It conscientiously fulfills the "dual responsibilities" for Party conduct and integrity, strengthens disciplinary education and rigid constraints, guides Party members and cadres to remain in awe of the Party and observe the bottom line, and drives the in-depth advancement of strict self-governance across all aspects of the company.

未来展望

Looking Forward

山海寻梦，不觉其远；前路迢迢，阔步而行。

Seeking Dreams Across Mountains and Seas, We Press Forward Unceasingly.

展望2026，站在电投水电平台高质量发展的新起点，我们将凝聚起砥砺前行的磅礴力量，更加紧密地团结在以习近平总书记为核心的党中央周围，在国家电投集团党组的坚强领导下，始终秉持“闯”的精神破局攻坚、以“干”的劲头务实笃行、靠“严”的作风筑牢根基，以起步即冲刺、开局即决战的奋斗姿态，奋力开启电投水电从“平稳起航”到“行业领航”的发展新征程，以清洁能源的澎湃动能贡献社会的可持续发展，以优异的成绩回报股东、贡献社会，为谱写中国式现代化建设的能源篇章贡献电投力量、展现水电担当！

Looking ahead to 2026, standing at the new starting point of SPIC Hydropower Co., Ltd.'s high-quality growth, we will unite our formidable strength to advance with determination. We will remain closely aligned around the CPC Central Committee with Comrade Xi Jinping at its core, and under the strong leadership of the Party Committee of SPIC, consistently upholding the spirit of "bold exploration" to break through challenges, the drive of "practical action" to implement with diligence, and the rigor of "strict discipline" to consolidate our foundation. With a mindset of sprinting from the outset and decisive action from the start, we will strive to propel SPIC Hydropower Co., Ltd. from "a steady launch" to "industry leadership." We aim to leverage the dynamic power of clean energy to contribute to sustainable development, deliver excellent results to our shareholders, serve society, and contribute SPIC's strength and hydropower's commitment to advancing China's modernization, writing a distinguished chapter in the nation's energy development.



附录 Appendix

关键绩效 Key Performance

指标名称	单位	2025年
环境范畴		
总取水量	吨	12233159.10
总耗水量	吨	12125559.10
循环水量	吨	11895534.19
新鲜水用量	万吨	74.51
总用电量 (公司本部)	万千瓦时	103.08
办公用电中清洁能源使用量 (绿电)	千瓦时	1474600.00
天然气使用量	立方米	278.84
汽油使用量	吨	399.43
柴油使用量	吨	117.428583
外购电力使用量	兆瓦时	57321.5936
风电使用量	兆瓦时	69702.693
光伏发电使用量	兆瓦时	10889.492
水电使用量	兆瓦时	104044.813
非化石能源使用总量	吨标准煤	10793.50
能源消耗总量	吨标准煤	11552.67
废气污染物排放总量	吨	9.237
其中: 颗粒物排放量	吨	3.511
废水污染物排放总量	吨	564908.893
其中: COD排放量	吨	0.010453696
氨氮排放量	吨	0.00252912
工业废水排放量	吨	3103
生活废水排放量	吨	561805.88

Indicator name	Unit	2025
Environmental category		
Total water intake	Tons	12233159.10
Total water consumption	Tons	12125559.10
Circulating water volume	Tons	11895534.19
Freshwater consumption	Ten thousand tons	74.51
Total electricity consumption (company headquarters)	10,000 kWh	103.08
Clean energy (green power) used in office electricity consumption	kWh	1474600.00
Natural gas consumption	Cubic meters	278.84
Gasoline consumption	Tons	399.43
Diesel consumption	Tons	117.428583
Purchased electricity consumption	MWh	57321.5936
Wind power consumption	MWh	69702.693
Photovoltaic power consumption	MWh	10889.492
Hydropower consumption	MWh	104044.813
Total non-fossil energy consumption	Tons of standard coal equivalent	10793.50
Total energy consumption	Tons of standard coal equivalent	11552.67
Total emission of air pollutants	Tons	9.237
Including: particulate matter emissions	Tons	3.511
Total discharge of wastewater pollutants	Tons	564908.893
Including: COD discharge	Tons	0.010453696
Ammonia nitrogen discharge	Tons	0.00252912
Industrial wastewater discharge	Tons	3103
Domestic wastewater discharge	Tons	561805.88

指标名称	单位	2025年
固体废弃物处置总量	吨	2199328.442
一般工业固体废物处置量	吨	2196532
所产生有害废弃物总量	吨	2806.104
有害废弃物处理处置总量	吨	2806.104
温室气体排放总量	吨二氧化碳当量	34285.32
范围一排放量	吨二氧化碳当量	1594.82
范围二排放量	吨二氧化碳当量	32690.5
所产生发电副产品总量	吨	1725100
发电副产品资源循环利用量	吨	1749100
综合智慧能源项目规模	兆瓦时	16.299265
生态环保投入	万元	56721.3022
各附属公司通过ISO14001环境管理体系认证的数量	家	8
环境事件受处罚金额	万元	55
环保培训次数	次	800
环保培训参加人次	人次	15355
环保培训小时	小时	3924.02
环保隐患排查次数	次	360
环保隐患排查整改项数	项	1303
为应对气候相关风险和机遇而发生融资金额	万元	2076294
为应对气候相关风险和机遇而发生的投资金额	万元	232185.66
参与绿证交易规模	张	1241916
参与绿证交易产生的收入	万元	489.238782
参与绿色电力交易规模	千瓦时	171630318
参与绿色电力交易产生的收入	万元	1187.815356
绿色低碳转型投入	万元	5843.66
社会范畴		
员工总数	人	4456

Indicator name	Unit	2025
Total solid waste disposal	Tons	2199328.442
General industrial solid waste disposal	Tons	2196532
Total amount of hazardous waste generated	Tons	2806.104
Total volume of hazardous waste treated and disposed of	Tons	2806.104
Total greenhouse gas emissions	tCO ₂ e	34285.32
Scope 1 emissions	tCO ₂ e	1594.82
Scope 2 emissions	tCO ₂ e	32690.5
Total volume of by-products from power generation	Tons	1725100
Volume of power generation by-products recycled for resource utilization	Tons	1749100
Scale of integrated smart energy projects	MWh	16.299265
Investment in ecological and environmental protection	RMB 10,000	56721.3022
Number of subsidiaries that have obtained ISO 14001 environmental management system certification	Companies	8
Amount of penalties for environmental incidents	RMB 10,000	55
Number of environmental protection training sessions	Times	800
Number of participants in environmental protection training	Person-times	15355
Hours of environmental protection training	Hours	3924.02
Number of environmental hazard inspections	Times	360
Number of environmental hazards inspected and rectified	Items	1303
Amount of financing for addressing climate-related risks and opportunities	RMB 10,000	2076294
Amount of investment made to address climate-related risks and opportunities	RMB 10,000	232185.66
Scale of participation in green certificate trading	Pcs	1241916
Revenue generated from participation in green certificate trading	RMB 10,000	489.238782
Scale of participation in green power trading	kWh	171630318
Revenue generated from participation in green power trading	RMB 10,000	1187.815356
Investment in green and low-carbon transition	RMB 10,000	5843.66
Social category		
Total number of employees	Persons	4456

指标名称	单位	2025年
女性员工总数	人	963
高级管理层女性人数	人	4
新增员工人数	人	172
员工总体流失人数	人	56
员工人均带薪休假天数	天	5.54
员工社会保险缴纳覆盖率	%	100
少数民族	人	361
培训支出费用	万元	2119.67138
培训总人次	人次	132262
员工培训时数	小时	326416.5
引进人才数	人	88
员工关爱与帮扶投入	万元	425.29
员工关爱活动总次数	次	76
召开职工代表大会	次	1
参与满意度调查的员工数量	人	117
调查结果为满意的员工数量	人	117
信访投诉事件数量	件	4
信访投诉事件办结数量	件	4
安全隐患排查次数	次	570
安全隐患排查问题数	个	12895
安全隐患整改问题数	个	12762
安全应急演练次数	次	1260
安全应急演练总时长	小时	2095.5
安全应急演练参与人次	人次	16371
安全培训次数	次	2423
安全培训时长	小时	79129.5
安全培训参与人次	人次	51318

Indicator name	Unit	2025
Total number of female employees	Persons	963
Number of females in senior management	Persons	4
Number of new employees	Persons	172
Total number of employee turnovers	Persons	56
Average number of paid leave days per employee	Days	5.54
Employee social insurance coverage rate	%	100
Ethnic minorities	Persons	361
Training expenditures	RMB 10,000	2119.67138
Total number of training participants	Person-times	132262
Employee training hours	Hours	326416.5
Number of talents introduced	Persons	88
Investment in employee care and assistance	RMB 10,000	425.29
Total number of employee care activities	Times	76
Convening of employee representative congress	Times	1
Number of employees participating in surveys	Persons	117
Number of employees satisfied in surveys	Persons	117
Number of petition and complaint incidents	Pieces	4
Number of petition and complaint incidents resolved	Pieces	4
Number of safety hazard inspections	Times	570
Number of issues found in safety hazard investigations	Units	12895
Number of safety hazards rectified	Units	12762
Number of safety and emergency drills	Times	1260
Total duration of safety and emergency drills	Hours	2095.5
Number of participants in safety and emergency drills	Person-times	16371
Number of safety training sessions	Times	2423
Duration of safety training	Hours	79129.5
Number of participants in safety training	Person-times	51318

指标名称	单位	2025年
安全培训投入总额	万元	210
承包商培训时长	小时	34359
承包商培训次数	次	6763
应参与培训的承包商数量	家	411
参与培训的承包商数量	家	411
安全生产投入总金额	万元	22608.973
各附属公司通过ISO 45001职业健康管理体系认证的数量	家	16
员工体检覆盖率	%	93
因工作关系而死亡的员工人数	人	0
因工作关系而死亡的承包商员工人数	人	0
职业病发生数量	人	0
职业病发生率	%	0
员工职业健康安全投入	万元	1314.6098
因工伤损失工作日数	天	0
设备安全事故数量	起	0
电力安全事故数量	起	0
公益活动参与总次数	次	46
公益活动参与总人次	人次	253
公益活动参与总时数	小时	1915
乡村振兴投入金额	万元	426.9
惠及群体数量	人	1356
数字化转型投入	万元	12716.3265
研发人员数量	人	369
年内开展的科技创新项目数量	个	168
产学研合作伙伴数量	个	17
科技创新投入金额	亿元	2.151495103
科研培训活动次数	次	151

Indicator name	Unit	2025
Total investment in safety training	RMB 10,000	210
Duration of contractor training	Hours	34359
Number of contractor training sessions	Times	6763
Number of contractors required to participate in training	Companies	411
Number of contractors participating in training	Companies	411
Total investment in work safety	RMB 10,000	22608.973
Number of subsidiaries that have obtained ISO 45001 occupational health and safety management system certification	Companies	16
Employee health check coverage rate	%	93
Number of employee who died due to work-related incidents	Persons	0
Number of contractor employees who died due to work-related incidents	Persons	0
Number of occupational disease cases	Persons	0
Occupational disease incidence	%	0
Investment in employee occupational health and safety	RMB 10,000	1314.6098
Number of workdays lost due to work-related injuries	Days	0
Number of equipment safety incidents	Incidents	0
Number of power safety incidents	Incidents	0
Total number of participations in public welfare activities	Times	46
Total number of participants in public welfare activities	Person-times	253
Total hours of participation in public welfare activities	Hours	1915
Investment amount in rural revitalization	RMB 10,000	426.9
Number of beneficiaries	Persons	1356
Investment in digital transformation	RMB 10,000	12716.3265
Number of R&D personnel	Persons	369
Number of science and technology innovation projects carried out during the year	Units	168
Number of industry-university-research partners	Units	17
Investment amount in technological innovation	RMB 100mn	2.151495103
Number of scientific research training activities	Times	151

指标名称	单位	2025年
科研培训活动参与人次	人次	1515
科研培训活动时长	小时	1689.5
截至年底累计授权专利总件数	件	987
授权发明专利	件	296
授权实用新型专利	件	683
授权外观专利	件	8
年度内授权专利	件	63
授权发明专利	件	43
授权实用新型专利	件	20
年度内申请专利	件	87
申请发明专利	件	83
申请实用新型专利	件	4
年度内标准制定总数	件	9
其中：国家标准制定	件	6
团体标准制定	件	2
企业标准制定	件	1
年度内科技创新获奖数量	项	20
其中：省部级	项	1
地市级	项	1
行业级	项	14
企业级	项	4
年度内科技研发平台数量	个	5
省级科技研发平台	个	3
市级科技研发平台	个	1
企业级科技研发平台	个	1
网络安全投入金额	万元	1341.03531
供应商总数	家	2173

Indicator name	Unit	2025
Number of participants in scientific research training activities	Person-times	1515
Duration of scientific research training activities	Hours	1689.5
Cumulative number of patents granted by the end of the year	Pieces	987
Granted invention patents	Pieces	296
Granted utility model patents	Pieces	683
Granted design patents	Pieces	8
Patents granted within the year	Pieces	63
Granted invention patents	Pieces	43
Granted utility model patents	Pieces	20
Patent applications filed during the year	Pieces	87
Invention patent applications	Pieces	83
Utility model patent applications	Pieces	4
Total number of standards developed during the year	Pieces	9
Including: national standards developed	Pieces	6
Development of group standards	Pieces	2
Development of corporate standards	Pieces	1
Number of S&T innovation awards within the year	Items	20
Including: provincial and ministerial level	Items	1
Prefectural and municipal level	Items	1
Industry level	Items	14
Corporate level	Items	4
Number of S&T R&D platforms within the year	Units	5
Provincial-level S&T R&D platforms	Units	3
Municipal-level S&T R&D platforms	Units	1
Enterprise-level S&T R&D platforms	Units	1
Cybersecurity investment amount	RMB 10,000	1341.03531
Total number of suppliers	Companies	2173

指标名称	单位	2025年
公司及各所属公司通过ISO 9001质量管理体系认证的数量	家	26
报告期内发生的产品和服务相关的安全与质量重大责任事故损害涉及的金额	万元	0
因健康与安全原因须撤回和召回的产品数量	件	0
因健康与安全原因须撤回和召回的产品百分比	%	0
客户总数量	家	377
参与满意度调查的客户数量	家	243
满意度调查结果为满意的客户数量	家	243
治理范畴		
董事会人数	人	11
董事会女性人数	人	3
董事会女性人数占比	%	27.27
独立董事人数	人	4
召开董事会次数	次	14
反商业贿赂及反贪污培训时长	小时	514
重大诉讼案件数量	件	7
法律合规培训次数	次	24
法律合规培训时长	小时	44.5
法律合规培训参与人次	人次	1163
向员工提供的反贪污培训次数	次	165
向员工提供的反贪污培训时长	小时	339
参加反贪污培训的员工人数	人	3054
参加反贪污培训的员工人次	人次	10334
反贪腐举报数量	件	1
贪污诉讼案件数量	件	0
召开股东大会次数	次	6
披露的定期报告数量	个	4
发布的临时公告数量	个	98

Indicator name	Unit	2025
Number of the Company and its affiliated companies that have obtained ISO 9001 quality management system certification	Companies	26
Amount of damages involved in major liability accidents related to product and service safety and quality during the reporting period	RMB 10,000	0
Number of products withdrawn and recalled for health and safety reasons	Pieces	0
Percentage of products withdrawn and recalled for health and safety reasons	%	0
Total number of customers	Companies	377
Number of customers participating in satisfaction surveys	Companies	243
Number of customers satisfied in satisfaction surveys	Companies	243
Governance category		
Number of board members	Persons	11
Number of female board members	Persons	3
Proportion of female board members	%	27.27
Number of independent directors	Persons	4
Number of board meetings held	Times	14
Duration of anti-commercial bribery and anti-corruption training	Hours	514
Number of major lawsuits	Times	7
Number of legal compliance training sessions	Times	24
Duration of legal compliance training	Hours	44.5
Number of participants in legal compliance training	Person-times	1163
Number of anti-corruption training sessions provided to employees	Times	165
Duration of anti-corruption training provided to employees	Hours	339
Number of employees participating in anti-corruption training	Persons	3054
Number of employees participating in anti-corruption training	Person-times	10334
Number of anti-corruption reports	Pieces	1
Number of corruption lawsuits	Pieces	0
Number of general meetings held	Times	6
Number of periodic reports disclosed	Units	4
Number of ad-hoc announcements issued	Units	98

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意见反馈 Feedback

尊敬的读者：

感谢您阅读本报告！为持续改进公司ESG工作，不断提高践行ESG理念的能力和水平，我们非常希望倾听您的意见和建议。

恳请您协助完成反馈意见表中提出的相关问题，并选择以下方式反馈给我们。

地址：重庆市两江新区黄环北路10号1栋

电话：(023) 65933055

传真：(023) 65933000

邮编：401122

电子邮箱：ydhb_dm@spic.com.cn

您的信息

姓名：_____ 工作单位：_____ 职务：_____

联系电话：_____ 电子邮件：_____

1.您对公司ESG报告的总体评价是？

好 较好 一般

2.您认为本报告是否能反映公司对经济、社会和环境的影响？

能 否

3.您认为本报告所披露信息、数据、指标的清晰、准确、完整度如何？

好 较好 一般

4.您对本报告的意见和建议：

Dear Reader,

Thank you for reading this report! To continuously improve the Company's ESG practices and enhance our ability to implement ESG principles, we highly value your opinions and suggestions.

We kindly ask you to complete the feedback form and provide your responses using one of the following channels:

Add.: Building 1, No. 10 Huanghuan North Road, Liangjiang New Area, Chongqing

Tel.: (023)65933055

Fax: (023)65933000

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Email: ydhb_dm@spic.com.cn

Your Information

Name:_____ Organization:_____ Position:_____

Phone:_____ Email:_____

1.How do you overall evaluate this report?

Excellent Good Average

2.Do you think this report reflects the Company's significant impacts on the economy, society, and the environment?

Yes No

3.Are the information, indicators, and data disclosed in this report clear, accurate, and complete?

Excellent Good Average

4.Your comments and suggestions on this report:

