



2025 年度 环境、社会和公司治理 (ESG) 报告

Environmental, Social and Governance (ESG) Report

国电投绿色能源股份有限公司

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关于本报告

About This Report

报告简介

国电投绿色能源股份有限公司发布的关于环境、社会和公司治理的系列报告，本着客观、真实的原则，详细披露了公司 2025 年度在积极承担社会责任、有效管理 ESG 风险与机遇等方面的具体举措、重点实践、亮点案例和关键绩效，旨在回应利益相关方的期望，未来更好地履行社会责任。

报告编制依据

- 深圳证券交易所上市公司自律监管指南第 3 号可持续发展报告编制 (2026 年修订)
- 国务院国资委《央企控股上市公司 ESG 专项报告参考指标体系》
- 《企业可持续披露准则第 1 号——气候 (试行)》
- 全球报告倡议组织《可持续发展报告标准》(GRI)
- 中国社会科学院《中国企业社会责任报告编写指南 (CASS-ESG5.0)》
- 联合国可持续发展目标 (SDGs)

报告期间

本报告为年度报告，报告期间与公司年报保持一致，即 2025 年 1 月 1 日至 2025 年 12 月 31 日。同时，为增强本报告的可比性和完整性，部分内容可能追溯至过往年份，或具有一定前瞻性描述。

报告范围

除另作说明外，本报告范围与公司年报合并报表范围保持一致。

Overview

The environmental, social and governance report series published by SPIC Green Energy Co., Ltd., in the spirit of objectivity and authenticity, provides a detailed disclosure of the Company's specific initiatives, key practices, highlight case studies, and key performance indicators in actively fulfilling social responsibilities and effectively managing ESG risks and opportunities in 2025. This report aims to respond to stakeholder expectations and better fulfill social responsibilities in the future.

Basis of Preparation

- Self-Regulatory Guidance No. 3 for Companies Listed on Shenzhen Stock Exchange—Preparation of Sustainability Report (2026 Revised Version)
- SASAC Reference Indicator System for ESG Special Reports of Central Enterprise-controlled Listed Companies
- Corporate Sustainability Disclosure Standard No.1 - Climate (Trial)
- Global Reporting Initiative Sustainability Reporting Standards (GRI)
- Chinese Academy of Social Sciences Guidelines for the Preparation of CSR Reports in China (CASS-ESG5.0)
- United Nations Sustainable Development Goals (SDGs)

Reporting Period

This is an annual report and its Reporting Period is consistent with that of the Company's annual report, covering January 1, 2025 to December 31, 2025. To enhance the comparability and completeness of this report, some content may trace back to previous years or include forward-looking descriptions.

Reporting Scope

Unless otherwise specified, the information and data in this report are consistent with the scope of the Company's annual report.

信息来源

除特殊说明之外，本报告所引用的信息与数据均来源于本公司的正式文件、统计报告、财务报告或有关公开文件。电投绿能承诺本报告内容不存在虚假记载、误导性陈述或重大遗漏，董事会对报告内容的真实性、准确性负责。

汇报原则

本报告遵循重要性、量化、平衡和一致性的汇报原则。

称谓说明

为便于表述，本报告中的“电投绿能”“我们”“公司”均指代“国电投绿色能源股份有限公司”。

报告获取途径

本着环境友好原则，我们减少纸质版报告印刷。您可以在国电投绿色能源股份有限公司官方网站下载本报告电子版。

报告批准

本报告经管理层确认后，于 2026 年 4 月 17 日获董事会审议通过。

地址：吉林省长春市人民大街 9699 号

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Information Sources

Unless otherwise specified, the information and data cited in this report are derived from the Company's official documents, statistical reports, financial reports, or relevant public documents. SPIC GECL undertakes that the content of this report contains no false records, misleading statements, or material omissions. The Board of Directors is responsible for the truthfulness and accuracy of the report's content.

Reporting Principles

This report adheres to the principles of materiality, quantification, balance, and consistency.

Explanation of Terms

For ease of reference, the terms "SPIC GECL," "we," and "the Company" in this report refer to "SPIC Green Energy Co., Ltd."

Access to the Report

In the interest of environmental friendliness, we have reduced the printing of paper copies. You can download the electronic version of this report from the official website of SPIC Green Energy Co., Ltd.

Reporting Approval

This report was confirmed by management and approved by the Board of Directors on April 17, 2026.

Address: No. 9699, Renmin Street, Changchun, Jilin Province

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董事长致辞

Message from the Chairman

时序更替，华章日新。2025 年，是电投绿能锚定“十五五”规划蓝图、深化 ESG 实践的关键一年。作为国家电投集团实际控制的上市公司和面向全球发展的唯一绿色氢能能源产业平台，我们始终以习近平新时代中国特色社会主义思想为指引，将可持续发展理念深度融入战略决策与运营管理全流程，在守护国家能源安全、加快新型能源体系建设的道路上笃定前行，用实际行动诠释能源央企的使命与担当。

这一年，公司资产总额 887.75 亿元，装机容量达 1,631.92 万千瓦，清洁能源占比攀升至近 80%，绿色转型成效持续领跑行业。这份成绩单的背后，是我们二十余年深耕能源领域的坚守，更是对“双碳”目标的矢志不渝。

我们坚持战略自信，以“向绿”发展筑牢产业根基。立足国家能源安全新战略，我们锚定“新能源+”与绿色氢能能源双赛道，按下高质量发展“加速键”，擘画“十五五”期间投资规划发展蓝图。“新能源+”赛道我们推行“1+N”发展，以吉林作“头雁”引领、推动全国“新能源+”基地多点突破，凭借成熟的基地开发经验将产业触角向沿海及重点内陆区域延伸，着力开发 N 个百万千瓦级能源基地，打造“新能源+”产业雁阵式格局。在绿色氢能能源赛道，我们紧跟国家氢能综合应用试点政策导向，推行“三三三”发展策略，明确技术创新、产品拓展、产业布局等高质量起步发展路径，推动绿氢在工业多元场景的规模化应用，为加快氢能产业成为新的经济增长点贡献力量。

我们坚持治理现代，以深化改革适应市场规则。我们持续优化公司治理结构，厘清权责边界，构建专业化、协同化管理体系，引入高素质人才队伍，不断完善绿色氢能能源产业平台顶层设计，全面提升“投资、开发、建设、技术、创新、运营”六大核心能力。我们深度践行 ESG 理念，对标国际先进标准，完善 ESG 管理机制与信息披露体系，以透明化运营赢得资本市场信任，为企业长远发展奠定坚实基础。

我们坚持初心使命，以责任担当诠释央企本色。在安全环保方面，我们坚守底线、不遗余力。我们始终坚持绿色低碳发展，以实际行动守护生态环境；在能源保供方面，我们充分发挥煤电兜底保障作用，协同新能源灵活调度，在保供重要时段、重点区域，彰显“顶梁柱”担当；在社会责任方面，我们深耕乡村振兴与社区共建，做到精准帮扶，积极公益捐赠，赢得社会广泛认可。

能源革命浪潮奔涌向前，可持续发展已是时代必然。2026 年，我们将始终坚持党对国有企业的全面领导，继续坚守“红”的信念，弘扬“创”的精神、“闯”的劲头、“干”的作风，以一体化大基地为支点，深化“新能源+”与绿色氢能能源双赛道布局，推动公司持续高质量发展。我们将为“在 2030 年建成世界一流清洁能源企业目标”而不懈奋斗，为我国构建新型能源体系、实现“双碳”目标贡献电投绿能力量。

我们深知，ESG 之路没有终点，唯有久久为功。期待与各位合作伙伴、投资者、员工及社会各界携手并肩，以责任担当为笔，以绿色发展为墨，共同书写新时代能源可持续发展的新篇章！

As times evolve and new chapters unfold. The year 2025 marked a pivotal year for SPIC GECL as it anchored its vision for the 15th Five-Year Plan and deepened its ESG practices. As a listed company under the actual control of the State Power Investment Corporation and the sole global green hydrogen-based energy industry platform, we consistently adhere to the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era. We deeply integrate the concept of sustainable development into the entire process of strategic decision-making and operational management, resolutely advancing on the path of safeguarding national energy security and accelerating the construction of a new energy system. through concrete actions, we demonstrate the mission and responsibility of a central energy enterprise.

This year, the Company's total assets reached RMB 88.775 billion, with an installed capacity of 16.3192 million kilowatts. The proportion of clean energy climbed to nearly 80%, continuing to lead the industry in green transition progress. Behind these achievements lies our over two decades of dedication to the energy sector, as well as our unwavering commitment to the "Dual Carbon" goals.

We uphold strategic confidence, solidifying our industrial foundation through "green-oriented" development. Rooted in the national energy security strategy, we have focused on two core tracks: "New Energy+" and green hydrogen-based energy. We have accelerated high-quality development and mapped out an investment and development blueprint for the 15th Five-Year Plan period. In the "New Energy+" track, we have implemented a "1+N" development model, with Jilin base serving as the lead hub to drive breakthroughs in "New Energy+" bases nationwide. Leveraging mature base development expertise, we have extended our presence to coastal and key inland regions, focusing on the development of multiple million-kilowatt-level energy bases, thereby creating a leading cluster in the "New Energy+" sector. In the green hydrogen-based energy track, we closely follow the national policy direction for hydrogen energy comprehensive application pilots, implementing a "Three-Three-Three" (developing three core product lines - green ammonia, green methanol, and green aviation fuel - while establishing three resource streams domestically and expanding into three key regions internationally.) development strategy. We define high-quality development paths for technological innovation, product expansion, and industrial layout, promoting the large-scale application of green hydrogen in diverse industrial scenarios, and contributing to accelerating the hydrogen energy industry as a new economic growth driver.

We uphold modern governance, adapting to market rules through deepened reforms. We have continuously optimized our corporate governance structure, clarified responsibilities and authority, and established a specialized, collaborative management system. By introducing high-caliber talent, we have steadily improved the top-level design of our green hydrogen-based energy industry platform, comprehensively strengthening six core capabilities: investment, development, construction, technology, innovation, and operations. We have deeply embedded ESG principles into our operations, benchmarking against advanced international standards, and enhancing ESG management mechanisms and disclosure systems. through transparent operations, we have earned the trust of the capital market, laying a solid foundation for the Company's long-term development.

We uphold our original aspirations and mission, embodying the role of a central government-owned enterprise through responsibility and commitment. In terms of safety and environmental protection, we have remained steadfast, sparing no effort. We have consistently pursued green and low-carbon development, taking concrete actions to protect the environment. In ensuring energy supply, we have fully leveraged the role of coal-fired power as a foundation, coordinating the flexible dispatch of new energy to play our backbone role during critical periods and in key regions. In fulfilling social responsibilities, we have been deeply involved in rural revitalization and community engagement, providing targeted assistance and actively contributing to public welfare initiatives, earning widespread recognition from society.

The wave of energy revolution surges forward, making sustainable development an inevitable trend of our time. In 2026, we will continue to uphold the full leadership of the Party over state-owned enterprises, remaining steadfast in our commitment to our core principles. We stay true to the "red" belief, fostering innovation, forging ahead, and taking solid action. Leveraging integrated large-scale bases as key focal points, we will deepen our focus on both the "New Energy+" and green hydrogen-based energy tracks, driving the Company's sustained high-quality development. We will work tirelessly toward our goal of becoming a world-class clean energy enterprise by 2030, contributing to the development of a new energy system and the achievement of the "Dual Carbon" goals.

We are deeply aware that the ESG journey has no end point; it requires persistent, long-term effort. We look forward to joining hands with our partners, investors, employees, and all sectors of society. With responsibility as our brush and green development as our ink, we will together write a new chapter in the sustainable development of the energy industry in the new era.

走进电投绿能

About SPIC GECL

公司简介

国电投绿色能源股份有限公司（原吉林电力股份有限公司）于 2002 年 9 月在深圳证券交易所上市，证券简称“电投绿能”，股票代码“000875”，是国家电投面向全球布局的绿色氢能能源产业平台公司，全面负责国家电投境内、外绿色氢能能源项目的“投建营、产供销”一体化管理，主要业务涉及新能源、绿色氢能能源、火电、供热、电站服务等领域。

在国家电投党组的坚强领导和全体股东的支持下，历届董事会带领公司全体干部员工始终坚持“红”的信念，大力弘扬“创”的精神、“闯”的劲头、“干”的作风，紧紧抓住国民经济快速发展和能源绿色低碳转型的重大历史机遇，打造了吉林、安徽、江西、河北、山东等区域新能源基地，开创了绿色氢能能源新产业。经过多年的深耕细作，成功走出了一条兼具行业特色与自身优势的“绿色、创新、融合”高质量转型发展之路。截至报告期末，公司资产总额 887.75 亿元，装机规模 1,631.92 万千瓦，其中清洁能源装机 1,301.92 万千瓦，占比 79.78%，清洁能源装机发电量 177.12 亿千瓦时，占比 61.51%，位列“全球新能源企业 500 强”第 271 名。

展望未来，公司以习近平新时代中国特色社会主义思想为指导，完整、准确、全面贯彻新发展理念，深入践行“四个革命、一个合作”能源安全新战略，贯彻落实“均衡增长战略”，坚持吉林省区域引领、N 个区域并进的“1+N”发展策略，全力打造具有核心竞争力的“新能源+”产业集群；实施绿色氢能能源产业“三三三”发展策略，打造三条产品线，建设三类示范项目：绿氨、绿甲醇、绿航油，国内布局三条资源线、国际布局三大区域，做强做优做大绿色氢能能源产业，全面提升“投资、开发、建设、技术、创新、运营”六大核心能力，努力建设世界一流清洁能源企业。

Company Profile

SPIC Green Energy Co., Ltd. (formerly Jilin Electric Power Co., Ltd. 1) was listed on the Shenzhen Stock Exchange in September 2002, with the stock abbreviation "SPIC GECL" and stock code "000875". It is a green hydrogen-based energy industry platform company under the State Power Investment Corporation, with a global layout. The Company is fully responsible for the integrated management of "investment, construction, operation, production, supply, and sales" for domestic and international green hydrogen-based energy projects of the State Power Investment Corporation. Its main business covers areas such as new energy, green hydrogen-based energy, thermal power, heating, and power station services.

Under the strong leadership of the SPIC Party Committee and the support of all shareholders, successive Boards of Directors have led all cadres and employees of the Company to stay true to the "red" belief, fostering innovation, forging ahead, and taking solid action. Seizing the significant historical opportunities arising from the rapid development of the national economy and the green and low-carbon energy transition, the Company has established new energy bases in regions such as Jilin, Anhui, Jiangxi, Hebei, and Shandong, and pioneered the new industry of green hydrogen-based energy. through years of dedicated efforts, the Company has successfully forged a path of high-quality transformation and development characterized by "green, innovation, and integration", combining industry-specific features with its own strengths. As of the end of the reporting period, the Company's total assets reached RMB 88.775 billion, with an installed capacity of 16,319.2 million kilowatts, of which clean energy installed capacity accounted for 13,019.2million kilowatts, representing 79.78%. Clean energy generated 17.712 billion kWh, accounting for 61.51% of total power generation. The Company ranked 271st in the "Global Top 500 New Energy Enterprises" list.

Looking ahead, guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, the Company will fully, accurately, and comprehensively implement the new development philosophy, diligently put into practice the energy security strategy of the "Four Revolutions and One Cooperation," and carry out "Balanced Growth Strategy." We will adhere to the "1+N" development strategy, with Jilin leading as the hub and multiple regions advancing in parallel, striving to build a "New Energy+" industrial cluster with core competitiveness. We will implement the "Three-Three-Three" development strategy for the green hydrogen-based energy industry, i.e. developing three core product lines and constructing three types of demonstration projects (green ammonia, green methanol, and sustainable aviation fuel). Domestically, we will establish three resource streams: the Northeast-North-Northwest Corridor, the Yangtze River Corridor, and the Coastal Corridor. Internationally, we will expand into three key regions: the Middle East and North Africa (MENA), South America, and Southeast Asia. through these efforts, we will strengthen, expand, and grow our green hydrogen-based energy industry, comprehensively enhancing our six core capabilities - investment, development, construction, technology, innovation, and operations- as we strive to build a world-class clean energy enterprise.

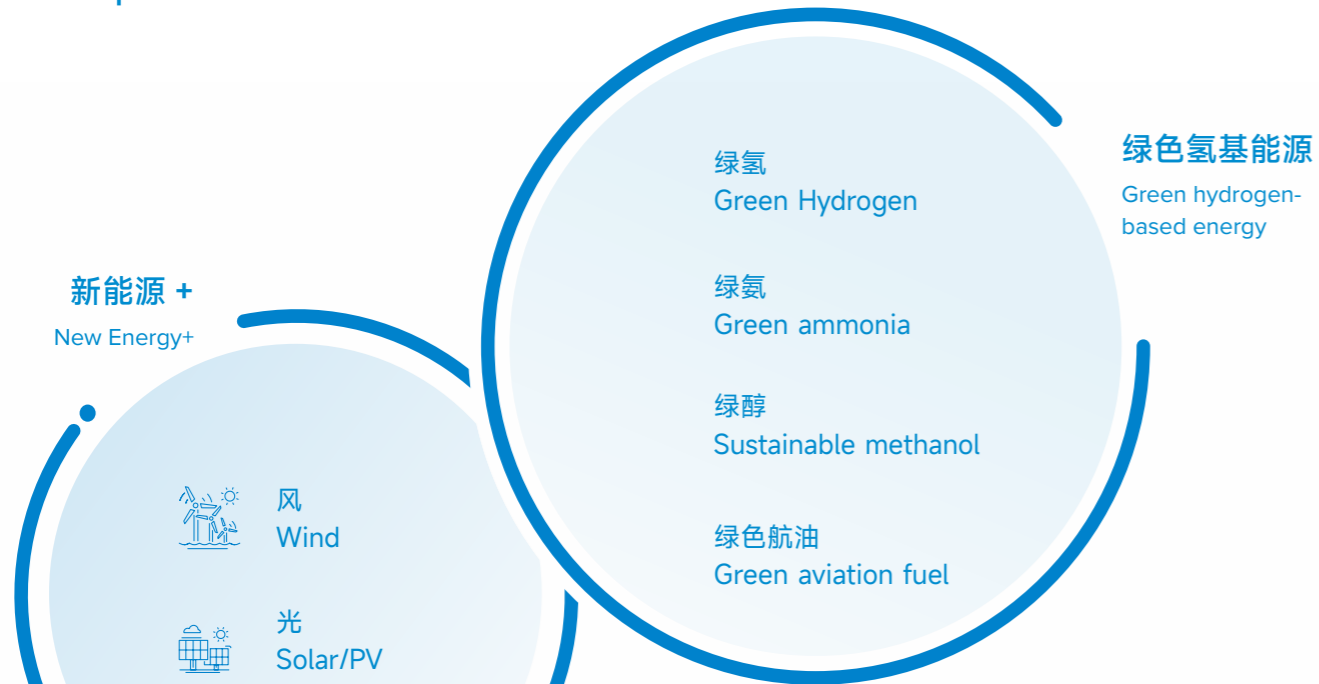
¹ Company name change completed in February 2026.



绿色氢能能源“三三三”发展策略

¹ 2026 年 2 月完成公司名称变更

公司业务发展方向 Corporate Business Development Direction



战略目标 Strategic Goal

Strategic Goal

战略定位 Strategic Positioning

Strategic Positioning

企业愿景 Corporate Vision

Corporate Vision

企业精神 Corporate Spirit

Corporate Spirit

工作理念 Work Philosophy

Work Philosophy

价值理念 Core Values

Core Values

建设世界一流清洁能源企业
Building a World-Class Clean Energy Enterprise

聚焦“新能源+”、绿色氢基能源双赛道
Focus On The Dual Tracks Of "New Energy+" And Green Hydrogen-Based Energy

共建共创绿色未来
Together for a Co-Created Green Future

红、创、闯、干
"Red Heritage" "Creation" "Brave Exploration" "Solid Work"

精、细、严、实
Precision, Detail, Rigor, Practicality

未来、创新、卓越、可持续、和谐
Future, Reinvention, Excellence, Sustainability, Harmony

发展历程

Development History

火电快速 发展阶段

2002 年上市初期，公司总装机只有 85 万千瓦。2005 年进入国家电投后，抓住“上大压小”契机，大力发展火电。到 2011 年末，装机规模增至 328.3 万千瓦，较上市之初翻两番。其中，白城 2×66 万千瓦火电项目获“中国建设工程鲁班奖”，长春东南 2×35 万千瓦火电项目获“国家优质工程奖”。

2002-2011

Rapid Thermal Power Development Phase

At the time of its initial public offering in 2002, the Company's total installed capacity was only 850,000 kilowatts. After joining the State Power Investment Corporation in 2005, it seized the opportunity of "replacing small units with large ones" to vigorously develop thermal power. By the end of 2011, its installed capacity had increased to 3.283 million kilowatts, quadrupling the initial capacity at the time of listing. Among them, the Baicheng 2×660,000 kilowatt thermal power project was awarded the "China Construction Engineering Luban Prize", and the Changchun Southeast 2×350,000 kilowatt thermal power project received the "National Quality Engineering Award".

新能源 走出去； 发展阶段

2012 年开始，吉林省电力市场持续低迷、燃料价格高涨，公司经营出现亏损。为摆脱上述困境，公司经过分析研讨后，将新能源作为发展方向，大力实施“走出去”发展战略，全国化发展新能源。到 2019 年，新能源装机规模达 340.15 万千瓦，占比 50.76%，历史性超越火电，成为公司转型发展的里程碑。

2012-2020

New Energy "Going Global" Development Phase

Starting in 2012, the Jilin Province electricity market remained sluggish and fuel prices were high, leading to operating losses. To overcome these challenges, the Company, after analysis and discussion, identified new energy as its development direction, vigorously implemented the "going global" development strategy, and expanded new energy development nationwide. By 2019, new energy installed capacity reached 3,401.5 million kilowatts accounting for 50.76%, historically surpassing thermal power and marking a milestone in the Company's transformation.

创新发展 阶段

从 2021 年开始，在国家电投战略指引下，在继续发展新能源的基础上，大力开发建设绿色氢能等新兴产业。2021 年，新能源板块发电收入 53.13 亿元，超过火电板块收入，利润贡献成为公司效益的重要支撑，公司成为以新能源发电业务为主的上市公司。2022 年开工建设大安风光制绿氢合成氨一体化示范项目，引领绿色氢能发展，新能源装机 1,012.12 万千瓦，装机占比 75.41%。

2021-2023

Innovation-Driven Development Phase

Starting from 2021, under the strategic guidance of SPIC, while continuing to develop new energy, the Company vigorously developed and constructed emerging industries such as green hydrogen-based energy. In 2021, the power generation revenue of the new energy segment reached RMB 5.313 billion, surpassing that of the thermal power segment, and its profit contribution became a key pillar of the Company's performance, making the Company a listed company primarily engaged in new energy power generation. In 2022, construction began on the Da'an Wind-Solar Green Hydrogen to Ammonia Integrated Demonstration Project, leading the development of green hydrogen-based energy. New energy installed capacity reached 10,121.2 million kilowatts, accounting for 75.41% of total installed capacity.

产业平台 发展阶段

公司全面贯彻落实“均衡增长战略”，聚焦新能源+、绿色氢能双赛道，2025 年成为国家电投“六大产业平台之一”，全面承接培育氢能主业发展任务，开启面向全球高质量发展新征程。

2024 年 - 至今

Industrial Platform Development Phase

The Company fully implemented the "Balanced Growth Strategy", focusing on the dual tracks of "New Energy+" and green hydrogen-based energy. In 2025, it became one of SPIC's "six major industrial platforms", fully undertaking the task of cultivating hydrogen energy as a core business, embarking on a new journey of high-quality development with a global perspective.

2025 年大事记 2025 Milestones

1月 January

- 公司选送的故事作品《守边·守爱》荣获第六届“国家电投好故事”二等奖。
- The story work *Guarding the Border, Guarding Love* submitted by the Company won the second prize in the sixth "SPIC Good Stories" competition.

2月 February

- 央视《新闻联播》报道国家电投集团电投绿能大安风光制绿氢合成氨一体化示范项目。
- 公司所属松花江热电公司获评“国家电力投资集团有限公司2024年度先进集体”。
- CCTV's *Xinwen Lianbo* (News Broadcast) reported on SPIC GECL Da'an Wind-Solar Green Hydrogen to Ammonia Integrated Demonstration Project.
- SPIC Green Energy Songhuajiang
- Songhuajiang Thermal Power Company affiliated with the Company was awarded the title of "2024 Advanced Collective of the State Power Investment Corporation Limited (SPIC)".

3月 March

- 公司所属吉电新能源公司辽宁阜新杭泰太阳能发电有限公司柔性控制装置改造项目，作为能源绿色低碳转型类示范项目入选《国家重点推广的低碳技术目录（第五批）》，标志着企业在推动清洁能源高效利用方面取得重要进展。
- The flexible control device renovation project of Liaoning Fuxin Hangtai Solar Power Generation Co., Ltd., a subsidiary of Jidian New Energy Company affiliated with the Company, has been selected as a demonstration project in the category of green and low-carbon energy transformation in the *Catalogue of National Key Low-Carbon Technologies for Promotion (the Fifth Batch)*. This marks a significant achievement for the Company in advancing the efficient utilization of clean energy.

4月 April

- 国家电投创新投资公司通过集中竞价交易方式首次购入公司股份5,642,000股，占公司总股本的0.155%。
- 公司圆满完成2024—2025年度采暖季供热任务，实现“零故障、零非停、零事故”的保供目标。
- SPIC Innovation Investment Co., Ltd. purchased 5,642,000 shares of the Company (representing 0.155% of total share capital) for the first time through centralized bidding trading.
- The Company successfully completed the 2024-2025 heating season supply task, achieving the supply guarantee targets of "zero failures, zero unplanned outages, zero accidents".

5月 May

- 公司在2025中国品牌价值评价信息发布会中以42.19亿元的品牌价值首登榜单，位列年度能源化工组第73位。
- 公司荣获第七届“全国文明单位”。
- 公司大安风光制绿氢合成氨一体化示范项目荣获2025年吉林省五一劳动奖状。
- At the 2025 China Brand Value Evaluation Information Release, the Company made its debut on the list with a brand value of RMB 4.219 billion, ranking 73rd in the annual energy and chemical category.
- The Company was awarded the 7th "National Civilized Unit".
- The Company Da'an Wind-Solar Green Hydrogen to Ammonia Integrated Demonstration Project received the 2025 Jilin Province National May Day Labor Award.

6月 June

- 公司单日发电量突破1933万千瓦时，创下历史最高纪录。
- 公司荣膺上榜中央宣传思想文化工作领导小组公布的第七届“全国文明单位”名单。
- 公司所属四平热电公司、白城热电公司通过全国文明单位复评。
- The Company's single-day power generation exceeded 19.33 million kWh, setting a new historical record.
- The Company was listed among the 7th "National Civilized Units" announced by the Central Leading Group for Publicity, Ideological and Cultural Work.
- The Siping Thermal Power Company and Baicheng Thermal Power Company affiliated with the Company passed the re-evaluation for National Civilized Units.

12月 December

- 公司获得第三届国新杯·ESG金牛奖“碳中和二十强”。
- 公司获得第20届中国上市公司董事会“金圆桌奖”公司治理特别贡献奖。
- The Company won the "Carbon Neutrality Top 20" award at the 3rd Guoxin Cup · ESG Golden Bull Awards 2025.
- The Company won the Special Contribution Award for Corporate Governance at the 20th "Golden Round Table Awards" for Boards of Directors of Listed Companies in China.

11月 November

- 公司蛟河市新能源乡村振兴工程项目入选国家电投2024年度社会责任 (ESG) 优秀案例。
- 公司所属四平热电公司“飞翔鸟”QC小组获得第50届国际质量管理小组会议 (ICQCC) 金奖。
- The Company's Jiaohe City New Energy Rural Revitalization Project was selected as an SPIC 2024 Social Responsibility (ESG) Excellent Case.
- The "Flying Bird" QC Group of SPIC
- The "Flying Bird" QC Group of Siping Thermal Power Company affiliated with the Company won a Gold Award at the 50th International Convention on Quality Control Circles (ICQCC).

10月 October

- “大安规模化风光离网直流制氢创新示范项目”成功入围国家能源局正式公示的能源领域氢能试点（第一批）名单，成为吉林省纳入国家级试点的标杆项目，标志着公司绿色氢能技术与产业化能力获国家行业主管部门认可。
- 公司大安风光制绿氢合成氨一体化示范项目“氢洲·绿氨”获得全球首张“ISCC EUR FNBO Ammonia”（可再生燃料非生物来源氨）认证证书。
- 公司荣获深圳证券交易所上市公司信息披露工作“A”级评价，实现连续4年取得信披工作最高等级评价。
- The "Da'an Large-Scale Off-Grid Wind-Solar DC Hydrogen Production Innovation Demonstration Project" was successfully shortlisted for the first batch of hydrogen energy pilot projects in the energy sector officially announced by the National Energy Administration, becoming a benchmark project in Jilin Province included in the national pilot program. This marks the recognition of the Company's green hydrogen-based energy technology and industrialization capabilities by the national industry authorities.
- The "Hydrogen Hub-Green Ammonia" of the Company Da'an Wind-Solar Green Hydrogen to Ammonia Integrated Demonstration Project obtained the world's first "ISCC EUR FNBO Ammonia" (Renewable Fuel - Non-Biological Origin Ammonia) certification.
- The Company received an "A" rating for information disclosure from the Shenzhen Stock Exchange, achieving the highest rating for four consecutive years.

9月 September

- 公司在中国水利电力质量管理协会最新公布的2025年电力质量管理小组交流活动中报送的9项成果获奖，其中四平热电公司《降低4号机组热工自动调节系统故障次数》课题荣获一等奖。
- Among the nine achievements submitted by the Company to the 2025 Power Quality Management Group Exchange Activity organized by the China Association for Water and Electric Quality Management, awards were won. Notably, the project *Reducing the Failure Frequency of the Thermal Automatic Regulation System of Unit No. 4* from Siping Thermal Power Company won the first prize.

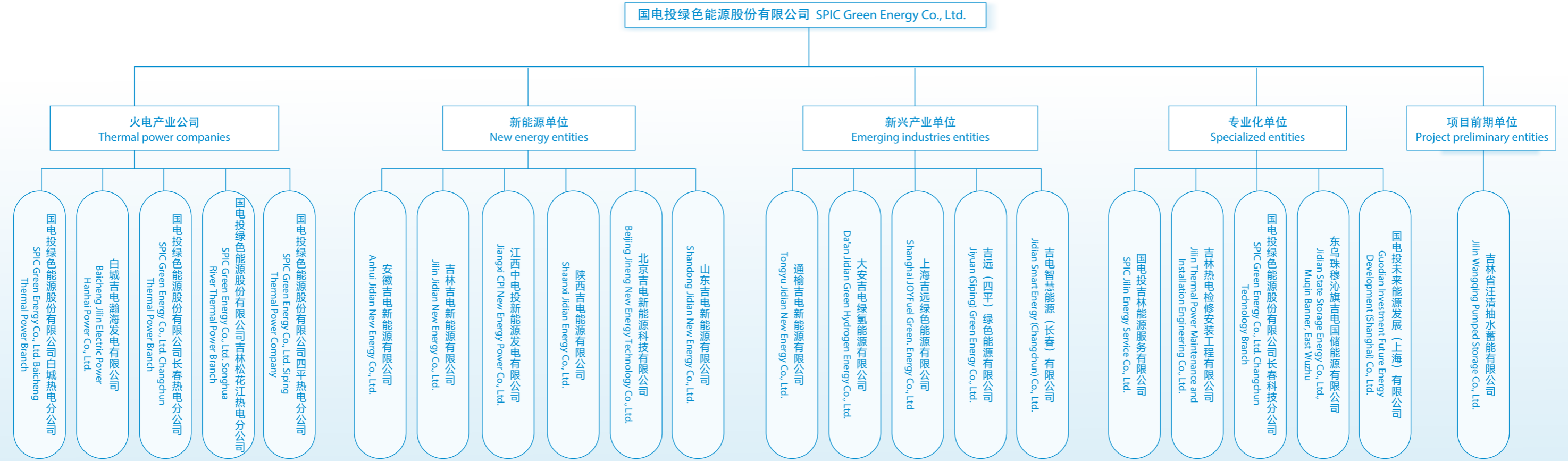
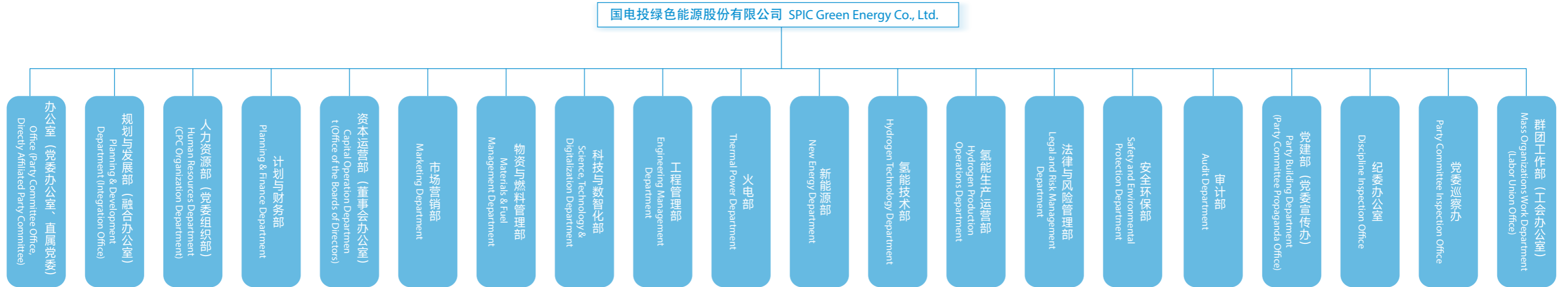
8月 August

- 公司扶余市三井子风电场五期100兆瓦风电项目、邕宁吉电百济新平农光互补光伏发电项目获评中国电力优质工程奖。
- The Company's Fuyu Sanjingzi Phase V Wind Farm 100 MW Wind Power Project and Yongning Jidian Baiji Xingping Agri-PV Complementary Photovoltaic Power Generation Project were awarded the China Power Quality Project Award.

7月 July

- 公司大安风光制绿氢合成氨一体化示范项目试运行投产。
- 公司获万得(Wind)ESG评级“AA”评价。
- The Company Da'an Wind-Solar Green Hydrogen to Ammonia Integrated Demonstration Project commenced trial operation and production.
- The Company received an "AA" ESG rating from Wind.

组织结构 Organizational Structure



年度荣誉

Annual Honors



2025 年度上市公司董事会优秀实践案例
2025 Excellent Practice Case for Boards of
Directors of Listed Companies in China

中国上市公司协会
China Association for Public Companies



第 20 届中国上市公司董事会“金圆桌奖”公司治理特别贡献奖
Special Contribution Award for Corporate Governance at the
20th "Golden Round Table Awards" for Boards of Directors of
Listed Companies in China

《董事会》杂志
Directors & Boards Magazine



2025 年上市公司董事会办公室最佳实践
2025 Best Practice Case for Boards of
Directors of Listed Companies in China

中国上市公司协会
China Association for Public Companies



第三届国新杯·ESG 金牛奖“碳中和二十强”
"Carbon Neutrality Top 20" award at the
3rd Guoxin Cup · ESG Golden Bull Awards

中国证券报、中国国新控股有限责任公司
China Securities Journal, China Reform
Holdings Corporation Ltd.



ESG 优秀案例
Excellent ESG Case Award

国家电力投资集团有限公司
State Power Investment Corporation
Limited (SPIC)



2024 年度金信披奖
2024 Golden Information Disclosure Award

中国证券报
China Securities Journal



科创体系建设

Science and Technology Innovation System Development

公司严格遵守《国家电力投资集团有限公司科研项目管理规定》等标准，设立《科技与创新管理规定》《科研项目管理规定》《知识产权管理办法》《科技奖励办法》等内部制度，持续优化创新管理机制，从研发项目立项、过程管控、项目验收等全流程的角度规范了研发行为，为公司的研发创新奠定稳定的基石。

公司科技与数智化部是科研项目归口管理部门，牵头对科技创新成效建立评价机制。各专业管理部门结合公司产业发展需求，在本专业领域内指导各类科研项目的实施，牵头履行公司审批的科研项目相关流程，组织本专业领域科技创新成果推广应用。公司计划与财务部负责筹集科技创新项目经费，审核科技创新项目经费使用。截至报告期末，公司研发投入 7,515 万元，占营业收入比例为 0.57%。研发人员 314 人，占比 8.63%。

公司现有 11 家所属企业获得国家高新技术企业认证，1 家企业获得吉林省专精特新企业认定。2025 年 12 月，子公司长春吉电能源科技有限公司申报的吉林省风光数智化能源科技创新中心通过吉林省科技厅认定。

The Company strictly complies with standards such as the *State Power Investment Corporation Limited Scientific Research Project Management Regulations* and has established internal policies including the *Technology and Innovation Management Regulations*, *Scientific Research Project Management Measures*, *Intellectual Property Management Measures*, and *Technology Incentive Measures*. These policies continuously optimize the innovation management mechanism, standardizing R&D activities across the entire process from project initiation and process control to project acceptance, thereby laying a solid foundation for the Company's R&D and innovation.

The Company's Science, Technology & Digitalization Department serves as the centralized management department for scientific research projects, taking the lead in establishing evaluation mechanisms for technological innovation outcomes. Each specialized management department, aligned with the Company's industrial development needs, guides the implementation of various scientific research projects within its respective field, leads the relevant processes for company-approved research projects, and organizes the promotion and application of technological innovation achievements within its domain. The Planning and Finance Department is responsible for raising funds for technology innovation projects and reviewing the use of such funds. As of the end of the reporting period, the Company's R&D investment reached RMB 75.15 million, accounting for 0.57% of operating revenue. The number of R&D personnel was 334, representing 9.18% of the total workforce.

Currently, 11 of the Company's subsidiaries have been certified as National High-Tech Enterprises, and one subsidiary has been recognized as a Jilin Province "Specialized and Sophisticated" enterprise. In December 2025, the Jilin Provincial Wind-Solar Digital Intelligence Energy Technology Innovation Center, established by subsidiary Changchun Jidian Energy Technology Co., Ltd., was officially accredited by the Jilin Provincial Department of Science and Technology.



科技成果转化

Commercialization of Scientific and Technological Achievements

- 截至报告期末，公司研发投入 **7,515** 万元，占营业收入比例为 **0.57%**。研发人员 **314** 人，占比 **8.63%**。
- 11** 家所属企业获得国家高新技术企业认证，**1** 家企业获得吉林省专精特新企业认定
- As of the end of the reporting period, the Company's R&D investment reached RMB **75.15** million, accounting for **0.57%** of operating revenue. The number of R&D personnel was **314** representing **8.63%** of the total workforce.
- Currently, **11** of the Company's subsidiaries have been certified as National High-Tech Enterprises, and **one** subsidiary has been recognized as a Jilin Province "Specialized and Sophisticated" enterprise.

公司深谙科技成果转化是实现高质量发展的重要路径，依据《知识产权管理办法》《科技成果转化管理办法》等制度，健全科技成果转化全流程管理，规范开展科技成果确权、评估、转化实施与运营管理，强化成果转化全流程风险防控与权益保障，推动创新技术高效落地应用，实现科技成果价值最大化。

The Company recognizes that the commercialization of scientific and technological achievements is a critical pathway to achieving high-quality development. In accordance with policies such as the *Intellectual Property Management Measures* and the *Measures for Scientific and Technological Achievements Management*, the Company has established comprehensive management procedures for the entire lifecycle of technology transfer. It systematically conducts activities such as confirmation of ownership, valuation, implementation, and operational management of technological achievements, strengthens risk prevention and rights protection throughout the process, promotes the effective application of innovative technologies, and maximizes the value of scientific and technological achievements.

案例
Case

绿色氢基能源柔性管控系统技术突破与成果应用

Technological Breakthrough and Application of Green Hydrogen-Based Energy Flexible Control System

公司专项课题绿色氢基能源（绿电-氢-氨）柔性管控系统研究与应用取得关键技术突破，以技术创新赋能新能源高效消纳与绿色化工低碳转型，为能源行业可持续发展提供核心支撑。课题聚焦电-氢-氨全链路协同管控，构建一体化调度与经济优化策略，平衡生产效率与经济效益；攻关动态合成氨多变量预控算法，显著提升合成氨生产精准控制水平，保障系统稳定可靠运行。建成具备完全自主知识产权的绿电-氢-氨全流程柔性管控系统，在环境效益、技术创新、产业示范等方面实现多重突破，有力推动绿色氢氨产业规模化、低碳化发展，为区域能源结构转型与绿色产业升级提供关键支撑。该课题凭借突出的技术价值与低碳效益，获得吉林省科技及能源行业主管部门高度认可，成功入选吉林省 2025 年聚力攻坚专项课题，获财政补贴资金 400 万元，彰显公司在绿色氢能与合成氨领域的技术领先性与社会责任担当。成功入选国家能源局 2025 年度能源行业十大科技创新成果。

The Company's special project, "Research and Application of a Flexible Control System for Green Hydrogen-Based Energy (Green Power-Hydrogen-Ammonia)," has achieved key technological breakthroughs, leveraging technological innovation to enhance the efficient integration of renewable energy and support the low-carbon transformation of the green chemical industry, thereby providing core support for the sustainable development of the energy sector. The project focuses on the coordinated control of the entire electricity-hydrogen-ammonia value chain, developing an integrated dispatching and economic optimization strategy to balance production efficiency and economic benefits. It has also tackled the development of a multi-variable predictive control algorithm for dynamic ammonia synthesis, significantly improving the precision control level of ammonia production and ensuring stable and reliable system operation. A fully self-developed, full-process flexible control system for green power-hydrogen-ammonia has been successfully established, achieving multiple breakthroughs in environmental benefits, technological innovation, and industrial demonstration. This advancement strongly promotes the large-scale, low-carbon development of the green hydrogen-ammonia industry and provides critical support for regional energy structure transformation and green industrial upgrading. Due to its outstanding technological value and low-carbon benefits, this project has received high recognition from the science, technology, and energy industry authorities in Jilin Province. It has been successfully selected as a special project for the 2025 Jilin Province Focused Breakthrough Initiative, securing a financial subsidy of RMB 4 million, which highlights the Company's technological leadership and social responsibility in the fields of green hydrogen and synthetic ammonia. Successfully selected as one of the 2025 Top Ten Scientific and Technological Innovation Achievements in the Energy Industry by the China National Energy Administration.



绿色氢基能源（绿电-氢-氨）柔性管控系统
Flexible Control System for Green Hydrogen-Based Energy (Green Power-Hydrogen-Ammonia)

案例
Case

创新创效工作屡获殊荣

Innovation and Efficiency Initiatives Receive Multiple Awards

四平热电公司“飞翔鸟”QC 小组凭借“研制热网回水管道太阳能数控排气装置”质量创新成果，在第 50 届国际质量管理小组竞赛 (ICQCC) 中从 465 项参赛作品中脱颖而出，荣获国际金奖，连续两年获得国际奖项突破。

公司参加由中华全国总工会、中共重庆市委、重庆市人民政府共同主办的第三届大国工匠创新交流大会暨大国工匠论坛，公司员工、全国劳模模范张玉忠现场讲解产业沙盘；参加由中国职工文化体育协会举办的《首届全国职工“三创”大赛》，决赛现场四平热电公司《冰山理论下火电厂隐性风险智能防控系统管理创新实践》荣获管理创效赛道二等奖。

The "Flying Bird" QC Group of Siping Thermal Power Company won a Gold Award at the 50th International Convention on Quality Control Circles (ICQCC) for its quality innovation achievement, "Development of a Solar-Powered Automatic Exhaust Device for Heating Network Return Water Pipelines." Standing out among 465 participating projects, the group achieved consecutive international awards for two years.

The Company participated in the Third Innovation Exchange Conference for Craftsmen of the Nation and the Third National Great Craftsmen Forum, co-hosted by the All-China Federation of Trade Unions, the Chongqing Municipal Committee of the Communist Party of China, and the Chongqing Municipal People's Government. Zhang Yuzhong, a company employee and National Model Worker, presented an industrial sand table at the event. The Company also participated in the "First National Employees' Innovation, Entrepreneurship, and Creative Competition" organized by the China National Workers' Cultural and Sports Association. In the finals, the Siping Thermal Power Company's submission, *Management Innovation Practice for Intelligent Prevention and Control of Hidden Risks in Thermal Power Plants under the Iceberg Theory*, won the second prize in the Management Innovation and Efficiency Track.





保护知识产权 Intellectual Property Protection

公司严格按照《知识产权管理办法》相关要求，规范开展知识产权创造、运用、保护与管理全流程工作。围绕科研项目实施、技术成果产出及创新成果转化，系统推进专利布局及商标管理，强化科研成果确权、权属界定与运营转化，切实维护公司知识产权权益，防范知识产权风险，以规范高效的知识产权管理支撑科技创新与高质量发展。

The Company strictly adheres to the requirements of the *Intellectual Property Management Measures*, systematically managing the creation, utilization, protection, and administration of intellectual property throughout the entire process. Focusing on the implementation of scientific research projects, the output of technological achievements, and the commercialization of innovations, the Company systematically advances patent portfolio development and trademark management, strengthens the confirmation of ownership, definition of rights, and operational transformation of research outcomes, effectively safeguarding the Company's intellectual property rights, mitigating IP risks, and supporting technological innovation and high-quality development through standardized and efficient IP management.

知识产权治理体系 Intellectual Property Governance System



截至报告期末，公司有效专利总量 **454** 件，商标权总量 **8** 件，著作权总量 **80** 件。申请专利 **61** 件，其中发明专利 **60** 件、实用新型专利 **1** 件；授权专利 **47** 件，其中发明专利 **36** 件、实用新型专利 **11** 件。发布《电解水制氢合成可再生氨碳足迹评价技术规范》《质子交换膜水电解制氢安全技术要求》两项企业标准。

As of the end of the reporting period, the Company held **454** valid patents, **8** trademarks, and **80** copyrights. It applied for **61** patents, including **60** invention patents and **1** utility model patent; **47** patents were granted, including **36** invention patents and **11** utility model patents. Two enterprise-level standards were released: *Technical Specification for Carbon Footprint Assessment of Renewable Ammonia Produced via Water Electrolysis-Based Hydrogen* and *Safety Technical Requirements for Proton Exchange Membrane Water Electrolysis for Hydrogen Production*.

研究内容 /Research Content

电解水制氢合成可再生氨碳足迹评价技术规范

Technical specification for carbon footprint assessment of renewable ammonia produced via water electrolysis-based hydrogen

质子交换膜水电解制氢安全技术要求

Safety technical requirements for proton exchange membrane water electrolysis for hydrogen production

研究成果 /Research Outcome

规定了可再生能源电解水制氢合成可再生氨碳足迹的评价条件、要求及方法。适用于可再生能源电解水制氢合成可再生氨碳足迹的评价。

Specifies the assessment conditions, requirements, and methods for the carbon footprint of hydrogen production via water electrolysis using renewable energy for renewable ammonia synthesis. Applicable to the carbon footprint assessment of renewable ammonia produced via water electrolysis-based hydrogen.

规定了国家电投内部质子交换膜水电解制氢系统的技术参数、安全技术要求、安全标识等内容。适用于质子交换膜水电解制氢系统调试、运营阶段的安全技术要求。

Specifies the technical parameters, safety technical requirements, and safety identification for the internal proton exchange membrane water electrolysis hydrogen production system of SPIC. Applicable to the safety technical requirements during the commissioning and operation phases of proton exchange membrane water electrolysis hydrogen production systems.



守护科技伦理 Upholding Ethics in Science and Technology

公司始终坚持科技向善、伦理先行，围绕科技创新全流程强化科技伦理治理与风险防控。结合《科技与创新管理规定》《科研项目管理规定》《知识产权管理办法》《科技奖励办法》等内部管理制度，同步建立健全风险研判、过程监管和合规督导机制，将伦理要求嵌入科研立项、项目实施、成果转化、知识产权运用、科技奖励评定等关键环节，严守伦理底线、规范科研行为、保障数据安全与权益保护，推动科技创新高质量发展。

The Company consistently upholds the principles of "technology for good, ethics first," strengthening the governance of science and technology ethics and risk prevention throughout the entire process of technological innovation. In alignment with internal management policies such as the *Technology and Innovation Management Regulations*, *Scientific Research Project Management Measures*, *Intellectual Property Management Measures*, and *Technology Incentive Measures*, the Company has simultaneously established and improved mechanisms for risk assessment, process oversight, and compliance guidance. Ethical requirements are embedded into key stages such as research project initiation, project implementation, commercialization of achievements, intellectual property application, and technology incentive evaluation. By strictly adhering to ethical boundaries, standardizing research conduct, and ensuring data security and rights protection, the Company promotes high-quality development driven by technological innovation.



治理筑善治

Good Governance

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公司 ESG 治理安排

ESG Governance Arrangements

公司高度重视 ESG 管理，深入实施创新、协调、绿色、开放、共享的新发展理念，持续优化 ESG 治理架构，强化风险管控体系，提升 ESG 管理水平，致力于实现企业与环境、社会的可持续共生发展。

The Company places great emphasis on ESG management, deeply implementing the new development philosophy of innovation, coordination, green, openness, and sharing. It continuously optimizes its ESG governance structure, strengthens its risk management system, and enhances its ESG management capabilities, striving to achieve sustainable coexistence and development between the enterprise, the environment, and society.

治理

Governance

公司持续完善 ESG 治理架构，制定《董事会可持续发展 (ESG) 委员会议事规则》《ESG 建设管理规定》等相关内部管理规范及配套文件。明确各层职责，形成从决策、沟通、实际执行到汇报考核的实践闭环管理体系，为系统化推进 ESG 管理工作、提升治理效能提供制度支撑。

为推进 ESG 理念与公司运营的深度结合，公司立足业务运营实际需求，建立结构完整、层级清晰、权责明确、运行高效的 ESG 管理体系，设立由 ESG 委员会、ESG 办公室与 ESG 工作小组形成的“决策、管理、执行”三级 ESG 治理架构，完善三级工作联动机制，通过清晰的权责划分与高效的协同配合，为将环境、社会和公司治理融入企业长期发展战略与日常经营业务筑牢基础。公司董事会设置可持续发展 (ESG) 委员会，接受公司董事会监督，向董事会报告工作并对董事会负责，明确 ESG 委员会以实现企业高质量可持续发展为目标。

The Company continuously improves its ESG governance structure, establishing internal management regulations and supporting documents such as the *Rules of Procedure for the Board Sustainable Development (ESG) Committee and the ESG Construction Management Regulations*. The responsibilities of each level are clearly defined, forming a closed-loop management system from decision-making, communication, and implementation to reporting and assessment, providing institutional support for systematically advancing ESG management and enhancing governance effectiveness.

To promote the deep integration of ESG principles with the Company's operations, the Company has established a comprehensive, clearly structured, well-defined, and efficient ESG management system based on the actual needs of its business operations. A three-tier ESG governance structure consisting of the ESG Committee, the ESG Office, and the ESG Working Group has been established, forming a "decision-making, management, and execution" framework. The three-tier working mechanism has been improved, and through clear division of responsibilities and efficient coordination, a solid foundation has been laid for integrating environmental, social, and governance considerations into the Company's long-term development strategy and daily business operations. The Company's Board of Directors has established a Sustainable Development (ESG) Committee, which is supervised by the Board, reports to the Board, and is accountable to the Board. The ESG Committee is tasked with achieving the Company's goal of high-quality sustainable development.

ESG 治理架构各层级主要职责

Key Responsibilities of Each Level of the ESG Governance Structure



董事会
Board of Directors

决策层
Decision-making Level

董事会是 ESG 工作的领导和决策机构，董事会负责审议公司 ESG 管理相关的规划及目标、管理制度、年度 ESG 报告等事项。

The Board of Directors serves as the leadership and decision-making body for ESG initiatives. It is responsible for reviewing the Company's ESG-related plans and goals, management systems, annual ESG reports, and other relevant matters.



ESG 委员会
ESG Committee

管理层
Management Level

董事会可持续发展 (ESG) 委员会 (以下简称“ESG 委员会”) 是 ESG 工作的研究和指导机构：

- 负责审核公司 ESG 相关信息及其披露、监督
- 评估识别可持续发展风险
- 指导及审阅公司可持续发展方针、规划及目标

The Board of Directors' Sustainable Development (ESG) Committee (hereinafter referred to as the "ESG Committee") serves as the research and guidance body for ESG initiatives:

- Responsible for reviewing the Company's ESG-related information and its disclosure, and overseeing
- Assessing and identifying sustainable development risks
- Guiding and reviewing the Company's sustainable development policies, plans and goals



ESG 工作组
ESG Working Group

执行层
Executive Level

公司设 ESG 工作组，由公司各业务分管领导、各部门及子公司主要负责人组成，负责为 ESG 指导机构履行相关工作职责提供保障和专业支持：

- 负责贯彻落实公司 ESG 发展规划与目标
- 组织和安排各执行单位实施 ESG 工作
- 负责 ESG 相关议题、阶段性工作计划及实施方案等

The Company has established an ESG working group, composed of business leaders from various departments and the heads of departments and subsidiaries. The working group is responsible for providing support and professional expertise to the ESG guidance body in fulfilling its relevant duties:

- Responsible for implementing the Company's ESG development plans and goals
- Organizing and arranging each implementation unit to carry out ESG work
- Responsible for ESG-related issues, phased work plans and implementation plans, etc.



ESG 工作执行单位
ESG Work Implementation Units

公司各部门及子公司是 ESG 工作的执行单位：

- 承担职责范围内的主体责任
- 负责按照公司整体规划落实 ESG 工作任务并定期汇报执行情况

Each department and subsidiary of the Company is the implementation unit of ESG work:

- Undertake the main responsibility within the scope of their duties
- Responsible for implementing ESG work tasks in accordance with the Company's overall plan and reporting the implementation status regularly

战略

Strategy

公司全面审视企业愿景、使命和价值，梳理形成富有公司特色的 ESG 愿景和理念，并使之融入企业文化，着力彰显“电投绿能品牌”价值和形象，推动公司在清洁能源领域做出更大贡献，赋能价值创造，服务经济社会发展。

The Company comprehensively reviews its corporate vision, mission, and values, consolidating them into a distinctive ESG vision and philosophy, which are integrated into the corporate culture. This effort aims to highlight the value and image of the "SPIC Green Energy brand", drive the Company to make greater contributions in the clean energy sector, empower value creation, and serve economic and social development.



ESG 愿景：奉献绿色能源 打造低碳生活

ESG Vision: Dedicate to Green Energy, Create a Low-Carbon Life



ESG 理念：绿色发展 服务公众 诚信为本 合作共赢

ESG Philosophy: Green Development, Serving the Public, Integrity as the Foundation, Win-Win Cooperation

公司结合发展实际需要，定期对 ESG 相关议题的重要性进行评估，将其纳入公司风险管理体系，制定风险与机遇应对措施，跟进风险情况。公司风险管理体系机制及为监测、预防、管理、控制、减缓相关重大影响所采取的措施和行动，详见“以合规控风险：风控管理”章节及正文中各章节内容。

Based on its actual development needs, the Company regularly assesses the materiality of ESG-related topics, incorporates them into its risk management system, develops responses to risks and opportunities, and tracks risk developments. Details on the Company's risk management system and mechanisms, as well as the measures and actions taken to monitor, prevent, manage, control, and mitigate significant impacts, can be found in the section "Risk Management" and throughout the relevant chapters of this report.

影响、风险和机遇管理

Impact, Risk, and Opportunity Management

公司注重 ESG 影响、风险和机遇的管理，将 ESG 职责纳入经营决策和内部控制评估中，推动 ESG 工作从简单的信息披露向更深层次的治理发展。董事会对公司内部控制有效性进行评价时，将识别并评估 ESG 职责相关风险，对涉及内控缺陷事项提出改进意见。

The Company emphasizes the management of ESG impacts, risks, and opportunities, integrating ESG responsibilities into business decisions and internal control assessments. This drives the evolution of ESG work from simple information disclosure to deeper governance. When the Board of Directors evaluates the effectiveness of the Company's internal controls, it identifies and assesses risks related to ESG responsibilities and proposes improvement suggestions for matters involving internal control deficiencies.

公司设有 ESG 工作评价及考核机制，使 ESG 工作能够更好地融入企业的日常运营和管理体系，确保 ESG 工作得到有效执行。公司风险管理体系机制详见风险管理相关章节。

The Company has established an ESG work evaluation and assessment mechanism, enabling ESG work to be better integrated into the Company's daily operations and management systems, ensuring its effective implementation. Details on the Company's risk management mechanisms can be found in the relevant risk management sections.

指标与目标

Indicators and Targets

公司致力于提高 ESG 管理水平，构建完善的 ESG 体系。报告期内，公司参照国务院国资委《央企控股上市公司 ESG 专项报告参考指标体系》及交易所相关文件要求，全力提高 ESG 相关数据收集、核算与分析的信息化、数字化水平，增强所披露数据的可靠性与可比性，不断提高 ESG 信息披露质量。报告期内，公司在年度工作计划中明确全年目标及相应考核指标，包括环境、社会及公司治理等 ESG 相关领域，经审慎分析研判，本报告中披露部分重要议题指标设定及完成情况，具体情况详见正文各章节相关内容。

The Company is committed to improving its ESG management level and building a comprehensive ESG system. During the reporting period, the Company has referred to the requirements of relevant documents including the *ESG Special Report Reference Indicator System for Listed Companies Controlled by Central State-Owned Enterprises* issued by the SASAC. It has made every effort to enhance the informatization and digitalization of ESG-related data collection, accounting and analysis, improve the reliability and comparability of disclosed data, and continuously elevate the quality of ESG information disclosure. During the reporting period, the Company clearly defined its annual objectives and corresponding performance indicators, including those related to ESG, in its annual work plan. After prudent analysis and evaluation, this report discloses the target-setting and completion status of some key issue indicators. For detailed information, please refer to the relevant sections in the main text.

议题重要性评估

Materiality Assessment

公司将实施常态化的重要性议题管理视为其 ESG 战略规划、风险与机遇管理以及信息披露的基础和核心环节，从自身所处行业特点、商业模式等出发，综合考虑各利益相关方的核心关切，并兼顾本报告的信息连续性、内容可读性与逻辑完整性，结合专业方法解读和辅导，定期开展 ESG 议题重要性评估工作。

The Company regards the implementation of normalized management of important issues as the foundation and core component of its ESG strategic planning, risk and opportunity management, and information disclosure. Based on the characteristics of its industry and business model, it comprehensively considers the core concerns of various stakeholders, while taking into account the continuity of information, readability of content, and logical integrity of this report. With the support of professional interpretation and guidance, SPIC GECL regularly conducts ESG issue importance assessments.

重要性议题分析

Materiality Analysis

公司持续完善 ESG 议题双重重要性分析机制，以“开展背景研究—建立议题清单—评估与确认重要性—形成议题报告”为路径，聚焦“财务重要性”与“影响重要性”两大维度，开展双重重要性评估、排序及筛选工作。报告期内，公司在上年度重要性议题基础上，结合对相关及潜在重点领域的最新评估后筛选得出。

The Company has continuously improved its double materiality analysis mechanism for ESG issues. Following the process of "background research-issue list establishment- materiality assessment and confirmation-issue report formulation", the Company performs dual materiality assessment, prioritization, and screening, focusing on the two key dimensions: "financial materiality" and "impact materiality". During the reporting period, the material issues were screened based on those from the previous year, combined with the latest assessments of relevant and potential key areas.



充分考虑公司活动和业务关系
充分调研 ESG 政策与标准、ESG 评级及同行实践
明确利益相关方类型，建立并维持联络

Background research

Give full consideration to the Company's activities and business relationships. Comprehensively research ESG policies and standards, ESG ratings, and industry peer practices. Identify stakeholder categories and establish and maintain communication channels with them.



以上年度 ESG 议题识别结果为基础，结合国家相关政策、ESG 规范标准、公司业务特点以及同行业议题对标分析结果，识别潜在议题，并形成议题清单

Issue Identification

Based on the ESG topic identification results from the previous year, identify potential topics by considering national policies, ESG standards and frameworks, the Company's business characteristics, and the results of benchmarking against peers in the same industry, and form a list of topics.



对经济、社会和环境的重要性：主要面向各内外部利益相关方，通过专家咨询、利益相关方调研、内部讨论等形式，从影响规模、范围、发生可能性及补救性等维度出发，综合考虑相关议题的表现可能造成的影响，形成议题影响重要性分析结果

对公司财务的重要性：主要面向公司领导、风控部门、财务部门、投资部门及其他了解相关内容的主体，通过内部讨论等形式，综合考虑议题的风险和机遇对公司商业模式、业务运营、发展战略、财务状况等产生的影响程度和发生的可能性，形成议题财务重要性的分析结果

Assessment and determination of materiality

Materiality of Impact on the Economy, Environment, and Society: Impact materiality is primarily assessed from the perspective of internal and external stakeholders. Through expert consultations, stakeholder surveys, internal discussions, and other methods, the Company assesses issues from dimensions such as scale of impact, scope, likelihood, and remediability, and evaluates the potential impact of relevant issues, resulting in the impact materiality analysis result.

Financial Materiality to the Company: Primarily targeting company leadership, risk control, finance, investment departments, and other entities familiar with the relevant content, through methods such as internal discussions, comprehensively evaluate the degree of impact and likelihood of risks and opportunities related to the topics on the Company's business model, operations, development strategy, and financial condition, forming the results of financial materiality analysis.



在 ESG 报告中披露议题重要性的分析过程、方法与结果，并在报告中针对性回应

Issue report development

Disclose the analysis process, methodology, and results of materiality assessment, and provide targeted responses in the ESG report.

利益相关方沟通 Stakeholder Engagement

公司坚持共同发展、合作共赢的原则，保持与政府及监管机构、股东与投资者、客户和合作伙伴、员工等利益相关方的密切沟通，能够及时获悉各方期待和建议并对各方的诉求和期望予以回应。

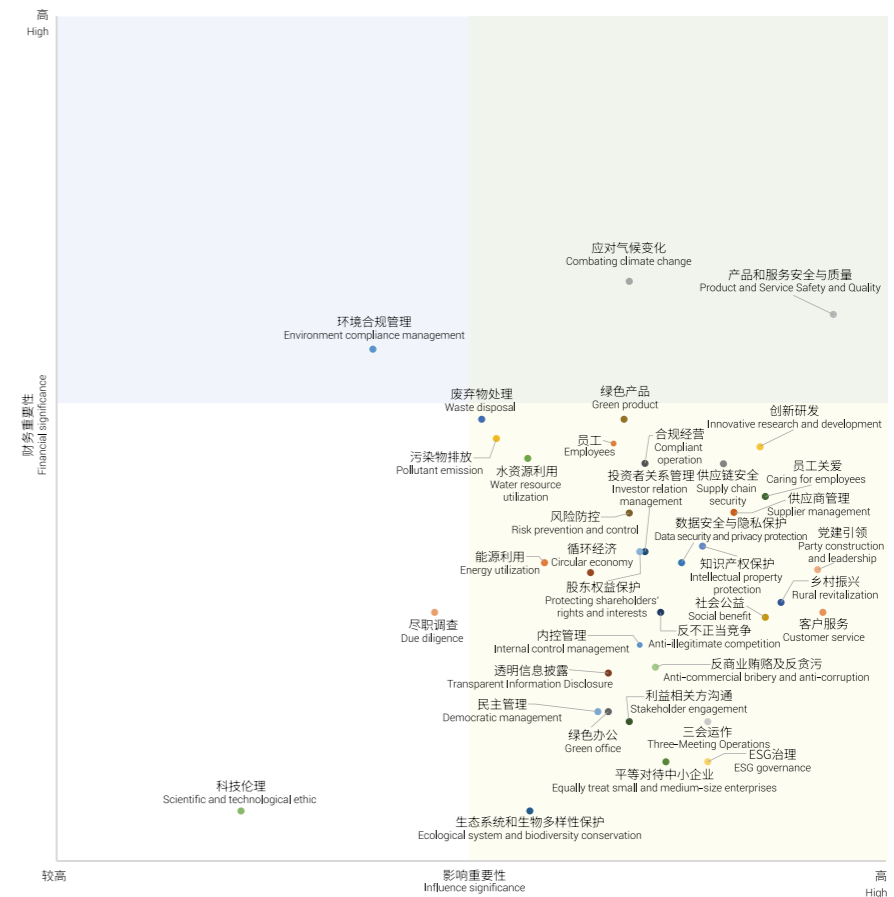
Adhering to the principles of common development, cooperation, and win-win outcomes, the Company maintains close communication with stakeholders such as government and regulatory authorities, shareholders and investors, customers and partners, and employees. It is able to promptly understand the expectations and suggestions of all parties and respond to their demands and expectations.

利益相关方 Stakeholder	主要关注点 Key Concerns	主要举措 Key Initiatives
 政府及监管机构 Government and regulatory authorities	<ul style="list-style-type: none"> 保障能源安全 响应国家战略 反贪腐 守法合规 促进地区经济发展 	<ul style="list-style-type: none"> 与政府开展战略合作 工作汇报 接受监督并开展警示教育 足额纳税
 股东及投资者 Shareholders and investors	<ul style="list-style-type: none"> 公司治理与价格创造 国有资产保值增值 信息披露 风险控制 	<ul style="list-style-type: none"> 提升管理水平与风险管理能力 安全稳健运营 发布定期报告、业绩交流 现金分红
 供应商及合作伙伴 Suppliers and partners	<ul style="list-style-type: none"> 互利共赢 	<ul style="list-style-type: none"> 广泛开展战略合作
 客户 Customers	<ul style="list-style-type: none"> 服务质量 	<ul style="list-style-type: none"> 践行责任使命，保障能源供应 开展客户满意度调查
 社区 Community	<ul style="list-style-type: none"> 关注社区发展 建立和谐社会 保护社区环境 	<ul style="list-style-type: none"> 乡村振兴帮扶 慈善公益 节能技术升级改造 发展清洁能源
 员工 Employee	<ul style="list-style-type: none"> 薪酬及基本权益保障 个人发展与晋升 健康与安全保障 员工关怀 	<ul style="list-style-type: none"> 签订合同 员工培训体系建设 员工代表大会及工会 员工小家建设

重要性分析结论 Materiality Analysis Conclusions

公司注重强化议题重要性评估的严谨性，以利益相关方调研结果为基础，采用定性与定量相结合的分析方法，综合考量各利益相关方关注点与公司规划的契合度，全面识别可持续发展核心议题，以确保评估结果的全面性和科学性，同时明确信息披露要点，为后续信息披露工作及日常运营管理提供指引。报告期内，公司识别出应对气候变化、产品和服务安全与质量 2 项双重重要性的议题，环境合规管理 1 项财务重要性的议题，以及 14 项影响重要性的议题，其余议题既不具备财务重要性也不具备影响重要性。根据上述重要性议题评估结果，公司编制 2025 年度重要性矩阵，如下图所示。

The Company places great emphasis on enhancing the rigor of its materiality assessments. Based on stakeholder survey results and employing a combination of qualitative and quantitative analytical methods, it comprehensively considers the alignment between stakeholder concerns and the Company's strategic planning. This approach enables the comprehensive identification of core sustainability topics, ensuring the comprehensiveness and scientific validity of the assessment results, while also clarifying key points for information disclosure, providing guidance for subsequent disclosure efforts and daily operational management. During the reporting period, the Company identified two topics with dual materiality (climate change response and product and service safety and quality), one topic with financial materiality (environmental compliance management), and 14 topics with impact materiality. The remaining topics were determined to have neither financial nor impact materiality. Based on the results of the materiality assessment described above, the Company prepared the 2025 materiality matrix, as illustrated in the figure below.



注：公司广泛收集内部专业意见，对重要性等级进行审慎复核与适当调整，以期形成客观公正、切实可行的评估结论。
Note: The Company extensively gathered internal professional opinions to carefully review and appropriately adjust materiality levels, aiming to form an objective, fair, and practical assessment conclusion.



绿色固根基

Building a Solid Foundation for Green-Based Energy

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以制度固根基

Strengthening the Foundation through Systems

公司以“保护优先、预防为主、综合治理、全员参与”为总方针，构建并完善公司环境保护和内部监督机制，要求党组织在生态环保工作中发挥重要作用，把生态环保纳入议事日程，及时组织研究重大问题，督促各项生态环保决策落实到位。公司坚决贯彻落实国家生态环保法律法规、标准规范，组织制定生态环保管理制度，全面提升生态环境保护管理能力。

The Company adheres to the overarching principles of "protection first, prevention foremost, comprehensive management, and all-employee participation", establishing and improving its environmental protection and internal supervision mechanisms. The Party organization is required to play a significant role in ecological and environmental protection work, including such matters on its agenda, promptly organizing the study of major issues, and ensuring the implementation of all ecological and environmental protection decisions. The Company resolutely implements national ecological and environmental protection laws, regulations, and standards, organizes the formulation of ecological and environmental protection management systems, and comprehensively enhances its capacity for ecological and environmental protection management.

治理 Governance

公司严格遵循《中华人民共和国环境保护法》《中华人民共和国环境影响评价法》《中华人民共和国大气污染防治法》《中华人民共和国水污染防治法》《中华人民共和国噪声污染防治法》等法律法规，建立了《生态环境保护管理工作规定》《突发环境事件应急预案》《生态环保责任制管理规定》等管理制度，不断完善环境管理内部制度和管理体系，通过了ISO14001环境管理体系认证。为确保环境管理体系的有效运行，公司已建立自上而下的管理架构，成立生态环保委员会，设立安全环保部、火电部、新能源部、工程管理部、氢能生产运营部等专业部门。

The Company strictly complies with laws and regulations such as the *Environmental Protection Law of the People's Republic of China*, the *Law of People's Republic of China on Environmental Impact Appraisal*, the *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*, the *Water Pollution Prevention and Control Law of the People's Republic of China*, and the *Noise Pollution Prevention and Control Law of the People's Republic of China*. It has established management systems including the *Regulations on Ecological and Environmental Protection Management*, the *Emergency Plan for Sudden Environmental Events*, and the *Regulations on the Management of Ecological and Environmental Protection Responsibility Systems*. It continuously improves its internal environmental management systems and framework, having obtained ISO 14001 Environmental Management System certification. To ensure the effective operation of the environmental management system, the Company has established a top-down management structure, forming an Ecological and Environmental Protection Committee and establishing specialized departments such as the Safety and Environmental Protection Department, the Thermal Power Department, the New Energy Department, the Engineering Management Department, and the Hydrogen Production Operations Department.

环境管理架构 Environmental Management Structure



战略 Strategy

公司将环境合规管理纳入可持续发展规划核心，与能源转型、循环经济布局形成战略协同。结合行业项目周期特点和生产运营实践，全面识别环境合规议题对公司发展的潜在影响。公司针对识别的每项环境合规管理相关风险和机遇，明确其可合理预期产生重大影响的时间范围，并划分为短期（1-5 年）、中期（5-10 年）长期（10 年以上）。

The Company integrates environmental compliance management into the core of its sustainable development planning, creating strategic synergy with energy transition and circular economy initiatives. Combining the cyclical characteristics of the industry and its production and operational practices, it comprehensively identifies the potential impacts of environmental compliance topics on the company's development. For each identified risk and opportunity related to environmental compliance management, the Company defines the time horizon over which it could reasonably be expected to have a material impact, categorizing them as short-term (1-5 years), medium-term (5-10 years), and long-term (over 10 years).

类型 Type	相关风险与机遇 Related Risks and Opportunities	财务影响 Financial Impact	影响时间 Time Horizon of Impact	应对举措 Countermeasures
转型风险 Transition risk	政策和法律风险 Policy and Legal Risks	<p>法规跟踪滞后 Regulation compliance tracking</p> <p>环保法律法规、地方排放标准动态更新，企业未及时同步调整内部管理标准，导致原本合规的生产行为陷入被动违规 Environmental laws, regulations, and local emission standards are dynamically updated. Failure to promptly adjust internal management standards may result in previously compliant production activities becoming non-compliant.</p>	短 - 中 - 长期 Short-medium-long-term	<p>设立专人对接环保部门、合作专业律所，建立法规更新预警机制，每季度梳理现行标准与内部制度的适配性，及时修订管理规范 Designate dedicated personnel to liaise with environmental protection departments and collaborate with professional law firms, establish a regulatory update alert mechanism, review the compatibility of current standards with internal systems quarterly, and revise management regulations in a timely manner</p>
		<p>制度落地失效 Ineffective system implementation</p> <p>虽建立环境合规制度，但存在纸面合规问题，制度与执行环节出现脱节 Environmental compliance systems are established but exist only on paper, leading to a disconnect between policies and execution.</p>	短 - 中 - 长期 Short-medium-long-term	<p>将合规要求分解至生产、采购、技术等各部门岗位，明确“谁操作、谁负责”，通过岗位合规手册固化流程 Decompose compliance requirements into the responsibilities of various departments and positions such as production, procurement, and technology, clarifying "who operates, who is responsible." Standardize processes through position-specific compliance manuals.</p>
	市场风险 Market risk	<p>供应链合规风险 Supply chain compliance risk</p> <p>上游供应商环保资质缺失、超标排放，企业未建立供应商合规审核与动态监管机制，导致自身因关联违规被牵连 Upstream suppliers lack environmental qualifications or exceed emission standards, and the Company lacks a supplier compliance review and dynamic supervision mechanism, leading to associated violations.</p>	短 - 中 - 长期 Short-medium-long-term	<p>建立供应商环保资质准入清单，在招标环节开展合规预审，定期对核心供应商进行核查，对违规供应商实施退出机制 Establish a supplier environmental qualification admission list. Conduct compliance pre-reviews during the bidding process. Regularly audit core suppliers and implement an exit mechanism for non-compliant suppliers.</p>
		<p>客户流失风险 Customer churn risk</p> <p>因自身环保资质缺失、超标排放、环境违法违规事件导致不满足下游供应商准入要求，造成客户流失 Due to a lack of environmental qualifications, exceeding emission standards, or environmental violations, the Company fails to meet downstream supplier admission requirements, resulting in customer loss.</p>	短 - 中 - 长期 Short-medium-long-term	<p>针对重点客户环保审查因素建立台账，定期开展环保合规自查 Maintain a record of environmental review factors for key customers. Conduct regular self-inspections of environmental compliance.</p>
	声誉风险 Reputational risks	<p>突发环境事件舆情发酵 Public opinion escalation following environmental incidents</p> <p>如泄漏、超标排放等事件被媒体曝光，企业应对不及时或回应敷衍，引发公众质疑、环保组织追责 Events such as leaks or excessive emissions are exposed by the media. The Company's response is delayed or perfunctory, leading to public scrutiny and accountability actions by environmental organizations.</p>	短 - 中 - 长期 Short-medium-long-term	<p>按监管要求定期披露环境合规报告、监测数据，通过官网、ESG 报告等渠道公开制度、成效与隐患整改情况，接受社会监督 Regularly disclose environmental compliance reports and monitoring data as required by regulations. Publicly share systems, achievements, and hazard rectification status through channels such as the company website and ESG reports, subject to public oversight.</p>
		<p>绿色承诺与行动脱节 Discrepancy between green commitments and actions</p> <p>对外宣称绿色生产但实际存在违规行为，存在漂绿风险，形成利益相关方信任危机 Publicly promoting green production while engaging in non-compliant practices, posing greenwashing risks and creating a crisis of trust among stakeholders</p>	长期 Long-term	<p>参与环保公益、开放工厂参观、邀请第三方机构鉴证合规成果等方式，修复品牌形象 Engage in environmental public welfare, open factories for visits, and invite third-party organizations to verify compliance achievements to restore brand image</p>
	市场机遇 Market opportunities	<p>客户拓展 Customer expansion</p> <p>进入对环保合规要求严苛的细分市场，获取优质订单，区别于行业内合规薄弱企业，获得消费者、合作方的认可 Enter market segments with stringent environmental compliance requirements, secure high-quality orders, and gain recognition from consumers and partners, distinguishing the Company from less compliant peers.</p>	中 - 长期 Medium to long term	<p>推动核心供应商提升合规水平，共同打造绿色供应链，满足下游客户的全链条环保要求，强化品牌差异化优势 Encourage core suppliers to enhance their compliance levels, jointly build a green supply chain, meet the full-chain environmental requirements of downstream customers, and strengthen brand differentiation advantages.</p>

影响、风险和机遇管理

Impact, Risk, and Opportunity Management

公司持续完善风险管理流程，编制《突发环境事件应急预案》，为进一步推动环境风险管理工作落地，公司指导所管各单位持续加强环境风险识别和防控措施落实，定期开展风险识别和评估工作，梳理环境风险清单，全面防控各类突发环境事件风险。

公司定期与政府监管部门、行业协会、客户等利益相关方沟通，了解其对公司环境管理工作的期望，并将其纳入公司的管理范畴。同时，公司密切关注所管各单位场站周边社区居民的反馈，避免因环境管理工作的不足对周边居民生活造成不便。为此，公司建立了内部管理程序，一旦收到社区或当地居民等利益相关方投诉，及时开展受理、调查、整改与复盘工作，持续提升环境管理工作的有效性。

公司识别出的主要生态环境保护风险包括不达标排放、发生一般及以上突发环境事件、建设项目环保违法违规三个风险点，进一步推动环境风险管理工作落地。公司指导所管各单位持续加强环境风险识别和防控，梳理环境风险清单，并实施环境风险应急演练计划，按照“三个验证、三个覆盖”原则，定期完成化学品泄漏、废水废气超标排放等突发环境事件应急演练，持续提升应对环境风险能力。公司所管各单位均已制定《重污染天气应急预案》，并按照相关要求要求进行大气污染物控制。

The Company continuously improves its risk management processes and formulates the *Emergency Plan for Sudden Environmental Events*. To further advance the implementation of environmental risk management, the Company guides all its managed units to consistently strengthen environmental risk identification and the implementation of prevention and control measures. It conducts regular risk identification and assessment activities, compiles environmental risk lists, and comprehensively prevents and controls risks associated with various sudden environmental incidents.

The Company maintains communication with government regulators, industry associations, customers and other stakeholders, timely understands their expectations for the Company's environmental management, and incorporates them into its management framework. Also, the Company pays close attention to feedback from residents surrounding the sites of its subsidiaries and minimizes any inconvenience to their daily lives caused by insufficient environmental management. To this end, the Company has established a complete internal management procedure. Upon receiving complaints from stakeholders such as the community or local residents, it promptly handles, investigates, rectifies and reviews the issues to continuously improve the effectiveness of environmental management.

The Company has identified three main ecological and environmental protection risks: non-compliant emissions, occurrence of general or above environmental emergencies, and environmental violations in construction projects. These are addressed to further advance the implementation of environmental risk management. The Company guides entities under its management to continuously strengthen environmental risk identification and control, compiles environmental risk lists, and implements environmental risk emergency drill plans. Following the principle of the "Three Validations and Three Coverages", regular emergency drills for environmental emergencies such as chemical spills and wastewater or gas emissions exceeding standards are conducted to continuously enhance the capacity to respond to environmental risks. All entities under its management have developed *Emergency Response Plans for Heavy Pollution Weather* and implement air pollutant controls in accordance with relevant requirements.



公司召开 2025 年第 6 次党委理论学习中心组学习（扩大）会暨中央生态环境保护督察整改推进会

The Company Holds the 6th Party Committee Theoretical Learning Central Group (Expanded) Meeting of 2025 and the Central Ecological and Environmental Protection Inspection Rectification Implementation Promotion Meeting

公司召开党委理论学习，深入学习贯彻习近平生态文明思想，传达中央生态环境保护督察组相关会议精神，部署公司生态环境保护督察问题整改工作，推进美丽中国建设。公司领导班子成员围绕“牢固树立安全发展、绿色发展理念，守牢安全生产和生态环境保护底线红线”主题进行专题研讨，公司党委书记、董事长杨玉峰主持会议并讲话。

会议宣贯了公司《中央生态环境保护督察问题整改专项工作方案》，此次会议既是贯彻落实党中央、国务院、国家电投关于生态环境保护工作决策部署的政治动员，也是公司直面问题、刀刃向内，坚决打好污染防治攻坚战的誓师大会。对于中央生态环境保护督察指出的问题，必须坚决照单全收、立行立改，以“钉钉子”精神推动整改见底清零，以实际行动践行“绿水青山就是金山银山”的发展理念。

The Company convened a Party Committee theoretical learning session to deeply study and implement Xi Jinping Thought on Ecological Civilization, convey the inspection report of the Central Ecological and Environmental Protection Inspection Group on SPIC and the spirit of the SPIC Central Ecological Environmental Protection Inspection Deployment Meeting, deploy the rectification work for ecological environmental protection inspection issues, and advance the construction of a Beautiful China. Members of the Company's leadership team conducted a thematic discussion on the topic of "firmly establishing the concept of safe development and green development, and firmly upholding the bottom line and red line of work safety and ecological environmental protection." The meeting was chaired by Yang Yufeng, Secretary of the Party Committee and Chairman of the Company, who also delivered a speech.

The meeting publicized the Company's *Special Work Plan for the Rectification of Issues Identified by the Central Ecological Environmental Protection Inspection*. This meeting served as both a political mobilization to implement the decisions and deployments of the Party Central Committee, the State Council, and the State Power Investment Corporation regarding ecological environmental protection work, and a oath-taking assembly for the Company to confront problems head-on, engage in self-reflection, and resolutely fight the battle against pollution. For the issues pointed out by the Central Ecological and Environmental Protection Inspection, the Company must resolutely accept all responsibilities, take immediate action to rectify them, promote thorough rectification with the spirit of driving in nails, and practice the development concept that "lucid waters and lush mountains are invaluable assets" through concrete actions.



案例
Case

公司举办 2025 年生态环保管理培训班

The Company Holds the 2025 Ecological and Environmental Protection Management Training Session

为深入贯彻习近平生态文明思想，全面加强公司生态环境保护管理能力建设，切实提升各级环保管理人员专业素养与业务能力，落实公司 2025 年培训工作计划，7 月 15 日至 18 日，公司 2025 年生态环保管理培训班在长春顺利举办，来自公司各部门、各所属单位的分管领导、环保管理相关负责人及专兼职管理人员等共计 51 名学员参加线下培训，各单位相关人员同步通过线上形式参训学习。

本次培训紧扣公司生态环保工作实际需求，精心设计课程体系，采用“线下+线上”相结合的培训模式，既设置了水污染、大气污染、危废固废管理等污染防治核心内容，又涵盖了生态环保最新法律法规宣贯、中央生态环保督察典型案例剖析、排污许可管理、污染源在线监控设施运维等实操要点，同时结合火电、新能源等不同业务板块特点，解读无组织排放管理、水土保持方案落实、排污许可登记等专项工作要求，课程内容兼具政策高度、专业深度和实践广度。培训邀请行业资深专家授课，通过政策解读、案例分析、手册宣贯等方式，将理论知识与实际工作紧密结合，让参训人员精准把握生态环保工作的最新要求和实操方法。

为提升培训实效，培训班设置多场课题交流研讨及分享环节，围绕建设项目土地复垦、施工扬尘长效治理、新能源环保管理、火电废水零排放等 11 个贴合工作实际的推荐课题，组织学员深入交流探讨，分享各单位在生态环保规范化管理中的良好实践，凝聚工作思路，破解实操难题。培训严格执行 SAT（培训-考核-授权-上岗）程序，在培训尾声组织统一考试，对考核合格人员将发放培训合格证书，切实保障培训成果落地。同时，培训班实行封闭管理，明确纪律要求，为培训顺利开展提供坚实保障。



此次培训是公司夯实生态环保管理基础、锻造专业环保队伍的重要举措，有效搭建了公司内部环保管理经验交流的平台，进一步提升了各级环保管理人员的政策理解能力、问题处置能力和实操应用能力，为公司持续提升生态环境保护管理水平、推动绿色低碳高质量发展奠定了坚实的人才基础。参训学员纷纷表示，将把此次培训所学知识与实际工作紧密结合，把培训成果转化为推动工作的实际行动，严格落实各项生态环保要求，切实履行环保主体责任，以更专业的能力、更扎实的作风做好生态环保各项工作，为公司高质量发展筑牢绿色生态屏障。

To thoroughly implement Xi Jinping's ecological civilization thought, comprehensively strengthen the Company's ecological and environmental protection management capacity building, effectively enhance the professional quality and operational capabilities of environmental protection management personnel at all levels, and implement the Company's 2025 training work plan, from July 15 to 18, the Company successfully held the 2025 Ecological and Environmental Protection Management Training Session in Changchun. A total of 51 participants, including department heads, environmental protection management leaders, and full-time or part-time management personnel from various departments and affiliated units, attended the offline training. Relevant personnel from all units also participated in the training online.

Tailored to the actual needs of the Company's ecological and environmental protection work, the training course featured an elaborate curriculum design and adopted a combined offline-online training model. It covered core content on pollution prevention and control such as water pollution, air pollution, and hazardous waste management, as well as practical essentials including the dissemination of the latest ecological and environmental protection laws and regulations, analysis of typical cases from the Central Ecological and Environmental Protection Inspection, discharge permit management, and operation and maintenance of online monitoring facilities for pollution sources. Simultaneously, in conjunction with the characteristics of different business segments such as thermal power and new energy, it interpreted the special work requirements for unorganized emission management, implementation of soil and water conservation plans, and discharge permit registration. The curriculum content was policy-oriented, professionally in-depth, and practically comprehensive. The training course invited senior industry experts to deliver lectures, combining theoretical knowledge with practical work through policy interpretation, case analysis, and manual dissemination, enabling trainees to accurately grasp the latest requirements and practical methods for ecological and environmental protection work.

To enhance the effectiveness of the training, the training course organized multiple sessions of topic exchange seminars and sharing sessions. Focusing on 11 practice-oriented topics including land reclamation for construction projects, long-term management of construction dust, new energy environmental management, and zero discharge of thermal power wastewater, it facilitated in-depth discussions among trainees, sharing of good practices in standardized ecological and environmental management across various units, pooling work ideas, and solving practical problems. The training strictly followed the SAT (Study-Assessment-Authorization-Onboarding) procedure. A unified examination was organized towards the end of the training, and training qualification certificates will be issued to those who pass the assessment, ensuring the practical implementation of the training outcomes. Meanwhile, the training course adopted closed management and clarified disciplinary requirements, providing a solid guarantee for the smooth conduct of the training.

This training was an important initiative for the Company to consolidate the foundation of ecological and environmental protection management and build a professional environmental protection team. It effectively built a platform for internal exchange of environmental management experience, further enhancing the policy understanding, problem-solving capabilities, and practical application skills of environmental management personnel at all levels, laying a solid talent foundation for the Company to continuously improve its ecological and environmental protection management level and promote high-quality green and low-carbon development. Trainees expressed that they would closely combine the knowledge learned in the training with practical work, transform the training results into practical actions to promote work, strictly implement all ecological and environmental protection requirements, effectively fulfill the main responsibilities for environmental protection, and carry out all ecological and environmental protection work with more professional capabilities and a pragmatic style, building a robust green ecological barrier for the Company's high-quality development.

指标与目标

Indicators and Targets

公司高度重视环境保护工作，积极设立阶段性环境保护目标，预计于 2027 年实现生态环保“十个百分之百”。报告期内，公司环保总投入 4.74 亿元，同比增加 334.86%；年内未因环境事件受到生态环境等有关部门重大行政处罚。

The Company places high importance on environmental protection efforts, actively establishes phased environmental protection goals, and is expected to achieve the "Ten 100 Percent" ecological and environmental protection targets by 2027. During the reporting period, the Company's total environmental protection investment reached RMB 474 million, an increase of 334.86% year-on-year. No significant administrative penalties were imposed by ecological and environmental authorities or other relevant departments due to environmental incidents during the year.

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2025 年公司环境管理目标 2025 Environmental Management Targets

2025 年完成情况 2025 Completion Status

火电厂大气主要污染物各项指标达标率达到 100% Compliance rate for major air pollutant indicators in thermal power plants reaches 100%	 Achieved
不发生一般及以上环境污染事件 No occurrence of general or above environmental pollution incidents	 Achieved
固体废物、危险废物处置均符合国家要求 Solid waste and hazardous waste disposal fully comply with national requirements	 Achieved
生态环保问题整改按计划完成率 100% Completion rate for ecological and environmental protection rectification items as planned reaches 100%	 Achieved

以减碳强担当

Demonstrating Responsibility through Carbon Reduction

治理

Governance

公司遵守《企业温室气体排放核查技术指南发电设施》《企业温室气体排放核算与报告指南发电设施》等规范要求，制定《碳排放管理细则》，明确责任落实、监督检查、统计分析、知识培训、考核奖惩等要求，指导节能低碳工作规范开展，推动公司绿色可持续发展。

董事会是气候相关议题的最高负责与决策机构，主要职责包括审批公司气候变化管理战略，审批公司气候变化管理中长期规划和年度规划，审批公司气候变化风险管控目标等。

The company complies with regulatory requirements such as the *Technical Guidelines for Corporate Greenhouse Gas Emission Verification for Power Generation Facilities and the Guidelines for Corporate Greenhouse Gas Emission Accounting and Reporting for Power Generation Facilities*. It has formulated the *Detailed Rules for Carbon Emission Management*, which clarify requirements for responsibility implementation, supervision and inspection, statistical analysis, knowledge training, assessment, and rewards and penalties. These policies guide the standardized implementation of energy conservation and low-carbon initiatives, promoting the Company's green and sustainable development.

The Board of Directors serves as the highest authority and decision-making body for climate-related issues. Its primary responsibilities include approving the Company's climate change management strategy, medium- and long-term plans, annual plans, and climate change risk control objectives.

战略

Strategy

以习近平新时代中国特色社会主义思想为指导，完整、准确、全面贯彻新发展理念，深入践行能源安全新战略，全面贯彻“均衡增长战略”，重点发展“新能源+”和绿色氢基能源双赛道，全面提升“投资、开发、建设、技术、创新、运营”六大核心能力，全力打造世界一流绿色氢基能源平台。

Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, we will fully, accurately, and comprehensively implement the new development philosophy, deeply practice the new energy security strategy, comprehensively carry out the "Balanced Growth Strategy," focus on developing the dual tracks of "New Energy+" and green hydrogen-based energy, comprehensively enhance the six core capabilities of "investment, development, construction, technology, innovation, and operation," and strive to build a world-class green hydrogen-based energy platform.

气候变化相关风险和机遇类型 Types of Climate-Related Risks and Opportunities		对公司的影响 Impact on the Company	时间范围 Time Horizon	气候相关财务影响 Climate-Related Financial Impact	受影响的价值链范围 Value Chain Scope Affected	主要应对举措 Key Countermeasures	
物理风险 Physical risk	急性风险 Acute risk	极端高温 Extreme heat	制冷设备需求增大，增加运营成本支出；导致员工中暑、工作状态不佳，降低公司运营效率，同时员工健康维护成本增加；温度敏感的设备、化学试剂，仓储环节的爆炸、火灾等安全风险升高。 Increased demand for cooling equipment, leading to higher operational costs; causing heatstroke among employees, poor work conditions, reduced company operational efficiency, and increased health maintenance costs for employees; elevated safety risks such as explosions and fires in storage areas for temperature-sensitive equipment and chemical reagents.	短期 Short-term	自身运营 Operation	增加运营成本和员工维护成本，降低财务收入 Increased operating costs and employee maintenance costs; reduced financial revenue	合理配置制冷设备，且优先采用节能环保的设备类型；制定并落实员工防中暑措施，开展防暑降温关心关爱活动；加强安全管理，严格控制仓储环节的条件，并定期开展消防检查、消防演练，普及员工消防意识。 Reasonably deploy refrigeration equipment, prioritizing energy-saving and environmentally friendly types; Develop and implement employee heatstroke prevention measures, carry out heatstroke prevention and cooling care activities; Strengthen safety management, strictly control storage conditions, and regularly conduct fire inspections and drills to enhance employees' fire safety awareness.
	急性风险 Acute risk	自然灾害 Natural disasters	由于气候变化导致的台风、风暴潮、洪水等自然灾害，可能对公司资产和生产经营带来直接损害；自然灾害可能导致供应链中断，为公司带来间接影响。 Natural disasters such as typhoons, storm surges, and floods caused by climate change may directly damage the Company's assets and production operations; Natural disasters may lead to supply chain disruptions, causing indirect impacts on the Company.	短期 Short-term	自身运营 上下游 Operation Upstream & downstream	固定资产损失 Fixed asset loss	加强和业务所在地政府、气象和应急部门的沟通联动，及时发布预警；持续完善自然灾害应急预案，加强应急能力建设，定期开展应急演练，做好自然灾害的应急处置，减少对公司生产经营的影响；加强供应链管理，建立更具韧性的供应链。 Strengthen communication and coordination with local governments, meteorological departments, and emergency response agencies in operational areas, and issue timely warnings; Continuously improve natural disaster emergency response plans, enhance emergency response capabilities, conduct regular emergency drills, effectively handle natural disasters, and minimize their impact on the Company's production and operations; Strengthen supply chain management and establish a more resilient supply chain.
		极端天气 Extreme weather	台风、暴雨、洪涝等极端天气事件愈来愈频繁发生，可能造成公司生产设备损坏、运输受阻、供应链中断等风险，导致运营产能下降、运营成本增加，降低公司盈利水平。 Extreme weather events such as typhoons, heavy rain, and floods are occurring with increasing frequency, potentially causing risks such as damage to the Company's production equipment, transportation disruptions, and supply chain interruptions. This may lead to a decline in operational capacity, an increase in operational costs, and a reduction in the Company's profitability.	短期 Short-term	自身运营 上下游 Operation Upstream & downstream	增加运营成本，降低财务收入 Increased operating costs; reduced financial revenue	开展气象监测，关注极端天气预警，制定科学有效的灾害应急预案，并强化应急演练；定期排查生产运营设施隐患，及时升级改造设施设备；做好防灾减灾物资的日常储备。 Conduct meteorological monitoring, pay attention to extreme weather warnings, develop scientific and effective disaster emergency plans, and strengthen emergency drills; Regularly inspect and address hidden dangers in production and operation facilities, and promptly upgrade and renovate equipment; Maintain daily reserves of disaster prevention and mitigation supplies.
		慢性风险 Chronic risk	气温上升 Rising temperature	平均气温上升，可能造成设备冷却水增加、运营场所制冷与采暖需求增加等，进而导致运营成本上升。 An increase in average temperature may lead to higher cooling water requirements for equipment, increased cooling and heating demands in operational facilities, and consequently, higher operational costs.	长期 Long-term	自身运营 Operation	固定资产损失，运营成本增加，收入减少 Fixed asset losses, increased operating costs, reduced revenue
	慢性风险 Chronic risk	水资源短缺 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 shortages at major production bases may lead to higher water supply costs.	短期 Short-term	自身运营 Operation	增加用水成本 Increased water costs	开展节水行动，实施节水改造，深耕替代水源项目。 Launch water-saving initiatives and retrofits; develop alternative water source projects.

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转型风险 Transformation risk	政策法规风险 Policy and regulatory risk	碳市场与碳定价 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 sector in the national carbon trading market may increase electricity prices.	短期 Short-term	上游 Upstream	提升运营成本 Increased operating costs	加强能源管理，提升能源利用效率，降低电单耗；使用绿电。 Strengthen energy management, improve energy efficiency, reduce unit electricity consumption; utilize green electricity.
		环保法规趋严 Stringent environmental regulations	业务所在地政府未来将实施更为严格的环保法规，对温室气体排放设置严格的限制和排放配额，遵守这些新规和标准会增加公司的合规成本。 Local governments may implement stricter environmental regulations, imposing rigorous limits and emission quotas on greenhouse gas emissions. Compliance with new rules and standards will increase compliance costs.	中期、长期 Medium to long term	自身运营 Operation	增加运营成本，降低财务收入 Increased operating costs; reduced financial revenue	密切关注并严格遵守碳排放和碳交易相关法律法规，积极采取措施减少碳排放，严格遵守业务所在国家或地区碳排放法规，加强碳资产的储备和管理，保障履约；提升公司低碳发展、气候风险管控水平。 Closely monitor and strictly adhere to laws and regulations related to carbon emissions and carbon trading, actively take measures to reduce carbon emissions, strictly comply with carbon emission regulations in the countries or regions where operations are conducted, strengthen the reserve and management of carbon assets to ensure compliance; Enhance the company's low-carbon development and climate risk management capabilities.
		碳价格上涨 Rising carbon prices	预期碳价格将会上涨，增加公司内部环境管理、经营决策的成本。 Anticipated increases in carbon prices will raise costs associated with internal environmental management and business decision-making.	短期、中期 Short to medium term	自身运营 Operation	人力成本增加及合规成本增加 Increase in labor costs and compliance costs	实施节能减排措施，达到或超越运营当地的法规要求；研究采购新型节能设施替换旧设备；定期监察法律法规的发展趋势。 Implement energy-saving and emission reduction measures to meet or exceed the regulatory requirements in the operating area; Research and procure new energy-saving facilities to replace old equipment; Regularly monitor the development trends of laws and regulations.
	技术风险 Technological risks	低碳转型 Low-carbon energy transition	低碳转型会极大增加公司技术创新成本。 Low-carbon transition will significantly increase the Company's technological innovation costs.	中期、长期 Medium to long term	自身运营 Operation	提升运营成本 Increased operating costs	加大技术创新方面的投资，大力发展低碳和节能技术。 Increase investment in technological innovation, vigorously develop low-carbon and energy-efficient technologies.
		低碳技术发展 Low-carbon technology development	低碳技术持续发展，淘汰耗能高的技术。 Continued development of low-carbon technologies will phase out energy-intensive technologies.	中期、长期 Medium to long term	自身运营 Operation	收入减少 Reduced revenue	积极拓展多元化绿色业务。 Actively expand diversified green business initiatives.
	市场风险 Market risks	市场需求变化 Changing market demand	对气候变化的关注可能促使市场倾向于选择低碳产品和服务，从而影响化石燃料的需求；替代燃料、新能源和新产品的快速发展可能给公司造成一定的竞争力。 Growing focus on climate change may steer markets toward low-carbon products and services, affecting fossil fuel demand; rapid development of alternative fuels, new energy sources, and new products may weaken the Company's competitiveness.	长期 Long-term	自身运营 Operation	财务收入减少 Reduced financial revenue	将气候因素纳入投资决策，加大新能源和替代能源投资力度，大力发展清洁能源，加快向油气热电气综合型能源公司转型；加大绿色产品开发和生产，向市场提供更多清洁低碳的能源产品。 Incorporate climate factors into investment decisions; increase investment in new energy and alternative energy sources; vigorously develop clean energy, accelerate the transition to an integrated energy company (oil, gas, heat, electricity, hydrogen); enhance the development and production of green products, offering cleaner, low-carbon energy products to the market.
	声誉风险 Reputational risks	公司形象 Corporate image	低碳形象已成为能源公司的重要影响力标签和利益相关方关注的焦点。如果公司低碳发展目标、达成目标的路径与措施不及预期，可能会对公司的声誉和形象产生影响。 A low-carbon image has become an important reputational marker for energy companies and a key focus of stakeholder interest. If the Company's low-carbon development targets and pathways/measures fall short of expectations, it may impact corporate reputation and image.	中期 Medium-term	自身运营 Operation	财务收入减少 Reduced financial revenue	制定低碳发展目标，细化绿色低碳转型具体部署和举措，强化监督，加快推进公司绿色低碳转型；扩大全方位沟通交流，提升应对气候变化相关信息披露水平和透明度。 Establish low-carbon development targets, detail specific plans and measures for green and low-carbon transition, strengthen oversight, accelerate the Company's green and low-carbon transformation; expand comprehensive communication and engagement, improve the quality and transparency of climate-related information disclosure.

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转型风险 Transformation risk	声誉风险 Reputational risks	市场转变 Market shift	市场更加追求低碳理念，对传统能源相关行业、产品、企业印象负面。 Growing market emphasis on low-carbon principles may lead to negative perceptions of traditional energy-related industries, products, and companies.	中期 Medium-term	自身运营 Operation	品牌价值下降 Reduced brand value	积极拓展多元化绿色业务。 Actively expand diversified green business initiatives.
		利益相关方期望 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 associated with maintaining or enhancing reputation.	短期 Short-term	自身运营 Operation	提高合规成本，低财务影响 Increased compliance costs (low financial impact)	实时了解所管各单位各地市场监管要求和披露要求，开展合规工作。 Stay informed of regulatory requirements and market disclosure expectations in regions where entities under management operate, and conduct compliance work accordingly.
	产品/服务机遇 Product/service opportunities	绿色产品赛道 Green product track	“绿电+绿氢”的解决方案带来新的业务增长机会点。 The "Green Electricity + Green Hydrogen" solutions present new business growth opportunities.	短期 Short-term	下游 Downstream	提升产品销售收入，高财务影响 Increased product sales revenue (high financial impact)	不断拓展应用场景，探索多行业的解决方案；加大对氢能的技术研发。 Continuously expand application scenarios, explore cross-industry solutions; increase investment in hydrogen energy technology R&D.
机遇 Opportunity	气候机遇 Climate opportunities	技术进步 Technological advancement	碳减排目标促使公司加强技术创新，减少碳排放，提高能源利用率，降低生产成本，提高竞争力。 Carbon reduction targets encourage the Company to strengthen technological innovation, reduce carbon emissions, improve energy efficiency, lower production costs, and enhance competitiveness.	中期、长期 Medium to long term	自身运营 Operation	降低生产成本，增加财务收入 Reduce production costs and increase financial revenue	加强替碳技术研发，以科技手段大力推动节能、降碳、减污协同增效，稳步推进自耗能源清洁替代，加大清洁生产和污染防治。 Strengthen R&D in carbon-replacement technologies, leverage technology to drive synergies in energy conservation, carbon reduction, and pollution control; steadily advance the clean substitution of self-consumed energy, enhance clean production and pollution prevention.
	能源使用效率机遇 Energy use efficiency opportunities	清洁能源 Clean energy	通过发展清洁能源项目和绿色电力购买等措施，可在减少碳排放的同时降低能源购置成本，支持公司在可持续能源领域的发展。 Developing clean energy projects and procuring green electricity can reduce carbon emissions while lowering energy procurement costs, supporting the Company's growth in the sustainable energy sector.	短期、中期、长期 Short, medium to long term	自身运营 Operation	降低能源购置成本，提升财务收入 Reduced energy procurement costs; increased financial revenue	发展清洁能源项目。 Develop clean energy projects.
	气候机遇 Climate opportunities	业务发展 Business development	加大生产用清洁能源替代，消纳新能源发电。 Increase the use of clean energy in production, integrate new energy generation.	中期、长期 Medium to long term	自身运营 Operation	增加营业收入 Increased operating revenue	加快拓展地热、风光发电、氢能，以及充电站等新能源业务，大力推动油气和新能源融合发展；建设新能源业务发展基地。 Accelerate expansion into new energy businesses such as geothermal, wind and solar power, hydrogen, and charging stations; vigorously promote the integrated development of oil/gas and new energy; establish new energy business development bases.
	市场机遇 Market opportunities	电气化 Electrification	各行业的电气化转型及绿色电力消费需求的提高增加了对可再生能源装备和解决方案的需求。 The electrification transformation across various industries and growing demand for green electricity increase the need for renewable energy equipment and solutions.	短期 Short-term	下游 Downstream	提升产品销售收入，高财务影响 Increased product sales revenue (high financial impact)	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, adjust production capacity; increase R&D investment in renewable energy solutions.
	资源效率机遇 Resource efficiency opportunities	循环经济 Circular economy	利用循环技术回收再利用材料和产品设计提升，减少采用原始材料所形成的开采和生产碳排放，同时减少原始材料的采购。 Utilizing circular economy technologies to recycle materials and improve product design reduces carbon emissions from extraction and production of virgin materials, while also lowering raw material procurement costs.	短期、中期 Short to medium term	上游 Upstream	减少原始材料的采购成本 Reduced raw material procurement costs	设计精简化减少材料使用，修旧利废；提高使用循环材料的比例。 Simplify design to reduce material usage, repair and reuse old materials; increase the proportion of recycled materials used.
	能源效率机遇 Energy efficiency opportunities	生产过程采用低排放和可再生能源 Adoption of low-emission and renewable energy in production processes	减少对化石能源及传统能源的依赖。 Reduces reliance on fossil fuels and traditional energy sources.	短期、中期 Short to medium term	自身运营 Operation	能源效率提升降低使自身运营成本降低 Reduced operating costs from improved energy efficiency	推动和优化能源管理系统，利用智能制造实现节约能源；推动生产工艺优化及节能降碳技术改造；优化能源结构，提高光伏及其他清洁能源的使用。 Promote and optimize energy management systems, leverage smart manufacturing to achieve energy savings; drive process optimization and energy-saving and carbon-reduction retrofits; optimize energy mix, increase the use of photovoltaic and other clean energy sources.

影响、风险和机遇管理

Impact, Risk, and Opportunity Management

公司结合战略规划、产业布局，聚焦“新能源+”和绿色氢基能源双赛道，加快由投资驱动向创新驱动转型发展。逐步淘汰火电机组落后产能，对在运机组实施节能改造，对新建机组实施高标准管控，持续推进火电清洁化发展。高质量推进清洁发电占比不断提高，持续降低度电二氧化碳排放强度。积极参与碳交易和绿电绿证市场交易，充分利用碳金融工具和政策获得收益。积极开展 CCUS、低碳技术研究、示范与应用，在高质量发展中促进清洁低碳转型。

The Company, aligning with its strategic planning and industrial layout, focuses on the dual tracks of "New Energy+" and green hydrogen-based energy, accelerating its transformation from investment-driven to innovation-driven development. It is gradually phasing out outdated thermal power capacity, implementing energy-saving retrofits for existing units, applying high-standard controls to new units, and continuously advancing the clean development of thermal power. It is promoting a high-quality increase in the share of clean power generation, consistently reducing the carbon dioxide emission intensity per kilowatt-hour. The Company actively participates in carbon trading and the green electricity and green certificate markets, fully utilizing carbon financial instruments and policies to realize benefits. It is actively engaged in the research, demonstration, and application of CCUS and low-carbon technologies, promoting a clean and low-carbon transition through high-quality development.

碳排放管理措施

Carbon Emission Management Measures



温室气体减排实践

Greenhouse Gas Emission Reduction Practices



推进节能环保知识培训

Advance energy conservation and environmental protection training

公司开展节能环保知识培训，并将节能环保学习机制纳入班组建设中，形成常态化的学习模式。报告期内，公司组织各单位开展节能环保培训 92 次，累计参培人员 4,236 人次，通过学习极大提升公司各级人员节能环保理论知识和责任意识，拓宽了视野和工作思路。

The Company conducts energy conservation and environmental protection training and integrates the learning mechanism into team building, establishing a regular learning model. During the reporting period, the Company organized 92 energy conservation and environmental protection training sessions for its entities under management, with a cumulative total of 4,236 participants. These training sessions significantly enhanced the theoretical knowledge and sense of responsibility of personnel at all levels regarding energy conservation and environmental protection, broadening their perspectives and work approaches.

参与环保公益活动

Participate in environmental public welfare activities

公司围绕“节能宣传周”“环保知识进车间”等宣传类活动 45 次，重点普及节能政策与绿色生产理念；“垃圾分类攻坚”“节水节电专项行动”等实践类活动 53 次，推动日常节能环保行为落地；“节能电机更换”“余热回收工艺改造”等技术改造升级 30 次，年度节能 1,260 吨标准煤、节水 8.5 万吨；白城热电公司“绿色车间创建”、长春热电公司“节能改造示范项目”等特色活动成效突出。

The Company organized 45 awareness campaigns, such as "Energy Conservation Awareness Week" and "Environmental Protection Knowledge into the Workshop", focusing on disseminating energy conservation policies and green production concepts. It also conducted 53 hands-on activities, including "Waste Sorting Initiatives" and "Water and Electricity Conservation Campaigns", to promote the implementation of daily energy-saving and environmental protection practices. Additionally, 30 technical upgrade projects, such as "Replacement with Energy-Efficient Motor" and "Waste Heat Recovery Process Retrofits", were carried out, achieving annual energy savings of 1,260 tons of standard coal and water savings of 85,000 tons. Notable initiatives such as Baicheng Thermal Power Company's "Green Workshop Creation" and Changchun Thermal Power Company's "Energy-Saving Retrofit Demonstration Project" achieved outstanding results.

公司持续加强碳资产管理，提升管理能力。报告期内，公司开展碳数据质量提升专项行动，提升了企业碳数据质量。公司积极参与全国碳排放权交易，组建专职交易团队，统筹控排企业配额盈缺情况，科学制定碳交易计划，充分发挥交易集中管理优势，确保所属企业全部按期完成碳配额履约任务。公司积极参与试点和全国碳交易，准确研判碳市场价格走势，2025 年完成碳交易量 12.4 万吨。公司统筹绿电、绿证交易，实现绿色电力价值。

The Company continuously strengthens its carbon asset management to enhance management capabilities. During the reporting period, the Company carried out a special initiative to improve carbon data quality, enhancing the quality of its carbon data. The Company actively participates in the national carbon emission rights trading market. It has established a dedicated trading team to coordinate the allowance surplus and deficit of emission-controlled enterprises, scientifically develop carbon trading plans, and fully leverage the advantages of centralized trading management, ensuring that all subsidiaries complete their carbon allowance compliance tasks on schedule. The Company actively participates in pilot and national carbon trading, accurately analyzing carbon market price trends. In 2025, it completed carbon trading of 124,000 tons. The Company coordinates green electricity and green certificate trading to realize the value of green power.

2025 年，公司累计交易绿电电量 **17.2** 亿千瓦时，出售绿证 **580** 万张。

In 2025, the Company traded a cumulative total of **1.72** billion kWh of green electricity and sold **5.8** million green certificates.

案例
Case

绿色承诺：公司获全球首张非生物来源的可再生燃料氨证书

Green Commitment - The Company Obtains World's First Renewable Fuel of Non-Biological Origin Ammonia Certificate

公司大安风光制绿氢合成氨一体化示范项目获得国际可持续发展和碳认证系统（英文简称“ISCC EU”）颁发的全球首张“非生物来源的可再生燃料氨”认证证书。证书中的“可再生”，是指项目生产的“绿氨”完全由风能、太阳能等可再生能源生产，这次证书的获得，意味着公司大安风光制绿氢合成氨一体化示范项目生产的“绿氨”获得销往全球市场的“通行证”。

公司大安风光制绿氢合成氨一体化示范项目创下全球首张“非生物来源可再生燃料氨”认证证书、全球最大规模的一次性投产绿色合成氨单体项目、全球最大规模的碱液与 PEM 混合电解水制氢、全球最大规模的直流微电网制氢、全球最大规模的固态储氢等五项“全球之最”，打响了我国央企在绿色氢基能源领域的第一枪，彰显了公司技术集成与自主创新能力，及绿色产品核心优势与品牌价值。

The company's Da'an Wind-Solar Green Hydrogen-to-Green Ammonia Integrated Demonstration Project obtained the world's first "Renewable Fuel of Non-Biological Origin Ammonia" certification certificate issued by the International Sustainability and Carbon Certification System (ISCC EU). The term "renewable" in the certificate indicates that the "green ammonia" produced by the project is entirely generated from renewable energy sources such as wind and solar power. Obtaining this certificate signifies that the "green ammonia" produced by the Company's Da'an Wind-Solar Green Hydrogen-to-Green Ammonia Integrated Demonstration Project has secured a "passport" for sales to global markets.

The Company's Da'an Wind-Solar Green Hydrogen-Ammonia Integration Demonstration Project has achieved five "global firsts": the world's first certification for "non-biological source renewable fuel ammonia," the world's largest single green ammonia production project commissioned at one time, the world's largest alkaline and PEM hybrid water electrolysis for hydrogen production, the world's largest DC microgrid for hydrogen production, and the world's largest solid-state hydrogen storage. This project marks the first major initiative by a Chinese state-owned enterprise in the field of green hydrogen-based energy, showcasing the Company's capabilities in technology integration and independent innovation, as well as the core advantages and brand value of its green products.



案例
Case

循碳致远，启航氢氨新程——公司氢能产业 ESG 系统化实践

Advancing with Carbon Circularity, Embarking on a New Journey of Hydrogen and Ammonia - The Company's Systematic ESG Practices in the Hydrogen Energy Industry

公司大安风光制绿氢合成氨一体化项目作为全球领先的绿氢绿氨一体化解决方案，是推动能源转型与低碳制造领域的标志性工程。项目于 2023 年 5 月正式启动，于 2025 年 7 月 26 日试运行投产，深度融合风光发电系统与创新制氢体系，实现年产绿氢 3.2 万吨，绿氨 18 万吨，年均二氧化碳减排量约 65 万吨，节约标准煤 23 万吨。通过采用“混合制氢 + 直流微电网 + 柔性控制 + 复合储氢”集成技术，项目成功实现了波动性可再生能源与连续化工生产之间的高效协同，显著降低碳排放，形成可推广、可复制的绿色工业化路径，在履行环境责任、推动清洁能源利用与促进技术创新等方面，为行业 ESG 发展树立了标杆。

The Company's Da'an Wind-Solar Green Hydrogen-Ammonia Integrated Demonstration Project, as a globally leading green hydrogen-to-green ammonia integrated solution, is a landmark project driving energy transition and low-carbon manufacturing. The project officially commenced in May 2023 was put into trial operation on July 26, 2025. It deeply integrates wind and solar power generation systems with an innovative hydrogen production system, achieving an annual output of 32,000 tons of green hydrogen and 180,000 tons of green ammonia, with an average annual CO₂ emissions reduction of approximately 650,000 tons and energy savings of 230,000 tons of standard coal. By adopting integrated technologies of "mixed hydrogen production + DC microgrid + flexible control + composite hydrogen storage", the project successfully achieved efficient coordination between fluctuating renewable energy and continuous chemical production, significantly reducing carbon emissions. It has established a replicable and scalable pathway for green industrialization, setting a benchmark for ESG development in the industry in fulfilling environmental responsibilities, promoting clean energy utilization, and driving technological innovation.



指标与目标

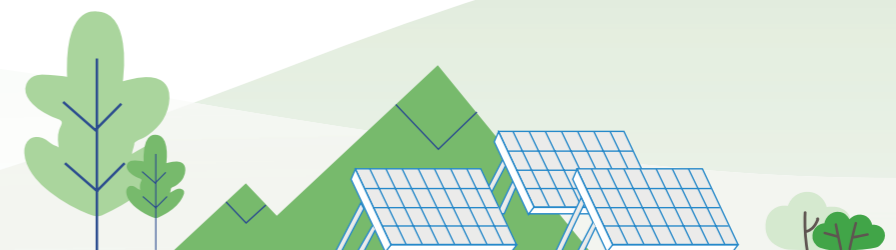
Indicators and Targets

公司二氧化碳排放主要通过生产用煤燃烧、柴油燃烧等产生。

The company's CO₂ emissions are primarily generated from coal combustion for production and gasoline combustion for vehicles.

指标 Indicator	单位 Unit	2025
温室气体排放总量 Total greenhouse gas emissions	吨二氧化碳当量 Tons of CO ₂ equivalent	12,337,499.66
范围一排放量 Scope 1 emissions	吨二氧化碳当量 Tons of CO ₂ equivalent	12,335,126.92
范围二排放量 Scope 2 emissions	吨二氧化碳当量 Tons of CO ₂ equivalent	2,372.74
范围三排放量 Scope 3 emissions	吨二氧化碳当量 Tons of CO ₂ equivalent	—
温室气体排放强度 Greenhouse gas emission intensity	吨二氧化碳当量 / 百万元 Metric tons CO ₂ e/million CNY	9.41

注：数据未经第三方审核
Note: Data has not been verified by a third party.



以集约优效能

Enhancing Efficiency through Intensification

能源管理

Energy Management

公司遵守《中华人民共和国能源法》《中华人民共和国节约能源法》等法律法规要求，建立健全能源管理体系，编制实施《火电节能管理办法》等内部管理制度，并指导所属单位制定《节能管理制度》等相关制度，每年持续开展节能技术改造，不断加强能源管控，积极推进能源梯级利用，合理规划能源使用流程，推进烟气余热再利用，推进节能降耗和深度挖潜，努力让每一吨煤产生更多的效益。

公司总经理是公司火电节能工作第一责任人，对节能管理工作全面负责。下设节能管理工作小组，由总经理任组长，主管火电生产的副总经理（或总工程师）任副组长，成员部门包括火电部、规划与发展部（融合办公室）、计划与财务部、审计部、物资与燃料管理部、科技与数字化部，对节能管理工作实施领导。节能管理工作小组主要职责包括执行国家法律、法规、方针、政策、行业标准和公司实控人的有关要求，审定公司的节能发展战略、节能发展规划和年度计划等。同时设立节能管理专兼职人员，建立三级节能网。

公司使用能源的类型集中在煤、电、油、生物质等，主要通过外购煤炭、柴油、生物质燃料等方式获取。能源利用主要集中在机组启停、机组运行期间发电（供热）等生产作业环节、机组检修、技改期间的施工作业环节、办公环节等。

The Company complies with laws and regulations such as the *Energy Law of the People's Republic of China* and the *Energy Conservation Law of the People's Republic of China*. It has established a robust energy management system, formulated internal management systems such as the *Management Measures for Energy Conservation in Thermal Power*, and guided its subsidiaries to develop relevant systems such as the *Energy Conservation Management System*. Each year, the Company continuously implements energy-saving technological upgrades, strengthens energy control, actively promotes cascade energy utilization, rationally plans energy use processes, advances the utilization of flue gas waste heat, and pursues energy conservation, consumption reduction, and deep potential tapping, striving to generate greater benefits from every ton of coal.

The General Manager of the Company serves as the primary responsible person for thermal power energy conservation and holds overall responsibility for energy conservation management. An energy conservation management working group has been established, with the General Manager as the group leader and the Deputy General Manager (or Chief Engineer) in charge of thermal power production as the deputy group leader. Member departments include the Thermal Power Department, Planning & Development Department (Integration Office), Planning & Finance Department, Audit Department, Materials & Fuel Management Department, and Technology & Digitalization Department. The working group provides leadership over energy conservation management. The main responsibilities of the energy conservation management working group include implementing relevant national laws, regulations, policies, industry standards, and requirements of the Company's actual controller; and reviewing the Company's energy conservation development strategy, energy conservation development plan, and annual plans. Additionally, full-time and part-time energy conservation management personnel are appointed, forming a three-level energy conservation network.

The Company's energy types are primarily coal, electricity, oil, and biomass, mainly obtained through the external procurement of coal, diesel, and biomass fuel. Energy utilization is mainly concentrated in production processes such as unit start-up and shutdown, power generation (heating) during unit operation, construction operations during unit maintenance and technical upgrades, and office operations.

案例 Case

绿色能源全链贯通：公司打造国内首个“绿醇—加注—航运”全链示范项目

Full-Chain Integration of Green Energy, Creating the First "Green Methanol - Bunkering - Shipping" Full-chain Demonstration Project in China

公司联合中远海运国际（香港）有限公司、上港集团能源（上海）有限公司共同投资建设的国内首个贯通“绿醇生产—燃料加注—远洋航运”全链条的绿色甲醇示范项目——梨树风光制绿氢生物质耦合绿色甲醇项目，在吉林四平启动创优建设。

此举不仅开创了央国企共建绿色液体燃料产业链的全新模式，也为我国绿色航运提供了可复制的闭环解决方案，为培育新质生产力、落实“双碳”目标注入强劲动力。项目的启动，不仅是一个开端，更是一个产业的宣言——在中国东北，一场以科技创新为驱动、以绿色发展为底色的能源革命正澎湃涌动，为全球可持续发展贡献着东方智慧与中国力量。

The Company, in collaboration with COSCO SHIPPING International (Hong Kong) Co., Ltd. and Shanghai International Port Group (SIPG) Energy (Shanghai) Co., Ltd., jointly invested in the construction of the country's first green methanol demonstration project that links the entire chain of "green methanol production - fuel bunkering - ocean shipping" - Lishu Wind-Solar Hydrogen-Biomass Coupled Green Methanol Project. The project has initiated quality construction in Siping, Jilin Province.

This initiative not only pioneered a new model of joint development of a green liquid fuel industry chain by central and state-owned enterprises, but also provided China with a replicable closed-loop solution for green shipping, injecting strong momentum into fostering new productive forces and achieving the "dual carbon" goals. The launch of the project marks not just a beginning, but a declaration of an entire industry—a sweeping energy revolution driven by technological innovation and underpinned by green development in Northeast China, contributing Eastern wisdom and Chinese strength to global sustainable development.

公司积极推进节能实践，2025 年完成 15 台高耗能机电设备替换，并组织开展节能宣传周和低碳日活动。

The Company actively promotes energy conservation practices. In 2025, it completed the replacement of 15 high-energy-consumption electromechanical devices and organized activities for Energy Conservation Publicity Week and Low-Carbon Day.

指标 Indicator		单位 Unit	2025	
直接能源消耗量 Direct energy consumption	化石能源消耗量 Fossil energy consumption	煤炭消耗量 Coal consumption	吨标煤 tce	4,282,172.87
		柴油消耗量 Diesel consumption	吨标煤 tce	1,673.76
	清洁能源消耗量 Clean energy consumption	吨标煤 tce	36,458.78	
间接能源消耗量 Indirect energy consumption	外购电力 Purchased electricity	吨标煤 tce	11,357.54	
能源消耗总量 Total energy consumption		吨标煤 tce	4,331,662.95	

注：本表统计数据范围为生产口径。
Note: The statistical scope of the data in this table covers production operations.

水资源管理 Water Resource Management

公司遵守《中华人民共和国水法》《中华人民共和国水污染防治法》《地下水管理条例》《饮用水水源保护区污染防治管理规定》等法律法规要求，制定相关内部管理制度，建立水资源管理体系，火电部设立节能对标管理岗位，各子分公司明确生产技术部为水资源管理部门。

公司使用水资源的类型有地表水、中水、水库水等，主要耗水产生在机组发电补水，闭式循环水补水、冷却塔补水、脱硫工艺水补水等工艺环节。公司积极设立水资源指标与目标，关注自用水率、补充水率、汽水损失率等主要指标，在每年年初核定各三级单位耗水率，并积极宣传节水、水资源管理等相关内容。

The Company complies with laws and regulations such as the *Water Law of the People's Republic of China*, the *Water Pollution Prevention and Control Law of the People's Republic of China*, the *Regulations on the Administration of Groundwater*, and the *Regulations on the Prevention and Control of Pollution in Drinking Water Source Protection Areas*. It has formulated relevant internal management systems and established a water resource management system. The Thermal Power Department has established a benchmarking management position for energy conservation, and each subsidiary branch has designated its Production Technology Department as the water resource management department.

The types of water resources used by the Company include surface water, reclaimed water, and reservoir water. Water consumption primarily occurs in process links such as makeup water for power generation, closed-cycle cooling water makeup, cooling tower makeup, and desulfurization process water makeup. The Company actively sets water resource indicators and targets, focusing on key metrics such as self-use water rate, makeup water rate, and steam loss rate. At the beginning of each year, it verifies the water consumption rates of each third-level unit and actively promotes water conservation and water resource management.

报告期内，公司总耗水量 **686,398,700** 吨，同比下降 **4.38%**。其中新鲜用水 **22,031,215** 吨；重复用水 **664,367,485** 吨，重复用水消耗量占比达 **96.79%**。

During the reporting period, the Company's total water consumption was **686,398,700** tons, a year-on-year decrease of **4.38%**. Among this, fresh water consumption was **22,031,215** tons; recycled water consumption was **664,367,485** tons, accounting for **96.79%** of total water consumption.

以治污净家园

Purifying the Environment through Pollution Control

废水管理

Wastewater Management

公司遵守《中华人民共和国环境保护法》《中华人民共和国水污染防治法》《水污染防治行动计划》《污水综合排放标准》《地下水质量标准》等法律法规，制定《生态环境保护管理工作规定》等内部管理制度，规范废水排放管理要求，各单位结合自身生产特点，产生的废水类型及基础处理方式各有不同。

火电单位在电力生产过程中产生一定量的废水，主要类型有化学制水及精处理生产运行维护产生废水、机组湿法脱硫设施在运行中产生脱硫废水、发电机组附属生产设施产生的工业废水、煤场冲洗产生的含煤废水、生活污水等。

大安绿氢公司在生产过程中产生一定量的废水，主要类型有：机组循环冷却水、制氢合成氨生产设施产生的工业废水等，废水均排至大安市工业园区污水处理厂统一处理，严格按排污许可证要求达标排放。

新能源单位不产生生产废水，场站增设“净水池 + 自动抽水泵及灌溉系统”，构建污水收集、净化与自动回用的完整流程，将生活污水转化为绿化水源。

公司各单位废水处理工作遵循“分类收集、分质处理”核心原则，共采用 4 类主流工艺，整体工艺匹配度达 95.2%，处理后废水 100% 实现达标排放。

报告期内，公司在生产运营过程中产生的各类废水均经废水处理设施处理后，全部循环利用，严格按排污许可证要求零排放；废水监测指标有 SS、PH、COD、氨氮等，水质均符合 GB8978-1996《污水综合排放标准》限值要求，年度废水污染物管控目标（污水处置率 100%）全部完成。

The Company complies with laws and regulations such as the *Environmental Protection Law of the People's Republic of China*, the *Water Pollution Prevention and Control Law of the People's Republic of China*, the *Action Plan for Water Pollution Prevention and Control*, the *Integrated Wastewater Discharge Standard*, and the *Groundwater Quality Standard*. It has formulated internal management systems such as the *Regulations on Ecological and Environmental Protection Management* to standardize wastewater discharge management requirements. Each unit, based on its own production characteristics, generates different types of wastewater and employs different basic treatment methods.

Thermal power units generate a certain amount of wastewater during power production. The main types include wastewater from chemical water treatment and polishing treatment during operation and maintenance, desulfurization wastewater from the operation of wet flue gas desulfurization facilities, industrial wastewater from auxiliary facilities of power generation units, coal-containing wastewater from coal yard washing, and domestic sewage.

Da'an Green Hydrogen Co., Ltd. generates a certain amount of wastewater during its production process. The main types include circulating cooling water from units and industrial

wastewater from hydrogen production and synthetic ammonia facilities. All wastewater is discharged to the Da'an City Industrial Park Sewage Treatment Plant for centralized treatment, achieving compliance with discharge standards strictly in accordance with pollutant discharge permit requirements.

New energy units do not generate production wastewater. Stations are equipped with "clean water tanks + automatic pumping systems and irrigation systems" to establish a complete process for wastewater collection, purification, and automatic reuse, converting domestic sewage into a source of greening water.

Wastewater treatment at the Company's units follows the core principle of "classified collection and graded treatment." A total of four mainstream processes are used, achieving a process matching rate of 95.2%. After treatment, 100% of wastewater achieves compliance discharge.

During the reporting period, all types of wastewater generated during the Company's production operations were treated by wastewater treatment facilities and fully recycled, achieving zero discharge strictly in accordance with pollutant discharge permit requirements. Wastewater monitoring indicators include SS, pH, COD, ammonia nitrogen, etc. Water quality met the limits specified in GB 8978-1996 *Integrated Wastewater Discharge Standard*. The annual wastewater pollutant control target (wastewater treatment rate of 100%) was fully achieved.

废气管理

Waste Gas Management

公司遵守《中华人民共和国大气污染防治法》《环境监管重点单位名录管理办法》《大气污染防治行动计划》《大气污染物无组织排放监测技术导则》《建设项目竣工环境保护验收技术规范火力发电厂》《固定污染源烟气(SO₂、NO_x、颗粒物)排放连续监测技术规范》《固定源废气监测技术规范》《固定污染源烟气(SO₂、NO_x、颗粒物)排放连续监测系统技术要求及检测方法》《固定污染源排气中颗粒物测定与气态污染物采样方法》等法律法规，制定《环保设施远程监督管理办法》等内部管理制度，加强大气污染物管控。公司结合各类废气特点，产生的废气类型及基础处理方式各有不同。

The Company complies with laws and regulations such as the Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution, the Measures for the Administration of the Directory of Key Environmental Supervision Units, the Air Pollution Prevention and Control Action Plan, the Technical Guidelines for Monitoring Fugitive Emissions of Air Pollutants, the Technical Guideline for Check and Acceptance of Environmental Protection of Completed Projects - Thermal Power Plants, the Specifications for Continuous Emissions Monitoring of SO₂, NO_x, and Particulate Matter in the Flue Gas Emitted From Stationary Sources, Technical Specifications for Emission Monitoring of Stationary Source, Specifications and Test Procedures for Continuous Emission Monitoring System for SO₂, NO_x and Particulate Matter in Flue Gas Emitted from Stationary Sources and the Determination of Particulates and Sampling Methods of Gaseous Pollutants from Exhaust Gas of Stationary Source. It has formulated internal management systems such as the Management Measures for Remote Supervision of Environmental Protection Facilities to strengthen the control of air pollutants. Based on the characteristics of various waste gases, the Company's generated waste gas types and basic treatment methods vary.

主要污染物及特征污染物的名称 Main Pollutants and the Names of Particular Pollutants	排放总量(吨) Total Emissions (tons)	核定的年度排放总量(吨/年) Approved Annual Emissions (tons/year)	超标排放情况(吨/年) Excessive Emission (tons/year)
氮氧化物 Nitrogen oxides	1799.86	2277	-477.14
二氧化硫 Sulfur dioxide	657.71	1191	-533.29
烟尘 Particulate matter (smoke/dust)	87.60	/	4,282,172.87

大气污染物脱硫采用石灰石—石膏湿法脱硫工艺，脱硝采用 SCR 脱硝工艺，除尘采用静电除尘 + 湿式除尘器工艺；

在脱硫净烟道上安装在线监测设施，与国家、省、市生态环境部门，重点排污单位自动监控与基础数据库系统联网，实时连续传输环保数据；

公司每季度根据自行监测方案委托有资质的第三方对烟气进行检测并出具报告。

The flue gas desulfurization process employs the limestone-gypsum wet desulfurization method, the denitrification process utilizes the SCR (Selective Catalytic Reduction) technology, and the dust removal process combines electrostatic precipitation with wet dust collectors;

Online monitoring facilities are installed in the desulfurized clean flue gas duct, which are connected to the national, provincial, and municipal ecological environment departments as well as the key pollutant discharging unit automatic monitoring and basic database system, enabling real-time continuous transmission of environmental protection data.

The Company entrusts qualified third parties to conduct flue gas testing and issue reports quarterly based on its self-monitoring plan.

废弃物管理

Waste Management

公司遵守《中华人民共和国固体废物污染环境防治法》《危险废物转移管理办法》《企业环境信息依法披露管理办法》《危险废物鉴别标准》《危险废物鉴别技术规范》《危险废物识别标志设置技术规范》《危险废物贮存污染控制标准》《危险废物转移联单管理办法》《一般工业固体废物管理台账制定指南》《一般工业固体废物贮存和填埋污染控制标准》《一般工业固体废物环境管理工作指南》《固体废物综合治理行动计划》等法律法规，制定《生态环境保护管理工作规定》《生态环境保护“三同时”管理办法》《物资管理办法》《闲置、废旧物资管理办法》等内部管理制度，坚持合规处置原则。公司结合产生的废弃物类型，设置相关处理方法。

The Company complies with laws and regulations such as the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste, the Measures for the Management of Hazardous Waste Transfer, the Measures for the Administration of Legal Disclosure of Enterprise Environmental Information, the Standards for Hazardous Waste Identification, the Technical Specifications on Identification for Hazardous Waste, the Technical Specifications for Setting Hazardous Waste Labels, the Standard for Pollution Control on Hazardous Waste Storage, the Measures on the Management of Hazardous Waste Manifests, the Guidelines for the Preparation of General Industrial Solid Waste Management Ledgers, the Pollution Control Standards for the Storage and Landfill of General Industrial Solid Waste, the Guidelines for Environmental Management of General Industrial Solid Waste, and the Action Plan for the Comprehensive Treatment of Solid Waste. It has formulated internal management systems such as the Regulations on Ecological and Environmental Protection Management, the Management Measures for "Three Simultaneousness" in Ecological Environmental Protection, the Materials Management Measures, and the Management Measures for Idle and Scrap Materials, adhering to the principle of compliant disposal. The company establishes relevant treatment methods based on the types of waste generated.

废弃物类型及处理方法
Waste Type and Treatment Method

无害废弃物 Non-hazardous wastes	按标准合规处置 Compliant disposal according to standards	
	一般废弃物 General waste	对储存场所进行改造，完善现场标识 Modification of storage sites, improvement of on-site labeling
	不可回收固体废物 Non-recyclable solid waste	分类收集 Segregated collection
	生活垃圾 Domestic waste	定点收集后委托环卫及时清运 Centralized collection and timely removal by designated sanitation services
有害废弃物 Hazardous wastes	一般工业固体废物 General industrial solid waste	实施分类收集、妥善暂存，交由专业处理单位回收处理 Segregated collection, proper temporary storage, transfer to professional treatment units for recycling/disposal
	全面辨识危险废物产生环节 委托有专业资质的单位进行危险废物鉴别 规范危险废物标志标识 建立危险废物清单及台账 依法依规开展危险废物暂存设施建设和运维，规范分类、分区贮存，严禁露天堆放 Comprehensive identification of hazardous waste generation points Entrusting qualified professional units for hazardous waste identification Standardization of hazardous waste signs and labels Establishment of hazardous waste lists and ledgers Construction and operation of hazardous waste temporary storage facilities in accordance with laws and regulations; standardized classification and segregated storage; open stacking strictly prohibited	

报告期内，公司无害废弃物、危险废物处置均符合国家要求，完成年度目标。

During the reporting period, the disposal of both non-hazardous waste and hazardous waste by the Company complied with national requirements, and the annual targets were achieved.

噪声管理 Noise Management

公司遵守《中华人民共和国噪声污染防治法》《企业环境信息依法披露管理办法》《排污许可管理办法》等法律法规，制定了《生态环境保护管理工作规定》等制度。公司通过厂房隔声、转动设备降噪、水塔设置挡风帘、厂界设置降噪墙对噪声进行防治，降噪消声。

The Company complies with laws and regulations such as the *Law of the People's Republic of China on the Prevention and Control of Noise Pollution, the Measures for the Administration of Legal Disclosure of Enterprise Environmental Information, and the Measures for the Administration of Pollutant Discharge Permitting*. It has formulated systems such as the *Provisions on the Management of Ecological Environmental Protection*. The Company prevents and controls noise through measures such as plant sound insulation, noise reduction for rotating equipment, installation of wind screens on cooling towers, and installation of noise reduction walls along the plant boundary.

公司或子公司名称 Name of Company or Subsidiary	主要污染物及特征污染物的名称 Main Pollutants and the Names of Particular Pollutants	平均排放浓度 Average Emission Concentration
白城热电公司 Baicheng Thermal Power Company	厂界噪声 Plant boundary noise	昼间 59.6dB; 夜间 49.5dB Daytime: 59.6dB; Nighttime: 49.5dB
吉林吉长电力有限公司 Jilin Jichang Power Company Ltd.	厂界噪声 Plant boundary noise	昼间: 54.7dB; 夜间: 45.3dB Daytime: 54.7dB; Nighttime: 45.3dB
四平热电公司 Siping Thermal Power Company 长春热电公司 Changchun Thermal Power Company	厂界噪声 Plant boundary noise	昼间: 56.0dB; 夜间: 48.6dB Daytime: 56.0dB; Nighttime: 48.6dB 昼间: 49.81dB; 夜间: 45.06dB Daytime: 49.81 dB; Nighttime: 45.06 dB
吉林松花江热电有限公司 / 国电投绿色能源股份有限公司松花江热电分公司 Jilin Songhua River Thermal Power Co., Ltd. / SPIC Green Energy Co., Ltd. Songhua River Thermal Power Company	厂界噪声 Plant boundary noise	昼间 57.56dB; 夜间 51.25dB Daytime: 57.56dB; N

报告期内，公司噪声等污染物排放达标率 **100%**，目标全部完成。

During the reporting period, the compliance rate for pollutants such as noise reached **100%**, and all targets were achieved.

以共生护万物

Protecting All Living Things through Coexistence

公司严格遵守《中华人民共和国环境保护法》《中华人民共和国环境影响评价法》《生态环境保护督察管理条例》《生态环境监测条例》等国内相关法律以及《生物多样性公约》《湿地公约》等国际公约，将生物多样性保护纳入日常经营管理要求，制定了《推动美丽中国建设暨生态环境保护专项行动方案》《生态环境保护管理工作规定》《生态环境保护“三同时”管理办法》《生态环境保护专项督查实施办法》等制度、方案，明确了不毁林、规避生态保护红线区域等生态保护要求，要求工程项目设计、建设和运行阶段，严格落实生态环境保护措施，降低生产经营对生态环境的破坏。新建项目要优先避让生态敏感区，确实不能避让的，要按照生态敏感区主管部门要求开展专项论证，取得主管部门允许穿（跨）越许可；未按要求取得允许穿（跨）越许可时，项目不得开工建设。公司制定了多项风险管理举措，实现了从项目设计到项目建设过程中对生物多样性的全方位保护。

公司开展覆盖各单位分管生态环保副总经理、生态环保监督体系和保证体系部门负责人、专兼职生态环保管理人员及涉及固废和危废处置的物资部门相关管理人员的生态环保管理培训班，邀请专业机构讲解生态环保法律、法规、政策解读，共有 51 名管理人员参加培训，培训 24 课时。

The Company strictly complies with relevant domestic laws such as the *Environmental Protection Law of the People's Republic of China, the Law of People's Republic of China on Environmental Impact Appraisal, the Regulations on the Administration of Ecological and Environmental Protection Inspections, and Regulations on Ecological and Environmental Protection Inspections*, as well as international conventions such as the *Convention on Biological Diversity* and the *Ramsar Convention*. It has integrated biodiversity protection into its daily management requirements and formulated systems and plans such as the *Special Action Plan for Promoting the Construction of a Beautiful China and Ecological Environmental Protection, the Provisions on the Management of Ecological Environmental Protection, the Management Measures for "Three Simultaneousness" in Ecological Environmental Protection, and the Implementation Measures for Special Ecological and Environmental Protection Inspections*. These documents establish ecological protection requirements, including the prohibition of deforestation and the avoidance of ecological protection red line areas. They require that ecological and environmental protection measures be strictly implemented during the design, construction, and operation phases of engineering projects to minimize the impact of production and operations on the ecological environment. New projects must prioritize avoiding ecologically sensitive areas. When avoidance is truly impossible, a special argumentation must be conducted in accordance with the requirements of the competent authority of the ecologically sensitive area, and permission for crossing (or traversing) must be obtained from the competent authority. Projects shall not commence construction if the required permission for crossing (or traversing) is not obtained. The Company has established multiple risk management measures, achieving comprehensive biodiversity protection from project design through project construction.

The Company organized an ecological and environmental protection management training session for personnel including the deputy general managers in charge of ecological and environmental protection at each unit, heads of the ecological and environmental protection supervision system and assurance system departments, full-time and part-time ecological and environmental protection management personnel, and relevant management personnel from materials departments involved in solid waste and hazardous waste disposal. A total of 51 management personnel participated in the training, which lasted for 24 class hours.

共有 **51** 名管理人员参加培训，培训 **24** 课时。

A total of **51** management personnel participated in the training, which lasted for **24** class hours.

案例
Case

网格固沙保护生态

Grid Sand Fixation for Ecological Protection

公司推动霍城光伏项目子阵区沙丘固沙治理，通过网格固沙法对光伏场站所处的图开沙漠沙丘进行治理，稳固光伏支架基础的同时减少沙土的流动；开展了 13 座新能源场站变压器储油池改造，按照规范要求设置了能容纳相应电气设备全部油量的贮油设施，并设置油水分离装置，避免油品环境污染；完成 17 座场站危废库改造，按照安全环保最新要求，对原有危废库进行升级，并对投产运营期危废库房开展环境影响后评价及环保现状评价，避免了生态环保问题发生。

The Company promoted sand dune fixation in the sub-array area of the Huocheng PV project. through the grid sand fixation method, it managed the sand dunes in the Tukai Desert where the PV station is located, stabilizing the foundation of the PV supports while reducing sand movement. It also carried out the renovation of transformer oil storage tanks at 13 new energy stations, installing oil storage facilities capable of containing the full volume of oil from the corresponding electrical equipment in accordance with regulatory requirements, and installed oil-water separation devices to avoid environmental pollution from oil. Additionally, the renovation of hazardous waste warehouses at 17 stations was completed. In line with the latest safety and environmental protection requirements, the original hazardous waste warehouses were upgraded, and post-environmental impact assessments and environmental status assessments were conducted for hazardous waste warehouses during the operation phase, thereby avoiding ecological and environmental issues.



案例
Case

以实际行动践行生态保护

Practicing Ecological Protection through Concrete Actions

四平热电公司对贮灰场进行了生态修复，确保贮灰场覆土绿化率达标，以及周边山体森林覆盖率达标；松花江热电公司完成贮灰场裸露山体生态恢复；江西新能源公司组织对沙岭光伏电站，大水山、莲花山风电场滑坡治理施工。

陕西能源公司针对霍城光伏电站子阵区风沙易流失的生态痛点，精准施策推进专项治理工程。通过实地勘察沙丘分布、风沙流动规律，科学制定“固沙 + 护绿”综合治理方案，采用铺设防沙网、种植耐旱固沙植物、设置沙障等组合措施，构建多层次、立体化的风沙防护体系。专项治理工程全面完成后，有效遏制子阵区风沙侵蚀与流失，避免风沙对光伏组件、电缆线路等设备造成损害。同时改善场站周边环境，实现了生态保护与生产运营的协同发展，为干旱风沙地区新能源项目生态治理提供了可复制、可推广的实践经验。

延安风场开展植被恢复，严格落实植被恢复、水土保持等措施，种植 51,665 棵槐树、山杏等苗木，完成植被恢复面积 20 亩。

Siping Thermal Power Company carried out ecological restoration of its ash storage yard, ensuring that the vegetation coverage rate of the covered soil on the ash yard and the forest coverage rate of the surrounding mountains met the required standards. Songhua River Thermal Power Company completed the ecological restoration of exposed mountain areas in its ash storage yard. Jiangxi New Energy Company organized landslide control construction at the Shaling PV Station, Dashuishan Wind Farm, and Lianhuashan Wind Farm.

Shaanxi Energy Company targeted the ecological pain point of wind erosion and sand loss in the sub-array area of the Huocheng PV Station, implementing a precise and targeted special treatment project. through on-site surveys of sand dune distribution and wind-blown sand movement patterns, the Company scientifically formulated a comprehensive treatment plan combining "sand fixation + green protection." A combination of measures was adopted, including the laying of sand-blocking nets, planting of drought-tolerant sand-fixing vegetation, and setting up sand barriers, to build a multi-layered, three-dimensional wind-blown sand protection system. Upon the full completion of the special treatment project, wind erosion and sand loss in the sub-array area were effectively curbed, preventing damage to equipment such as PV modules and cable lines caused by wind-blown sand. At the same time, the ecological environment surrounding the station was improved, achieving synergistic development between ecological protection and production operations, and providing a replicable and scalable practical experience for ecological management of new energy projects in arid and wind-blown sand regions.

Yan'an Wind Farm carried out vegetation restoration, strictly implementing measures such as vegetation restoration and water and soil conservation. A total of 51,665 seedlings, including locust trees and wild apricot trees, were planted, achieving a vegetation restoration area of 20 mu.

案例
Case

守护·谱写人鸟共生新篇

Safeguarding, Writing a New Chapter of Human-Bird Coexistence

查干湖，这片被称作“圣水湖”的水域，不仅是吉林最大的内陆湖，更是世界主要候鸟东部迁徙路线上的主要补给站之一。这里，还坐落着公司所属吉电新能源公司查干湖·青山头风电场的 53 台风机。

“风机叶片转速可达每秒数十米，对鸟类曾是致命威胁。”该风电场区域中心安全管理张书瑄坦言。

针对候鸟迁徙管理，该公司建立动态监测机制，重点关注每年 3、4 月份和 9、10 月份的候鸟迁徙高峰期，并对鸟类集中分布区域开展高频巡查，一旦发现异常，立即联动主管部门启动应急响应，同步利用无人机、红外热像仪等专业设备实时追踪鸟类动向，保障候鸟迁徙通道安全。值得一提的是，为减少大雾、暴雨等极端天气下风机运行对候鸟迁徙的威胁，公司建立分级响应机制，在恶劣天气时加密风机周边巡检，增设警示标识并优化风机运行参数，降低鸟类与风机碰撞风险。截至目前，该风场已连续实现多年的候鸟“零碰撞”。

公司开展形式多样的宣教活动，通过科普讲座、线上知识竞赛、主题海报等方式，向员工乃至周边村民普及鸟类知识与野生动物保护政策，切实将生态保护理念融入日常生产经营工作中。

Chagan Lake, known as the "Holy Water Lake," is not only the largest inland lake in Jilin but also one of the key stopover sites



吉电新能源公司组织员工开展鸟类科普学习
Jidian New Energy Company Organizes Employees to Participate in Bird Science Learning Activities

along the world's major eastern migratory route for birds. Located here are 53 wind turbines of the Chagan Lake Qingshantou Wind Farm, owned by Jidian New Energy Company affiliated with the Company.

"The turbine blades rotate at speeds reaching tens of meters per second, which once posed a fatal threat to birds," admitted Zhang Shuxuan, the head of safety management at the center of the wind farm area.

For migratory bird management, the Company has established a dynamic monitoring mechanism, focusing on the peak migration periods in March-April and September-October each year. High-frequency inspections are conducted in areas where birds are densely distributed. If any anomalies are detected, an emergency response is immediately initiated in coordination with the competent authorities, while simultaneously utilizing drones, thermal imagers, and other professional equipment to track bird movements in real time, ensuring the safety of migratory bird flyways. Notably, to mitigate the threat to migrating birds from turbine operations during extreme weather such as heavy fog and heavy rain, the Company has established a graded response mechanism. During adverse weather, inspections around the turbines are intensified, warning signs are added, and turbine operating parameters are optimized to reduce the risk of bird collisions. To date, the wind farm has achieved consecutive years of "zero collisions" with migratory birds.

The Company conducts diverse educational activities, such as science lectures, online knowledge competitions, and themed posters, to disseminate bird knowledge and wildlife protection policies to employees and even surrounding villagers, effectively integrating ecological conservation concepts into daily production and operational work.





03

发展耕动能

Cultivating Momentum for Development

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以暖心聚人才

Gathering Talent through Warmth

公司坚持依法雇佣，扩大就业容量，持续完善薪酬福利保障体系，积极拓宽多元民主沟通渠道，维护全体员工各项合法权益，创造包容、开放的就业环境构建和谐稳定的劳动关系，为把公司打造成为世界一流的清洁能源供应商和综合能源服务商提供坚实的组织和人才保障。

The Company adheres to lawful employment, expands employment capacity, continuously improves the compensation and benefits system, actively expands diverse democratic communication channels, safeguards the legitimate rights and interests of all employees, creates an inclusive and open employment environment, and builds harmonious and stable labor relations, providing a solid organizational and talent foundation for building the Company into a world-class clean energy supplier and comprehensive energy service provider.

招聘与就业

Recruitment and Employment

公司严格遵守《中华人民共和国劳动法》《中华人民共和国劳动合同法》等法律法规，遵守《员工管理规定》，坚持平等原则，构建多元化人才体系。招聘过程全程由纪委会监督，确保公正透明。工会开放员工诉求通道，合理解决反映问题，维护全体员工合法权益，为公司高质量发展提供坚强有力的人力资源保障。

The Company strictly complies with laws and regulations such as the *Labor Law of the People's Republic of China* and the *Labor Contract Law of the People's Republic of China*, adheres to the *Employee Management Regulations*, upholds the principle of equality, and builds a diversified talent system. The recruitment process is supervised throughout by the Discipline Inspection Office to ensure fairness and transparency. The Labor Union opens employee grievance channels, reasonably addresses reported issues, safeguards the legitimate rights and interests of all employees, and provides strong human resources support for the Company's high-quality development.

公司从校园招聘、社会招聘和内部招聘三方面入手，丰富人才储备，不断优化人才结构。

The Company focuses on three aspects: campus recruitment, social recruitment, and internal recruitment, enriching its talent pool and continuously optimizing its talent structure.

报告期内，公司在职工总数为 **3,637** 人，劳动合同签订率 **100%**，新聘员工数量 **212** 人，员工流失率 **0.85%**。

During the reporting period, the total number of active employees was **3,637**, the labor contract signing rate was **100%**, the number of new hires was **212**, and the employee turnover rate was **0.85%**.

员工招聘渠道

Employee recruitment channels



员工招聘流程

Employee Recruitment Process



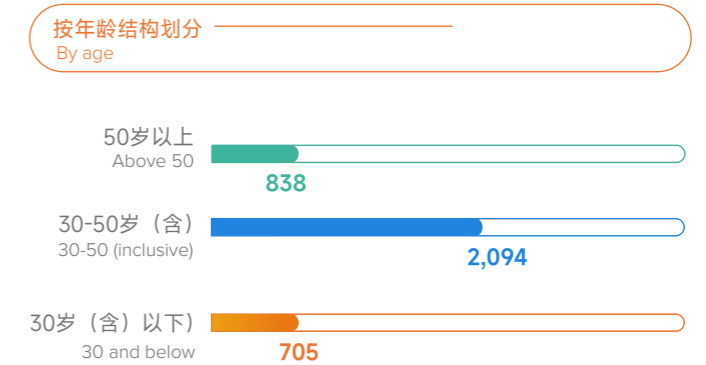
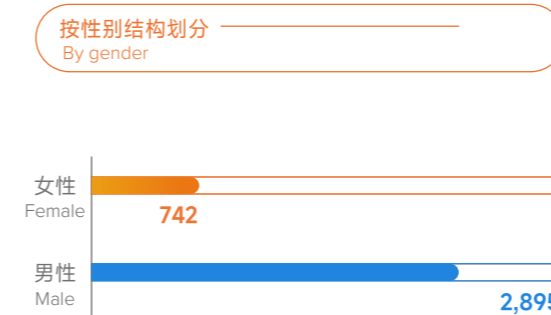
公司具有完善的用工制度，严格遵守《中华人民共和国劳动法》《中华人民共和国劳动合同法》等法律法规，支持《世界人权宣言与国际人权公约》，遵守国际劳工组织（ILO）及联合国全球契约在人权方面的规定，倡导多元化和机会平等，禁止任何形式的歧视，反对任何形式的强迫劳动和骚扰虐待，杜绝使用童工，公平对待不同国籍、种族、性别、宗教信仰和文化背景的员工。

The Company has a comprehensive employment system, strictly complies with laws and regulations such as the *Labor Law of the People's Republic of China* and the *Labor Contract Law of the People's Republic of China*, supports the *Universal Declaration of Human Rights and International Covenants on Human Rights*, adheres to the provisions of the International Labour Organization (ILO) and the United Nations Global Compact regarding human rights, advocates for diversity and equal opportunity, prohibits any form of discrimination, opposes any form of forced labor, harassment, and abuse, eliminates the use of child labor, and treats employees fairly regardless of nationality, ethnicity, gender, religion, or cultural background.

报告期内，公司收到人权问题投诉事件 0 起，未发生劳工纠纷事件，不存在雇佣童工的现象。

During the reporting period, there were 0 complaints related to human rights issues, no labor disputes occurred, and there were no instances of child labor.

员工构成 Employee Composition



薪酬与福利

Remuneration and Benefits

公司设立了《工资总额管理规定》《员工工资管理规定》《所管领导人员薪酬管理规定》等内部薪酬管理制度，构建“效率决定用工、效率调整薪酬”的管理机制，以全员劳动生产率为核心，强化“对标管理”理念，不断提高核心竞争力，支撑企业可持续高质量发展。

公司充分利用单列考核、专项激励等管理工具，聚焦发展、创新、经营等核心业务板块，制定目标清晰、导向明确、公平公正的薪酬激励措施，同时坚持战略性新兴产业与传统产业两端发力，通过多元化激励机制充分激发员工潜能、释放企业活力。

公司实施全员绩效管理，建立激励约束机制和绩效面谈机制；全面推行经理人契约化管理，通过年度考评与三年任期考评相结合的方式，强化考评结果与薪酬激励挂钩，并将经理层的薪酬绩效考核与可持续发展绩效建立关联。

公司明确了申诉处理程序及要求，及时向员工反馈绩效考核结果，为有异议的员工提供申诉渠道，充分听取员工的意见和建议，公正地审查和处理，保障员工的知情权和参与权。

公司为全体员工提供“五险一金”、企业年金、补充医疗保险等，并提供防暑降温费、困难补助、员工体检等福利；员工依法享有各种法定的带薪假期，包括法定节假日、年休假、婚假、丧假、产假、病假、工伤假，并增设育儿假、护理假等。

公司优化宿舍配置，设置医药箱、健康角、员工餐厅等，并配备空气净化器；生活休闲区设置简易健身设施、篮球场、羽毛球活动等场地，为员工提供健身运动场地。



安徽新能源公司员工在活动室使用健身器材锻炼身体
Anhui New Energy Company Employees use Fitness Equipment in the Activity Room



安徽新能源公司设立图书角，为员工读书增智提供便利
Anhui New Energy Company Book Corner, Facilitating Employees' Reading and Knowledge Learning

报告期内，公司社会保险覆盖率 **100%**，员工人均带薪休假时间 **11** 天。

During the reporting period, the Company's social insurance coverage rate was **100%**, and the average paid leave taken by employees was **11** days.

The Company has established internal compensation management systems such as the *Provisions on the Management of Total Salary Expenses, the Employee Management Regulations, and the Provisions on the Management of Compensation for Leaders under the Company's Management*, constructing a management mechanism of "efficiency-based employment, efficiency-based remuneration." With labor productivity per employee as the core, it strengthens the concept of "benchmarking management," continuously improves core competitiveness, and supports sustainable high-quality development of the enterprise.

The Company fully utilizes management tools such as separate assessment and special incentives, focusing on core business areas including development, innovation, and operations, to formulate clear, well-directed, fair, and impartial remuneration incentive measures. At the same time, it insists on promoting both strategic emerging industries and traditional industries, fully stimulating employee potential and unleashing enterprise vitality through diversified incentive mechanisms.

The Company implements comprehensive performance management for all employees, establishing incentive and restraint mechanisms and performance interview mechanisms. It comprehensively promotes contract-based management for managers, combining annual evaluations with three-year term evaluations to strengthen the linkage between evaluation results and remuneration incentives, and links the performance-based remuneration of management levels with sustainable development performance.

The Company has clarified grievance handling procedures and requirements, provides timely feedback on performance evaluation results to employees. It offers channels for employees to raise objections, fully listens to employee opinions and suggestions, conducts fair reviews and handling, and safeguards employees' right to information and participation.

The Company provides all employees with "five social insurances and one housing fund" (pension, medical, unemployment, work-related injury, maternity insurance, and housing provident fund), enterprise annuity, supplementary medical insurance, as well as benefits such as heatstroke prevention and cooling allowances, hardship subsidies, and employee health checkups. Employees are entitled to various statutory paid leaves in accordance with the law, including statutory holidays, annual leave, marriage leave, bereavement leave, maternity leave, sick leave, work injury leave, with additional parental leave and nursing leave.

The Company optimizes dormitory configurations, provides first-aid kits, health corners, employee canteens, and equips them with air purifiers. In leisure areas, simple fitness equipment, basketball courts, badminton courts, and other facilities are provided to offer employees venues for physical exercise.



发展与培训

Development and Training

公司制定《员工职业发展管理办法》《技能人才评价管理实施细则》《职称评定实施细则》《专业骨干人才库管理办法》《教育培训工作管理规定》《员工自我提升激励方案》等内部管理制度，为公司高质量发展筑牢人才根基。

公司员工职业发展分为基础阶段和进阶阶段。经过基础阶段发展之后，在进阶阶段拓宽职业发展空间，分设经营管理、专业技术、操作技能三条职业发展通道。经营管理通道，包含领导岗位和专业管理岗位。领导岗位按管理权限设置 4 个阶梯，分别依据《领导人员选拔任用管理规定》《员工管理规定》及相关制度规范管理；专业管理岗，按管理权限设置 4 个阶梯，在专业管理、任务攻关、课题研究及人才培养中发挥作用。专业技术岗，按管理权限设置 3 个阶梯，聚焦专业技术成果与业务担当，为技术骨干搭建成长平台。操作技能岗，按管理权限设置 2 个阶梯，为生产一线技能人才提供清晰的职业发展路径。

公司建立多样化员工培育体系，组建实训基地矩阵，形成人力资源部归口管理，专业部门分专业负责，培训中心（党校分校）具体落实，实训基地 / 党性教育基地专业支撑（绿色氢基能源、新能源、火电、党性），所管单位联动协同、专兼职培训管理人员直插部门 / 场站 / 分厂 / 班组的“1+X+1+4+N+X”立体教育培训管理体系。

报告期内，公司组织开展外派董监事暨法人治理培训、工程建设管理、燃料管理专业培训、前期开发人员能力提升培训班、科技创新管理专题培训班、物资采购操作规范及风险防范培训班等经营管理能力培训活动；全年员工培训投入金额为 1,791 万元，公司层面组织员工培训 60 项次，3,637 人次参加培训，培训覆盖率达 100%。

报告期内，公司高级工合计通过 **191** 人，再创新高；同步完成全部 **4** 家火电单位主、副值、副操、单元长、值长岗位认证，合计 **370** 人次通过认证，通过率 **100%**，为夯实产业根基提供坚实技能支撑。

During the reporting period, the Company saw a record high of **191** personnel passing the senior worker certification. Simultaneously, the certification for positions such as main operator, deputy operator, assistant operator, unit supervisor, and shift supervisor were completed across all four thermal power units, with a total of **370** personnel passing the certification at a **100%** pass rate, providing solid skill support for strengthening the industrial foundation.

全年员工培训投入金额 **1,791** 万元，公司层面组织员工培训 **60** 项次，**3,637** 人次参加培训，培训覆盖率达 **100%**。

The total investment in employee training for the year was RMB **22.52** million. A total of **60** training sessions were organized at the company level, with **3,637** participants, achieving a training coverage rate of **100%**.

The Company has formulated internal management systems such as the *Measures for Employee Career Development Management*, the *Detailed Implementation Rules for the Management of Skilled Talent Evaluation*, the *Detailed Implementation Rules for the Evaluation of Professional Titles*, the *Measures for the Management of the Professional Backbone Talent Pool*, the *Provisions on the Management of Education and Training*, and the *Employee Self-Improvement Incentive Plan*, laying a solid talent foundation for the Company's high-quality development.

The career development of company employees is divided into a foundational stage and an advanced stage. After the foundational stage, the advanced stage broadens career development space, establishing three career development pathways: management, professional technology, and operational skills. Management pathway: Includes leadership positions and professional management positions. Leadership positions are set in four tiers according to management authority, managed in accordance with the *Provisions on the Management of Leader Selection and Appointment*, the *Employee Management Regulations*, and related systems. Professional management positions are set in four tiers according to management authority, playing roles in professional management, task tackling, research projects, and talent development. Professional technology pathway: Set in three tiers according to management authority, focusing on professional technological achievements and business responsibilities, providing a growth platform for technical backbone personnel. Operational skills pathway: Set in two tiers according to management authority, providing a clear career development path for front-line production skilled personnel.

The Company has established a diversified employee training system, forming a training base matrix. This system is managed by the Human Resources Department, with specialized departments overseeing their respective fields, and implemented by the Training Center (Party School Branch). It incorporates professional support from training bases and party spirit education bases (covering green hydrogen-based energy, new energy, thermal power, and party spirit), along with coordinated efforts from managed units and direct involvement of full-time and part-time training management personnel in departments, stations, plants, and teams. This forms a comprehensive "1+X+1+4+N+X" three-dimensional education and training management system.

During the reporting period, the Company organized various management capability training activities, including training for seconded directors and supervisors on corporate governance, engineering construction management, fuel management professional training, capacity enhancement training for preliminary development personnel, special training on technology innovation management, and training on material procurement operational procedures and risk prevention.

案例 Case

关注青年员工成长

Focusing on the Growth of Young Employees

公司针对青年员工成长需求，打造青马工程培训班、“青安杯”青年安全知识竞赛等成长平台，为 2025 年新入职员工定制专属入职礼包，开展七个“一”入职导航活动，通过破冰团建、专题授课、生活关爱等举措，助力新员工快速融入企业。



Addressing the growth needs of young employees, the Company has established development platforms such as the "Young Marxist Training Project" and the "Youth Safety Cup" youth safety knowledge competition. It also customized exclusive onboarding gift packages for new employees in 2025 and carried out a "Seven-in-One" onboarding navigation program. Through ice-breaking team-building activities, specialized training sessions, and care initiatives, the program helps new employees quickly integrate into the Company.

案例
Case

搭建职工成长平台

Building Employee Development Platforms

公司深入推进全员“大练兵、大比武”，构建覆盖技能操作与经营管理两大领域的竞赛体系，全年组织 7 项公司级技能竞赛、18 项公司级管理业务竞赛，活动吸引系统内 4,500 人次踊跃参与，成功掀起各岗位齐参与、各层级共提升的学习热潮；积极选送优秀选手参加全国行业、集团级技能竞赛 11 项，44 人次获奖。



The company has deeply advanced the "comprehensive training and competition" initiative, establishing a competition system covering both technical operations and management capabilities. During the year, it organized 7 company-level skills competitions and 18 company-level management business competitions. These activities attracted 4,500 enthusiastic participants from within the system, creating a widespread learning atmosphere across various positions and levels. The Company also actively selected outstanding competitors to participate in 11 national and group-level skills competitions, with 44 individuals winning awards.

员工关爱与帮扶

Employee Care and Support

公司始终秉持“感情化人”的理念，以《员工慰问实施办法》《温暖救助帮扶工作细则》《困难员工帮扶工作实施办法》为核心，构建系统化、多层次的员工关爱与帮扶机制，为各项关爱工作开展提供坚实制度支撑，致力于打造一个工作舒适、心情舒畅的良好环境。

公司制定“1+N”关爱谈心直通车专项方案，推动各级党群干部深入一线，精准掌握员工急难愁盼；搭建全方位关爱体系，针对不同群体特点制定差异化关爱策略，形成“精准对接需求、服务全域覆盖”的关爱工作格局，为各项关爱措施落地提供坚实制度保障。组织职工代表述职及巡视工作，优化“SPIC—家园”建设管理，广泛收集员工对企业经营管理、福利保障等方面的意见建议。

Guided by the principle of "connecting with people through empathy", the Company has built a systematic, multi-tiered employee care and support mechanism, centered around the *Employee Condolence Implementation Measures, the Detailed Rules for Warmth Assistance and Support, and the Implementation Measures for Assisting Employees in Hardship*. These policies provide a solid institutional foundation for various care initiatives, aiming to create a comfortable and positive working environment.

The company has developed a "1+N" care and communication program, encouraging party and labor union officials at all levels to engage directly with frontline employees to accurately understand their urgent needs and concerns. A comprehensive care system has been established, with differentiated care strategies tailored to the characteristics of different employee groups, forming a care framework characterized by "precise alignment with needs and full coverage of services", providing solid institutional guarantees for the implementation of care measures. The Company organizes employee representative duty reports and inspections, optimizes the management of the "SPIC Home" platform, and extensively collects employee opinions and suggestions on business management, welfare protection, and other areas.

员工关爱与帮扶实践
Employee Care and Support Practices

职工慰问与帮扶
Employee condolence
and assistance

常态化开展“送温暖”“送清凉”等慰问活动。报告期内，累计走访慰问生产一线和困难职工 1,915 人次，切实为困难员工排忧解难；专项慰问各级劳模 24 名；聚焦偏远、艰苦一线场站员工，加大“职工小家”建设扶持力度，拨付专项建设资金，购置活动器材与生活用品。

Regular "warmth in winter" and "cooling in summer" condolence activities are carried out. During the reporting period, a total of 1,915 frontline and employees facing hardship were visited, providing practical assistance to those in need. Special condolence visits were extended to 24 model workers at various levels. For employees at remote, challenging frontline stations, support for building "employee homes" was increased through the allocation of special construction funds for purchasing activity equipment and daily necessities.

心理健康
Mental health

实施“职工心理健康关爱行动”，收集有效心理调查问卷 3,321 份，举办 9 期线下心理健康讲座，开通心理援助热线，提供线上科普宣教、线下问诊等全方位心理服务，筑牢员工心理健康防线。

The "Employee Mental Health Care Initiative" was implemented, collecting 3,321 valid psychological survey questionnaires. Nine offline mental health lectures were held, a psychological assistance hotline was established, and comprehensive psychological services including online outreach and offline consultations were provided, strengthening the mental health defense line of employees.

节日欢庆
Holiday celebrations

结合传统节日，举办系列主题活动，开展“最美春联”评选，征集作品 237 幅；精心策划首届“云上中秋”文艺晚会，统筹系统内 24 家单位参与，超 1.5 万人次观看，打破地域与空间限制，传递节日关怀与企业温情。

Series of themed activities were organized in conjunction with traditional festivals. A "Best Spring Festival Couplets" competition was held, collecting 237 entries. The inaugural "Cloud Mid-Autumn Festival Gala" was meticulously planned, involving 24 entities within the system and attracting over 15,000 viewers, transcending geographical and spatial limitations to convey holiday care and corporate warmth.

组图
Photo gallery



“聚力奋进‘十五五’，绿能澎湃‘向未来’”职工排球赛
“United for the 15th Five-Year Plan, Green Energy Charging
Toward the Future” Employee Volleyball Tournament



“心赋能心动力”员工心理关爱体验日活动
“Empowering Hearts, Energizing Minds” Employee
Psychological Care Experience Day



“粽情端午走出健康”趣味活动
“Dragon Boat Festival: Walking to Health” Fun Activity



“向绿向新中秋共美”云上中秋文艺晚会
“Embracing Green, Celebrating the New Mid-Autumn”
Cloud Mid-Autumn Festival Gala



民主管理
Democratic Management

公司建立《企业民主管理办法》，整合原有《员工代表大会管理办法》《员工代表大会专门委员会工作细则》《员工代表大会代表提案征集处理实施办法》《企业公开实施办法》《总经理联络员实施办法》《合理化建议管理办法》，完善构建程序规范、权责清晰、运行高效的制度体系，为民主管理筑牢基础。

报告期内，公司严格执行相关制度规范，召开五届二次职工代表大会和会员代表大会，确保会议流程合规、议题聚焦。期间广泛征集员工提案 21 项，采纳 9 项，建立征集—审核—办理—反馈全闭环督办机制，切实保障员工知情权、参与权和监督权；组织签订三项集体合同，从劳动报酬、工作条件、劳动保护等方面明确企业与职工的权利义务，构建和谐劳动关系；持续优化员工提案、建议征集、职工代表履职等配套流程，推动民主管理常态化、规范化运行。

The Company has established the *Measures for Corporate Democratic Management*, integrating the previous *Measures for Employee Representative Congress Management*, *Detailed Rules for the Work of the Employee Representative Congress Special Committees*, *Implementation Measures for the Collection and Handling of Employee Representative Congress Proposals*, *Measures for Corporate Openness*, *Measures for General Manager Liaison Officers*, and *Measures for Suggestion Management*. This integration has created a well-defined, clearly accountable, and efficient institutional system, laying a solid foundation for democratic management.

During the reporting period, the Company strictly implemented the relevant policies and procedures, convening the fifth session of the second employee representative congress and member representative congress, ensuring compliant processes and focused agendas. A total of 21 employee proposals were extensively collected, of which 9 were adopted. A closed-loop oversight mechanism encompassing "collection - review - handling - feedback" was established, effectively safeguarding employees' rights to information, participation, and oversight. Three collective contracts were signed, clarifying the rights and obligations of the Company and its employees in areas such as labor compensation, working conditions, and labor protection, fostering harmonious labor relations. Supporting processes such as employee proposal collection, suggestion gathering, and employee representative duty fulfillment were continuously optimized, promoting the normalization and standardization of democratic management.

案例
Case

公司开展“我为企业献一策”专项活动

The Company Launches the "One Suggestion for the Enterprise" Special Initiative

公司开展“我为企业献一策”专项活动，面向全体员工围绕生产经营、管理提升、福利保障等领域广泛征集建议，累计收集有效建议 174 条。通过建立专业评审机制，对具有可行性、创新性的建议分类梳理并推动落地实施，将员工智慧转化为企业发展动能。

构建“线上+线下”全方位互动网络，依托“SPIC 家园”线上平台、部门座谈、班组交流等形式，实现企业与员工常态化互动；针对驻外员工、一线员工、新入职员工等重点群体，通过关爱谈心、入职导航、现场观摩等活动精准对接需求，确保不同群体的声音均能得到有效倾听，形成“全员参与、共建共享”的良好氛围。

The Company launched the "One Suggestion for the Enterprise" special initiative, extensively collecting suggestions from all employees in areas such as production and operations, management improvement, and welfare protection. A total of 174 valid suggestions were collected. through a professional review mechanism, suggestions deemed feasible and innovative were categorized, organized, and implemented, transforming employee insights into drivers of corporate development.

A comprehensive online and offline interactive network was established. through the "SPIC Home" online platform, departmental meetings, and team discussions, regular interaction between the Company and its employees was achieved. For key groups such as expatriate employees, frontline workers, and new hires, initiatives such as care conversations, onboarding navigation programs, and on-site visits were used to precisely align with their needs, ensuring that the voices of all groups were effectively heard. This has fostered a positive atmosphere of "all-employee participation and shared contribution and benefits".

以协同强韧性

Strengthening Resilience through Collaboration

供应商管理

Supplier Management

公司严格遵守《中华人民共和国招标投标法》《招标投标法实施条例》《必须招标的工程项目规定》等法律法规，修订《采购与招标管理办法》《物资管理办法》等内部管理制度，各层级职能明确，高效且专业分工与协作，确保各项管理工作。

公司应用统一建立的供应商管理系统，包括制度体系、管理模式、评价标准、信息化系统；进行合格供应商评审、履约评价、不良行为记录和处置等。

The Company strictly complies with laws and regulations such as the *Law of the People's Republic of China on Tenders and Bids*, the *Regulations on the Implementation of Bidding and Tendering Law*, and the *Regulations on Projects Subject to Mandatory Bidding*. It has revised internal management systems including the *Procurement and Tendering Management Measures* and the *Materials Management Measures*. Clear functional divisions at all levels ensure efficient, professional specialization and collaboration, guaranteeing effective management.

The Company employs a unified supplier management system, encompassing institutional frameworks, management models, evaluation criteria, and digital platforms. This system facilitates qualified supplier assessments, performance evaluations, records of misconduct, and corresponding disciplinary actions.



供应商管理体系

Supplier Management System



- 实行供应商统一注册登记，供应商信息在国家电投系统内共享
- 供应商注册采取自愿原则，按规定在供应商管理信息系统进行网上注册
- 供应商注册信息包括供应商的营业执照和经营范围等基本情况，经审核通过后，供应商具备公司提供产品或服务的有关条件，成为潜在供应商。
- Implement unified supplier registration, with supplier information shared within the SPIC system
- Supplier registration follows the principle of voluntariness and must be completed online through the supplier management information system as required
- Supplier registration information includes basic details such as the supplier's business license and scope of operations. Upon approval, the supplier will meet the necessary conditions to provide products or services to SPIC and the Company, thereby becoming a potential supplier.



- 具有独立的法人资格或签订合同能力
- 具有履行合同的能力和良好的履约业绩
- 具有完善的质量保证体系
- 具有良好的财务状况
- 具有与本企业经营范围相符的资质条件，并符合国家和行业相关规定
- 没有被国家机关责令停产、停业或正处于财务被接管、冻结、破产的状态
- 没有涉及正在诉讼的重大案件，或虽涉及但经认定不会对其履行合同造成重大影响
- 近 18 个月内没有发生较大及以上生产安全责任事故
- 没有处于因严重不良行为受到公司相应处置的状态
- Possess independent legal entity status or contract signing capability
- Possess the capability to fulfill contracts and a commendable track record of performance
- Possess a comprehensive quality assurance system
- Possess sound financial conditions
- Possess qualifications aligned with the business scope of the enterprise and complies with relevant national and industry regulations
- Has not been ordered to suspend production or business by state authorities, nor is it currently under financial receivership, freezing, or bankruptcy
- Not involved in any major litigation, or if involved, it has been determined that such involvement will not significantly impact the fulfillment of contractual obligations
- No significant or above production safety liability accidents have occurred in the past 18 months
- Not in a state of receiving corresponding disciplinary actions from the Company due to serious misconduct



- 按“动态更新、年度评价”的原则，基于供应商信息系统开展全生命周期评价，按“采购、签约、履约”三个阶段制定评价指标体系（共计 64 项评分细则），供应商发生指标体系内列举的问题，按相应的标准分值进行扣分
- 根据年度综合绩效得分和战略合作情况，将供应商分为四个等级：优秀供应商、良好供应商、一般供应商和不合格供应商。不合格供应商：是指综合绩效得分在 60 以下的供应商。对于不合格供应商，下一评价年度参加采购活动时，资格审查按不合格处理；在合格供应商名录内的，从名录中剔除；正在申报合格供应商评审的，按不合格处理。
- Adhere to the principle of "dynamic updates, annual evaluation," conduct full lifecycle assessments based on the supplier information system. Establish an evaluation indicator system across three stages: "procurement, contracting, and fulfillment" (totaling 64 scoring criteria). When suppliers encounter issues listed within the indicator system, deduct corresponding standard points.
- Based on annual comprehensive performance scores and strategic collaboration status, suppliers are categorized into four grades: Excellent Suppliers, Good Suppliers, Average Suppliers, and Unqualified Suppliers. Unqualified suppliers refer to those with a comprehensive performance score below 60. For unqualified suppliers, during procurement activities in the next evaluation year, qualification review shall be processed as unqualified; those listed in the SPIC qualified supplier directory shall be removed from the list; those currently undergoing qualified supplier evaluation shall be treated as unqualified.

公司将“绿色发展、服务公众、诚信为本、合作共赢”ESG 理念纳入采购理念，积极主动履行央企政治责任和社会责任。在采购环节中，增加了“国电投绿色能源股份有限公司供应商行为政策”的单独专篇，将 ESG 理念贯穿公司的各层面、全过程，协同供应商在劳工权益、健康安全、环境保护、商业道德、管理体系要求等方面，推动可持续发展，实现企业与社会的共赢。同时，公司平等对待中小企业，保护其基本权利，积极支付相关款项。

The Company integrates the ESG principles of "green development, serving the public, integrity as the foundation, and win-win cooperation" into its procurement philosophy, proactively fulfilling the political and social responsibilities of a central enterprise. In the procurement process, a dedicated section on "State Power Investment Green Energy Co., Ltd. Supplier Conduct Policy" has been added, embedding ESG principles across all levels and throughout the entire process of the Company. This initiative collaborates with suppliers in areas such as labor rights, health and safety, environmental protection, business ethics, and management system requirements to promote sustainable development and achieve mutual benefits for both the enterprise and society. Additionally, the Company treats small and medium-sized enterprises equally, safeguards their fundamental rights, and actively settles relevant payments.

报告期内，公司供应商数量 **1,180** 家，符合 ESG 审核供应商数量占比 **100%**。截至报告期末，公司**无逾期未支付款项**。

During the reporting period, the Company had **1,180** suppliers, with **100%** of them meeting ESG audit standards. As of the end of the reporting period, the Company had no overdue unpaid payments.

供应链管理

Supply Chain Management

公司持续探索供应链管理途径，新修订《供应链管理规定》《供应链管理评价办法》等内部管理制度，确保供应链各环节之间的顺畅运作和高效协同，提升供应链的数字化转型和智能化升级，供应链的稳定性和可靠性。报告期内，公司供应商《廉洁协议》签订率 100%，供应链风险事件数量 0 个。

坚持公开采购，拓展供应商资源，形成良性的市场竞争，通过充分竞争的市场，筛选优质供应商。

通过拓展多元化采购方式，对重要设备配件签订长期长协，稳定供应商的选择，建立长期稳定的合作关系，提高抗风险能力及响应能力。

每年度开展供应商评价工作，对采购过程、签约过程、履约过程全环节进行评价，如供应商经营能力、财务能力、合规能力等。

开发数字化招标采购管理一体化平台系统，完善相关功能，通过完善大数据和综合分析的技术手段，提高供应链的可视化和决策依据。

制定对采购计划、订单处理、积压库存消耗、危化品危险品物流配送运输的监管要求，如粉煤灰道路运输的监管，危化品道路运输线路规划的监管等。

强化采购环节廉洁管控，规范采购行为，防范廉洁风险，与所有采购合同相对方均签署保廉、廉洁协议。

The Company continuously explores approaches to supply chain management, revising internal management systems such as the *Supply Chain Management Regulations and Supply Chain Management Evaluation Measures* to ensure smooth operation and efficient collaboration across all supply chain segments. This enhances the digital transformation and intelligent upgrading of the supply chain, bolstering its stability and reliability. During the reporting period, the Company achieved a 100% signing rate for the *Integrity Agreement* with suppliers and recorded zero supply chain risk incidents.

Adhere to open procurement practices, the Company expanded supplier resources to foster healthy market competition, thereby selecting high-quality suppliers through a fully competitive market.

By diversifying procurement methods, sign long-term agreements for critical equipment components to stabilize supplier selection, establish long-term and stable partnerships, and enhance risk resilience and responsiveness.

Conduct annual supplier evaluations covering the entire procurement, contracting, and fulfillment processes, including assessments of operational capability, financial strength, and compliance competence.

Develop an integrated digital bidding and procurement management platform system, enhance relevant functionalities, and improve supply chain visualization and decision-making basis by refining big data and comprehensive analysis technical means.

Establish regulatory requirements for procurement plans, order processing, backlog inventory consumption, and logistics distribution and transportation of hazardous chemicals and dangerous goods, such as supervision of fly ash road transportation and route planning for hazardous chemical road transportation.

Strengthen integrity control in the procurement process, standardize procurement behaviors, prevent integrity risks, and sign integrity and anti-corruption agreements with all counterparties of procurement contracts.

报告期内，公司供应商《廉洁协议》签订率 **100%**，供应链风险事件数量 **0** 个。

During the reporting period, the Company achieved a **100%** signing rate for the Integrity Agreement with suppliers and recorded **zero** supply chain risk incidents.

以贴心优服务

Providing Thoughtful and Premium Services

全流程客户服务

End-to-End Customer Service

公司始终坚持“以客户为中心”的理念，制定了《市场营销管理规定》等售后服务与客户投诉制度，组建服务精英、技术支持、专家服务等团队以高效解决各级客户服务中的各项难题，并开展服务人员培训，实现售前、售后、客户回访的全方位服务。报告期内，公司客户满意度调查覆盖率 100%，客户满意度得分 100 分。

The Company consistently upholds the "customer-centered" philosophy by establishing after-sales service and customer complaint mechanisms such as the *Marketing Management Regulations*. It has established elite teams including service specialists, technical support, and expert consultants to efficiently resolve challenges at all levels of customer service. Comprehensive training programs are conducted for service personnel to deliver holistic support encompassing pre-sales, after-sales, and customer follow-up services. During the reporting period, the Company achieved 100% coverage in customer satisfaction surveys, with a perfect score of 100 points in customer satisfaction.

售前 Pre-sales

- 提供电力零售市场规则咨询等服务
- 基于客户需求分析与客户画像，分类制定服务策略
- 积极为客户提供节能管理、需求侧响应、用电策略优化、绿电和绿证交易、低碳服务等一体化综合能源服务
- Provide services such as electricity retail market regulation consulting.
- Develop service strategies based on customer demand analysis and profiling.
- Proactively provide customers with integrated comprehensive energy services, including energy conservation management, demand-side response, electricity usage strategy optimization, green power and certificate trading, and low-carbon services.

售后 After-sales

- 实时跟踪市场电价走势与政策变动，及时调整交易策略，保障交易高效落地。
- 协助客户核对电量电费账单、偏差考核明细，处理结算争议；通过负荷预测、需求侧响应等手段优化用电负荷曲线，降低偏差考核风险，减少额外成本支出。
- Monitor real-time market electricity price trends and policy changes, promptly adjust trading strategies to ensure efficient transaction execution.
- Assist clients in verifying electricity consumption and billing statements, as well as deviation assessment details, and handle settlement disputes; optimize load curves through load forecasting and demand-side response measures to mitigate deviation risks and reduce additional cost expenditures.

客户回访 Customer follow-up

- 制定客户回访机制，组织开展线上线下相结合的回访工作。
- 结合回访开展用户满意度调研，分析客户对服务满意度，明确客户关注重点。
- Establish a customer follow-up mechanism and organize the implementation of both online and offline follow-up activities.
- Conduct user satisfaction surveys during follow-ups, analyze customer service satisfaction levels, and identify key customer concerns.

案例
Case

全面推进客户服务月活动

Comprehensive Promotion of Customer Service Month Activities

2025 年 9 月，公司围绕“以卓越服务，创共赢未来”主题，继续深入开展“客户服务月”活动。通过系统策划与全员协同，有序推进客户深度走访、数字化服务能力培训、综合能源解决方案优化及绿色低碳服务推广等重点任务，旨在进一步贴近客户期待、强化团队专业水平、完善服务生态体系，为客户提供更高效、更清洁、更智慧的能源服务体验。

In September 2025, the Company continued to deepen the "Customer Service Month" activities, centering on the theme of "Creating a Win-Win Future with Excellent Service". through systematic planning and cross-departmental collaboration, it will methodically advance key initiatives including in-depth customer visits, digital service capability training, optimization of integrated energy solutions, and promotion of green low-carbon services. These efforts aim to better align with customer expectations, enhance team expertise, and refine the service ecosystem, delivering more efficient, cleaner, and smarter energy service experiences.



数据安全治理

Data Security Management

公司严格遵守《中华人民共和国数据安全法》《中华人民共和国个人信息保护法》《中华人民共和国网络安全法》等法律法规，制定《网络安全管理规定》《网络安全信息通报实施办法》《数据管理办法》等内部管理制度，建立网络安全防御体系，明确各单位职责与分工。报告期内，公司未发生责任性网络安全事件。

The Company strictly complies with laws and regulations such as the *Data Security Law of the People's Republic of China*, the *Personal Information Protection Law of the People's Republic of China*, and the *Cybersecurity Law of the People's Republic of China*. It has established internal management systems including the *Cybersecurity Management Regulations*, the *Implementation Measures for Cybersecurity Information Reporting*, and the *Data Management Measures*. A cybersecurity defense system has been implemented, clearly defining the responsibilities and division of labor among various departments. During the reporting period, the Company did not experience any cybersecurity incidents attributable to its responsibility.

数据安全治理体系 - 网络安全领导小组

Data Security Governance System – Cybersecurity Leadership Group



制定《信息化绩效考核实施办法》，对网络安全实行年度水平考核和事件考核，督促所属企业落实相关工作，并将考核结果与年度绩效挂钩。

Formulate the *Implementation Measures for IT Performance Evaluation*, conduct annual proficiency assessments and incident-based evaluations for cybersecurity, supervise affiliated enterprises in implementing relevant tasks, and link assessment outcomes to annual performance.

对发生的网络安全事件划分等级，有序采取预警响应、应急处置、调查评估、预防和保障工作，定期开展网络安全攻防演练，确保风险清零。

Classify cybersecurity incidents by severity level, implement warning responses, emergency handling, investigation and evaluation, prevention, and safeguard measures in an orderly manner, and regularly conduct cybersecurity attack and defense drills to ensure risk elimination.

协同国家电投网络安全运营中心，常态化监测网络安全状态，发现隐患漏洞，快速处置网络异常行为威胁。

Collaborate with the SPIC's Cybersecurity Operations Center to routinely monitor cybersecurity status, identify potential vulnerabilities, and swiftly address threats from abnormal network behaviors.

将数据保护技术纳入网络安全防护体系，采用统一的数据加密及保护措施，加强对数据安全日常监测、预警、制定数据安全应急预案，定期开展应急演练，定期开展数据安全风险评估。

Incorporate data protection technologies into the cybersecurity defense system, adopt unified data encryption and protection measures, strengthen daily monitoring and early warning of data security, formulate data security emergency response plans, conduct regular emergency drills, and perform periodic data security risk assessments.

建立数据安全工作协调机制，开展数据分级分类保护，统筹制定重要数据目录，加强对重要数据的保护。

Establish a data security coordination mechanism, implement hierarchical and classified data protection, coordinate the formulation of important data catalogs, and enhance the protection of critical data.

以匠心稳供应

Ensuring Stable Supply with Meticulous Craftsmanship

治理

Governance

公司严格遵守《中华人民共和国安全生产法》《电力供应与使用条例》等法律法规，制定《技术监督管理规定》《生产调度管理规定》《安全生产责任制管理规定》《质量管理工作规定》等内部管理制度，围绕设备管理、运行调度管理、技术监督管理、承包商管理等进行重点管控，实现设备全寿命周期管控，杜绝三违行为，实现管理提升，保障发电、供热等产品稳定供应。截至报告期末，公司已通过质量管理体系认证。

The Company strictly adheres to laws and regulations such as the *Law of the People's Republic of China on Work Safety* and the *Regulations on Power Supply and Utilization*, and has established internal management systems including the *Technical Supervision Management Regulations*, *Production Dispatching Management Regulations*, *Work Safety Responsibility System Management Regulations*, and *Quality Management Work Regulations*. Focusing on key areas such as equipment management, operational dispatching management, technical supervision management, and contractor management, the Company implements comprehensive lifecycle control of equipment, eliminates the "three violations" (violations of regulations, discipline, and procedures), achieves management enhancement, and ensures stable supply of products such as electricity generation and heating. As of the end of the reporting period, the Company has obtained Quality Management System certification.

能源保供工作领导小组 Energy Supply Security Leading Group

贯彻落实党中央、国务院，吉林省委、省政府和公司实控人关于能源保供的决策部署和有关要求

做好公司保供工作的组织领导和统筹协调

研究决策保供工作的重大问题

Implement the decisions, deployments, and relevant requirements of the Party Central Committee, the State Council, the Jilin Provincial Party Committee, the Provincial People's Government, and the Company's actual controller regarding energy supply security
Strengthen organizational leadership and overall coordination of the Company's supply security efforts
Research and make decisions on major issues related to supply guarantee work

领导小组下设办公室在 公司火电部

Office under the Thermal Power
Department of the Company
by the Leading Group

领导小组下设专项工作组

Specialized Working Group
under the Leading Group

牵头贯彻落实公司能源保供领导小组的决策部署和有关要求

做好公司各部门、所管各单位之间日常工作的组织和协调

做好和政府相关部门的沟通对接

负责落实公司能源保供工作领导小组各项决策部署

组织开展保供具体工作

Take the lead in implementing the decisions, arrangements, and relevant requirements of the Company's Energy Supply Security Leading Group
Organize and coordinate daily work among various departments of the Company and the units under its management
Facilitate communication and liaison with relevant government departments
Implement all decisions and arrangements made by the Company's Energy Supply Security Leading Group
Organize and carry out specific supply security tasks

战略

Strategy

公司注重质量风险防控，按照国家、行业法律法规、标准、规范，识别业务发展中的风险，以及相应的应对措施，现已识别出1项法律诉讼风险、1项转型风险、1项声誉风险。

The Company emphasizes quality risk prevention and control, identifying risks in business development along with corresponding countermeasures in accordance with national and industry laws, regulations, standards, and norms. Currently, one legal litigation risk, one transformation risk, and one reputational risk have been identified.

风险类别 Risk Category	风险描述 Risk Description	影响周期 Impact Period	应对措施 Countermeasures
法律诉讼风险 Legal litigation risk	因产品或服务存在质量缺陷、安全隐患等问题，引发客户投诉、纠纷，进而面临法律诉讼、行政处罚及经济赔偿的风险。 Risks of client complaints, disputes, and consequently facing lawsuits, administrative penalties, and financial compensation due to product/service quality defects or safety hazards.	短 - 中 - 长期 Short-medium-long term	健全产品全生命周期质量管控流程，从源头降低质量隐患；建立法律纠纷应急处置机制，聘请专业律师团队，高效应对诉讼案件；定期开展法律合规培训，强化全员法律风险意识。 Refine the quality control process throughout the product lifecycle to mitigate quality risks at the source; establish an emergency response mechanism for legal disputes by engaging professional legal teams to efficiently handle litigation cases; conduct regular legal compliance training to strengthen organization-wide awareness of legal risks.
转型风险 Transition risk	因原材料生产、运输、储存、使用等环节管控不当，导致原材料质量不达标，进而影响产品品质、生产效率风险。 Risks of substandard raw material quality due to improper control in production, transportation, storage, or use, subsequently affecting product quality and production efficiency.	短 - 中 - 长期 Short-Medium-Long Term	建立健全质量管理体系，覆盖原材料采购、验收、仓储、领用全流程；引入智能检测设备，提升原材料质量检验精度；优化仓储及运输管控流程，防范原材料损耗、变质等问题。 Establish and improve the quality management system to cover the entire process of raw material procurement, acceptance, storage, and issuance; introduce intelligent inspection equipment to enhance the accuracy of raw material quality inspection; optimize storage and transportation control processes to prevent issues such as material loss and deterioration.
声誉风险 Reputational risks	因产品质量问题、服务不到位或负面舆情处置不及时，导致企业品牌形象受损、市场认可度下降，进而影响客户合作、市场份额及企业长期发展的风险。 Risks of damage to corporate brand image, decreased market recognition, and subsequent negative impact on client cooperation, market share, and long-term development due to product quality issues, poor service, or untimely handling of negative publicity.	短 - 中 - 长期 Short-Medium-Long Term	坚守质量底线，以优质产品和服务筑牢品牌根基，从源头规避声誉风险；建立舆情监测机制及应急处置方案；加强品牌建设与维护，通过正面宣传、客户口碑运营，提升品牌公信力。 Uphold quality standards to solidify brand foundation with superior products and services, mitigating reputational risks at the source; establish public sentiment monitoring and emergency response mechanisms; enhance brand building and maintenance through positive publicity and customer reputation management to elevate brand credibility.

影响、风险与机遇管理

Impact, Risk, and Opportunity Management

公司不断提升精细化管理，存量提质、增量做优，均衡发展，合理安排机组等级检修和技术改造工作，不断提高设备可靠性，确保应修必修、修必修好。报告期内，公司组织开展设备隐患排查治理专项活动，全年排查现场隐患 1800 余项，整改完成率不低于 98%，切实提高机组可靠性。

通过加强与主要煤炭供应商的沟通，强化调运组织管理，保证长协兑现率等措施，确保燃料库存不低于能源保供天数要求，保障燃料安全稳定供应。

精细化开展燃料混配掺烧工作，确保锅炉燃烧稳定。

严格遵守调度指令，保证机组按需调用、随调随启，按令执行机组发电曲线，根据需求顶尖峰、压低谷，保障电网频率稳定。

The Company continuously enhances refined management, improves the quality of existing assets, optimizes incremental growth, and achieves balanced development. It rationally schedules unit-level maintenance and technical renovation work to steadily enhance equipment reliability, ensuring that all necessary repairs are performed and executed to the highest standard. During the reporting period, the Company organized special activities for the investigation and rectification of equipment hazards. Over 1,800 on-site hazards were identified throughout the year, with a rectification completion rate of no less than 98%, significantly enhancing unit reliability. Enhance communication with major coal suppliers, strengthen the organization and management of dispatching, ensure the fulfillment rate of long-term agreements, and maintain fuel inventory above the required days for energy supply guarantee, so as to secure safe and stable fuel supply. Refine the blending and co-firing of fuels to ensure stable boiler combustion. Strictly adhere to dispatch instructions, ensuring units are called upon and started as needed, executing generation curves on command, and peaking or valley-filling as required to maintain grid frequency stability.

公司高度重视能源保供工作，制定《关于保供期间安全生产管控实施提级管理的细化方案》《强化火电安全设备管理，严控机组非停》《运行精细化管理提升活动》《迎峰度冬电煤保供方案》《煤炭保供应急预案》应对保供风险，并在迎峰度夏、迎峰度冬等特殊时期制定专项工作方案和行动项，各所管单位也分别制定相应的工作方案，确保组织到位、措施具体。

实行“零非停”奖励，对各所管单位领导班子进行“零非停”奖励，激励各单位强化安全生产管理。

加强机组等级检修管理，提升等级检修执行刚性，超前谋划，加强过程质量管控；

提升运行规范化管理水平，加强运行人员技能培训，认真开展隐患排查治理，提高应急响应能力。

The Company places high importance on energy supply security, formulating detailed plans such as the *Refined Implementation Plan for Upgraded Safety Production Management During Supply Assurance Periods*, *Strengthening Safety Equipment Management in Thermal Power and Strictly Controlling Unit Unplanned Outages*, *Operation Refinement Management Enhancement Activities*, *Peak Winter Coal Supply Assurance Plan*, and *Coal Supply Emergency Response Plan* to address supply risks. During critical periods like peak summer and winter demand, special work plans and action items are developed. All subordinate units also establish corresponding work plans to ensure organizational readiness and concrete measures.

Implement the "Zero Unplanned Outage" reward system, grant "Zero Unplanned Outage" rewards to the leadership teams of all subordinate units, and incentivize all units to strengthen work safety management.

Enhance the management of unit grade maintenance, improve the rigidity of grade maintenance execution, plan ahead, and strengthen process quality control;

Improve the standardization level of operation management, enhance the skill training of operational personnel, conscientiously carry out hazard investigation and rectification, and elevate emergency response capabilities.

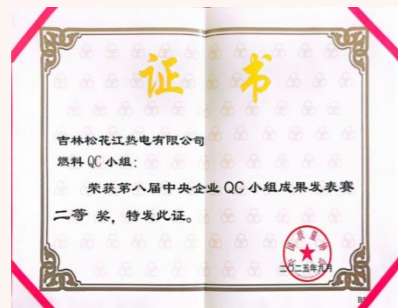
案例
Case

创新竞赛与质量活动成果丰硕

Innovative Competitions and Quality Activities Yield Bountiful Results

公司 QC 小组于第 50 届国际质量管理小组竞赛 (ICQCC) 中荣膺金奖，达成国际奖项的蝉联。荣获中国质量协会质量管理成果竞赛一等奖 1 项，在中央企业 QC 发表赛及行业质量管理评选中累计斩获 18 项奖项，于 2025 年第三届全国电力行业创新创意大赛中荣获一等奖 1 项。在第七届全国工业互联网大赛新兴产业行业赛中荣获领军组三等奖 1 项，于国家电投网络安全攻防技能竞赛中取得团体三等奖、个人二等奖等优异成绩；在人工智能创新应用技能竞赛中获得个人三等奖及优秀组织奖。

The Company's QC team clinched the gold medal at the 50th International Convention on Quality Control Circles (ICQCC), marking consecutive victories in international accolades. It secured one first prize in the Quality Management Achievement Competition by the China Association for Quality, accumulated 18 awards in the QC Presentation Contest of Central Enterprises and industry quality management selections, and won one first prize at the 3rd National Power Industry Innovation and Creativity Competition in 2025. It achieved one third prize in the Emerging Industries Track of the 7th National Industrial Internet Competition (Leadership Group category), earned outstanding results including a team third prize and individual second prize in the SPIC's Cybersecurity Attack-Defense Skills Competition; obtained an individual third prize and Excellent Organization Award in the Artificial Intelligence Innovation Application Skills Competition.



ICQCC 国际质量金奖，飞翔鸟中央企业 QC 小组成果发表赛二等奖

ICQCC International Gold Quality Award, Flying Bird Central Enterprise QC Group Achievement Presentation Competition Second Prize

中国质量协会“降低 4 号机组热工自动调节系统故障次数”一等奖

First Prize from China Association for Quality for "Reducing the Number of Faults in the Thermal Automatic Regulation System of Unit 4"

目标
Targets

完成值
Achieved Value

火电日均非停容量占比不超 1%

Thermal power daily average unplanned outage capacity ratio not exceeding 1%

火电日均非停容量占比 0.71%

Thermal power daily average unplanned outage capacity ratio: 0.71%

机组日均出力受阻不超 10%

Unit daily average output deration rate not exceeding 10%

机组日均出力受阻 3.72%

Unit daily average output deration rate: 3.72%

以硬核筑安全

Building Safety with Uncompromising Measures

治理

Governance

公司严格遵守相关法律法规要求，制定并严格执行《安全生产工作规定》《安全生产责任制管理规定》等制度，建立由安全生产、消防管理、生态环保委员会与安全生产办公室以及所管单位形成的三层职业健康与安全管理架构。明确质量管理方针、质量管理架构与职责，以及质量管理体系各要素间的相关作用。截至报告期末，公司已通过职业健康安全管理体系认证。

The Company strictly complies with relevant laws and regulations, formulates and rigorously implements systems such as the *Work Safety Regulations and Work Safety Responsibility Management Regulations*, establishing a three-tier occupational health and safety management framework comprising the Work Safety, Fire Protection Management, and Ecological Environmental Protection Protection Committees, the Work Safety Office, and subordinate units. It clearly defines the quality management policy, quality management structure and responsibilities, as well as the interrelationships among various elements of the quality management system. As of the end of the reporting period, the Company has obtained occupational health and safety management system certification.

职业健康与安全管理架构

Occupational Health and Safety Management Framework

安全生产、消防管理、
生态环保委员会
Work Safety,
Fire Protection
Management,
and Ecological
Environmental
Protection Committee

主任由党委书记、董事长担任
研究部署、指导协调公司安全质量环保工作
分析安全质量环保形势
研究决策安全质量环保工作中的重大问题
Appoint the Party Committee Secretary and Chairman of the Board as the Director
Carry out research and deployment, and provide guidance and coordination for the Company's safety, quality and environmental protection work
Analyze the safety, quality and environmental protection situation
Study and make decisions on major issues in safety, quality, and environmental protection work

安全生产办公室
责任主体
Office of Work Safety
Responsible entity

安全质量环保管理体系运行的监督管理
制定体系审核计划
安全质量环保管理体系建设和运行的责任主体是所属企业
开展安全质量环保工作任务分解
建立完善监测、报告、分析、持续改进工作机制，推动体系有效运行
Supervise and manage the operation of the Safety, Quality, and Environmental Protection Management System
Develop system audit plans
Define the affiliated enterprises as the responsible entities for the establishment and operation of the Safety, Quality, and Environmental Protection Management System
Decompose and assign tasks related to safety, quality, and environmental protection work
Establish and improve monitoring, reporting, analysis, and continuous improvement mechanisms to promote effective system operation

战略

Strategy

公司依据发展战略，按照国家、行业法律法规、标准、规范以及上级单位相关安全管理要求，识别业务发展中的风险，以及相应的应对措施，现已识别出员工健康损伤、安全生产事故 2 项风险。

In accordance with its development strategy and in compliance with national and industry laws, regulations, standards, norms, as well as the relevant safety management requirements of higher-level authorities, the Company has identified risks associated with business development and corresponding countermeasures. Currently, two risks have been identified: employee health impairment and workplace safety incidents.

风险类别 Risk Category	风险描述 Risk Description	影响周期 Impact Period	应对措施 Countermeasures
员工健康损伤风险 Employee health impairment risk	因工作环境存在工频电磁场、噪声、震动、SF6 等，导致员工患职业病（如尘肺病、噪声聋）或突发健康问题 Exposure to power frequency electromagnetic fields, noise, vibration, SF6, and other workplace hazards may lead to occupational diseases (such as pneumoconiosis, noise-induced hearing loss) or sudden health issues among employees.	短 - 中期 Short - medium term	<ul style="list-style-type: none"> 定期检测工作环境，减轻工作强度和接触职业病危害因素时长； 为员工配备符合标准的个人防护用品（如防毒面具、耳塞）； 定期组织员工职业健康体检，建立健康档案。 Conduct regular workplace monitoring to reduce work intensity and duration of exposure to occupational hazards; Provide employees with standard-compliant personal protective equipment (e.g., respirators, earplugs); Organize regular occupational health check-ups for employees and establish health records.
安全生产事故风险 Work safety accident risks	设备老化、操作不当、安全管理缺失等引发火灾、机械伤害、触电等安全事故。 Equipment aging, improper operation, and lack of safety management may lead to fire incidents, mechanical injuries, electric shocks, and other safety accidents.	短 - 中期 Short - medium term	<ul style="list-style-type: none"> 定期检修维护生产设备，淘汰老化设备； 开展全员安全操作培训，考核合格后方可上岗； 加强现场防人身反违章管理，运用智慧安防系统，及时发现、提醒并制止违章行为； 加大安全设施投入，组织开展安全设施专项排查，补齐安全警示标识； 制定应急预案并定期演练，配备应急救援设备 Conduct regular maintenance and overhaul of production equipment, and phase out aging machinery; Implement comprehensive safety operation training for all employees, with mandatory qualification assessments prior to assuming duties; Strengthen on-site anti-personnel and anti-violation management by utilizing intelligent security systems to promptly detect, alert, and prevent violations; Increase investment in safety facilities, organize specialized inspections to identify gaps, and complete safety warning signage; Develop emergency response plans and conduct regular drills, ensuring the provision of emergency rescue equipment.

影响、风险与机遇管理

Impact, Risk, and Opportunity Management

公司健全并定期更新专项应急预案，组织企业开展应急预案评审，配备必要的应急物资与装备，建立突发事件信息报告机制、突发事件舆情监测和信息披露机制，提高应急响应的统一指挥能力、整体协调能力、现场救护能力、快速反应能力和综合管理能力。

公司建立生产安全事故报告和调查处理制度，建立事故通报警示、挂牌督办、“说清楚”机制，按照“四不放过”原则进行原因分析、调查处理、警示教育、责任追究，按安全生产考核相关规定及年度安全生产工作责任书，对事故责任单位给予减分或处罚处理，同时事故发生单位要召开事故现场警示教育现场会，复盘还原事故经过、剖析事故原因，查找不足和短板。

公司依据国家《工伤保险条例》和相关法规的规定，结合实际情况制定《企业内部工伤管理操作指引》，并按时为公司员工缴纳工伤保险费用。发生工伤事故后，相关部门应当立即前往现场处置并进行事故调查，有必要时及时送员工到合适医院进行医疗，为员工申请工伤认定和待遇，并定期慰问。后续查明事故发生原因、伤害情况，分清事故性质和责任，拟定改进措施并监督实施。

The Company has established and regularly updated specialized emergency response plans, organized reviews of these plans, equipped necessary emergency supplies and equipment, and established mechanisms for incident reporting, public opinion monitoring, and information disclosure. These measures enhance unified command, overall coordination, on-site rescue, rapid response, and comprehensive management capabilities in emergency situations.

The Company has established a production safety accident reporting, investigation and handling system, and put in place mechanisms for accident notification and warning, listing-based supervision and handling, and the "accountability explanation" mechanism. In accordance with the "four no let-offs" principle (root cause not identified, responsible persons not held accountable, rectification measures not implemented, relevant personnel not educated), the Company has conducted cause analysis, investigation and handling, safety warning education, and accountability pursuit. According to relevant work safety assessment regulations and the annual work safety responsibility letter, score deductions or penalties shall be imposed on the accident-responsible units. Meanwhile, the unit where the accident occurred shall hold an on-site safety warning education meeting, review and reconstruct the accident process, analyze the root causes, and identify deficiencies and shortcomings.

Based on national Workplace Injury Insurance Regulations and relevant laws, and taking into account its actual circumstances, the Company has formulated the *Internal Workplace Injury Management Operating Guidelines* and pays workplace injury insurance premiums for its employees on time. In the event of a work injury accident, the relevant departments shall immediately go to the scene to handle the situation and conduct an accident investigation. If necessary, they shall promptly send the employee to an appropriate hospital for medical treatment, provide assistance in applying for work injury identification and benefits, and provide regular visits and condolences. Subsequent steps include identifying the cause and extent of the injury, determining the nature and responsibility for the accident, formulating improvement measures, and supervising their implementation.

安全生产管理与实践

Safety Production Management and Practice

由公司设备管理部门每年底组织设备报废申报、鉴定、处置工作，及时淘汰不经济、不安全、不环保的设备

The Company's equipment management department shall organize the annual declaration, evaluation, and disposal of equipment scrapping at the end of each year to promptly phase out uneconomical, unsafe, and non-environmentally friendly equipment

严格执行设备计划检修制度，对设备状态日常监测

Strictly implement the planned equipment maintenance system and conduct daily monitoring of equipment status

建立与生产经营相适应的设备例行保养、定期保养和特殊保养制度，设备保养按规程进行，杜绝设备非正常跑、冒、滴、漏，保障生产安全进行

Establish routine, periodic, and special maintenance systems for equipment that align with production and operation needs. Perform equipment maintenance according to regulations to prevent abnormal leaks, spills, or drips, ensuring safe production operations

各基层单位每年定期委托第三方有资质机构对生产作业场所开展职业健康危害因素检测

Each grassroots unit shall annually commission qualified third-party agencies to conduct occupational health hazard factor testing in production workplaces

在工作场所醒目位置设置警示标识和说明，设置职业卫生公告栏，公布有关职业病防治的规章制度、操作规程、职业病危害事故应急救援措施和职业病危害因素检测结果等

Place warning signs and instructions in prominent locations within the workplace, establish occupational health bulletin boards to publicize relevant regulations on occupational disease prevention, operating procedures, emergency rescue measures for occupational hazard accidents, and test results of occupational hazard factors

组织接触职业危害因素的员工进行职业健康体检，建立员工职业健康监护档案

Organize occupational health examinations for employees exposed to occupational hazards and establish occupational health surveillance records for them

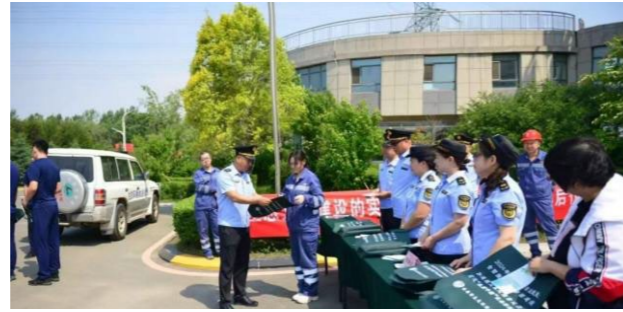
按照规定向员工发放劳动防护用品，完善配置和报废标准，指导劳动者正确使用职业病防护设备和个人防护用品

Distribute labor protection equipment to employees in accordance with regulations, improve allocation and retirement standards, and guide workers in the proper use of occupational disease prevention facilities and personal protective equipment

提高防护意识，举办健康知识讲座，组织职业健康防护综合培训，持续提升员工健康保健意识

Enhance awareness of protection by conducting health knowledge lectures, organize comprehensive occupational health and safety training, and continuously enhance employees' health consciousness

长春热电公司邀请长春市双阳区应急管理局到厂，为广大干部员工和外委承包商提供安全咨询服务，发放安全宣传册三百余份，并围绕安全生产月主题举办安全大讲堂，公司领导带头重温习近平总书记关于安全生产重要论述精神，详细讲解隐患排查的重要性和必要性，不仅有效提升员工的安全知识水平，还增强了与地方政府部门沟通合作，为企业的安全生产提供有力保障。



Changchun Thermal Power Company invited the Shuangyang District Emergency Management Bureau to the plant to provide safety consultation services for cadres, employees, and external contractors, distributing over 300 safety brochures. A safety lecture was held around the theme of the Safety Production Month, where company leaders took the lead in reviewing General Secretary Xi Jinping's important discourse on safety production, elaborating on the importance and necessity of hazard identification. This not only effectively improved employees' safety knowledge but also strengthened communication and cooperation with local government departments, providing strong support for the company's safety production.

江西新能源公司结合防风、防春季火灾等季节性特点对本单位安全隐患进行排查。生产方面重点检查防火及应急物资准备情况，叶片维修技改、边坡修复等项目安全措施落实情况以及防倒塔、电气设备、构筑物沉降等安全隐患。工程方面重点检查开工建设合规性手续办理情况，质量计划制定和实施情况，业主、总包、监理单位履职尽责、资质情况，工程质量监督手续办理情况。该公司以春检为契机，切实提升设备运行水平，高水平推进项目建设，为迎峰度夏工作打好提前量。



Jiangxi New Energy Company conducted a hazard inspection based on seasonal characteristics such as wind prevention and spring fire prevention. For production, the focus was on checking fire prevention and emergency material preparations, the implementation of safety measures for blade maintenance, technical upgrades, slope restoration projects, as well as potential hazards like tower collapse prevention, electrical equipment, and building settlement. For engineering, the emphasis was on examining the compliance of construction commencement procedures, the formulation and execution of quality plans, the performance and qualifications of owners, general contractors, and supervision units, and the completion of quality supervision procedures. The Company seized the opportunity of the spring inspection to effectively enhance equipment operational standards and advance project construction to a high level, laying solid groundwork for the peak summer demand period.

陕西能源公司积极推进安全宣传“五进”工作，深入户用光伏项目所在地，围绕光伏发电的科学原理及分布式光伏安全风险及隐患，开展安全科普讲解，在提升广大居民安全用电认识的基础上，进一步增强了对分布式光伏安全风险的防范意识。



Shaanxi Energy Company actively promoted the "Five Outreach" safety campaign, visiting residential photovoltaic project sites to deliver science-based explanations on solar power principles along with distributed PV safety risks and hazards. This initiative not only elevated public awareness of safe electricity usage but also strengthened preventive consciousness against distributed photovoltaic safety risks.

指标和目标

Indicators and Targets

公司每年由安全生产、消防管理、生态环保委员会指导各关键部门制定年度质量目标，定期对质量目标进行监测与分析，帮助业务部门实现质量目标并提升业务质量。坚持“零伤亡、零事故”奋斗目标不动摇

The Company annually guides key departments through the Work Safety, Fire Protection Management, and Ecological Environmental Protection Committee to establish annual quality objectives. These objectives are regularly monitored and analyzed to assist business departments in achieving quality targets and enhancing operational quality. We unwaveringly adhere to the goal of "zero casualties, zero accidents".

公司“八不发生”目标

The Company's "Eight Non-Occurrence" Objectives

不发生一般及以上人身伤亡生产安全事故 Prevent any production safety accidents causing personal casualties of general level or above	不发生一般及以上电力安全事故 Prevent any power safety accidents of general level or above
不发生一般及以上设备事故 Prevent any equipment accidents of general level or above	不发生一般及以上网络安全责任性事件 Prevent any cybersecurity liability incidents of general level or above
不发生水库、灰库和尾矿库大坝溃坝事故 Prevent any dam breach accidents of reservoirs, ash ponds and tailings ponds	不发生一般及以上责任性质量事故 Prevent any liability quality accidents of general level or above
不发生一般及以上铁路交通事故 Prevent any railway traffic accidents of general level or above	杜绝生态环保及文物保护违法违规行，不发生突发环境事件 Eliminate violations of ecological conservation and environmental protection as well as cultural heritage preservation, and prevent sudden environmental incidents

• 安全生产标准化达标企业数量 **13** 个

Number of enterprises meeting work safety standardization: **13**

• 安全生产投入金额 **24,463.52** 万元

Work safety investment amount: RMB **244.6352** million

• 安全生产责任险投入金额 **171,188.40** 元

Work safety liability insurance investment amount: RMB **171,188.40**

• 安全培训时长达 **109,656** 小时

Safety training duration: **109,656** hours

• 安全生产培训参与情况 **8,546** 人次

Participation in safety production training: **8,546** person-times

• 安全生产培训覆盖率 **100%**

Safety production training coverage rate: 100%

• 应急预案演练 **1,593** 次

Emergency plan drills conducted: 1,593 times

• 应急预案演练参与情况 **16,609** 人次

Participation in emergency plan drills: 16,609 person-times

• 重大安全事故 **0** 起

Major safety incidents: **0**



责任传温暖

Spreading Warmth through Responsibility

以数字提效能 Enhancing Efficiency through Digitalization	105
以公益传大爱 Spreading Love through Public Welfare	106
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以数字提效能

Enhancing Efficiency through Digitalization

公司严格落实国家电投数字化“四统一”要求，驱动企业治理与管理模式变革，构建了“全覆盖、全贯穿”的协同穿透式管理模式，打破了原有信息壁垒和层级阻隔，使公司本部与一线生产单元的安全信息能够实时同步、高效协同。

公司持续打造智慧火电、智慧场站、智慧新能源云平台、物采一体化系统、工业互联网安全生产平台等标志性项目，以实际举措积极推进业务数字化、治理智能化、数据要素化。截至报告期末，公司财务、生产、物资、合同、综合办公等关键业务环节基本实现数字化覆盖，数字化转型成效显著。

报告期内，公司完成了“工业互联网+安全生产平台”推广应用、数字化档案馆推广、财务共享功能拓展、网络安全监测平台建设等重点项目，相关项目协同推进，工业互联网+安全生产平台将传统的安全监管业务转变为驱动全公司数字化转型的关键切入点，实现了管理理念从“事后处理”向“事前预防、事中控制”的根本转变。平台支撑“科技兴安”项目落地，利用物联网等先进技术，实现对设备状态、人员行为、作业环境的实时监控与智能预警，显著提升了反违章监管的效能和精准度。



The Company strictly implements SPIC's "Four Unifications" digitalization requirements, driving transformative changes in corporate governance and management models. It has established a "full-coverage, full-penetration" collaborative and penetrating management approach, breaking down traditional information barriers and hierarchical obstacles. This enables real-time synchronization and efficient coordination of safety information between headquarters and frontline production units.

The Company continues to develop flagship projects such as smart thermal power, smart power stations, smart renewable energy cloud platforms, integrated procurement systems, and industrial internet safety production platforms. through concrete measures, it actively advances business digitalization, intelligent governance, and data elementization. As of the end of the reporting period, the Company has achieved comprehensive digital coverage in key business areas such as finance, production, materials, contracts, and general office operations, demonstrating significant results in digital transformation.

During the reporting period, the Company completed key projects including the promotion and application of the "Industrial Internet + Work Safety Platform," the expansion of digital archives, the enhancement of financial shared services, and the construction of a cybersecurity monitoring platform. These projects were advanced in a coordinated manner. The Industrial Internet + Work Safety Platform has transformed traditional safety supervision into a critical driver for the company-wide digital transformation, fundamentally shifting the management philosophy from "post-incident response" to "preventive measures and real-time control". The platform supports the implementation of the "Technology-Driven Safety" initiative, leveraging advanced technologies such as IoT to enable real-time monitoring and intelligent early warning for equipment status, personnel behavior, and operational environments, significantly improving the efficiency and precision of anti-violation supervision.

安全监督管理员建立电子台账
Safety Supervision Administrators establishing Electronic Records

以公益传大爱

Spreading Love through Public Welfare

公司遵循《对外捐赠管理办法》，充分考虑帮扶地区实际需求，将帮扶工作与促进项目开发相结合，对延边州珲春市密江村、依力村、白城地区、河南省商城县实施捐赠，建立产业帮扶基金，帮助地区发展特色产业，提升农村基础设施，以电投力量助力吉林省乡村振兴发展。报告期内，公司对外捐赠 1,028 万元。积极投身农村能源革命和美丽乡村建设，坚持扶贫与扶智双轮驱动，持续抓好产业扶贫、消费扶贫。推动产业绿色发展，在运扶贫光伏项目共 57.32 万千瓦，全年支持帮扶资金 4,680.79 万元，创造更多的经济效益和社会价值；担当央企社会责任，对定点的商城县无偿帮扶资金 1,000 万元、消费帮扶 530 余万元。

The Company adheres to the *External Donation Management Measures*, fully considers the actual needs of the assisted regions, and combines assistance efforts with project development promotion. Donations were made to Mijiang Village and Yili Village in Hunchun City, Yanbian Prefecture, Baicheng Region, and Shangcheng County in Henan Province. An industrial assistance fund was established to help these regions develop specialty industries, improve rural infrastructure, and leverage SPIC's strength to support rural revitalization in Jilin Province. During the reporting period, the Company donated RMB 10.28 million externally. The Company actively engaged in rural energy revolution and beautiful countryside construction, adhering to the dual-drive approach of poverty alleviation and intellectual empowerment, and continuously advanced industrial poverty alleviation and consumption-based poverty alleviation. To promote green industrial development, the Company operated 573,200 kilowatts of poverty alleviation photovoltaic projects, providing RMB 46.8079 million in support funds for the year, creating more economic benefits and social value. As a central SOE, the Company fulfilled its social responsibility by providing RMB 10 million in free assistance funds and over RMB 5.3 million in consumption-based assistance to designated Shangcheng County.

- 公司对外捐赠 **1,028** 万元
the Company donated RMB **10.28** million externally
- 对定点的商城县无偿帮扶资金 **1,000** 万元
the Company fulfilled its social responsibility by providing RMB **10** million in free assistance funds
- 在运扶贫光伏项目共 **57.32** 万千瓦
the Company operated **573,200** kilowatts of poverty alleviation photovoltaic projects,
- 消费帮扶 **530+** 万元
over RMB **5.3** million in consumption-based assistance
- 全年支持帮扶资金 **4,680.79** 万元
providing RMB **46.8079** million in support funds for the year

案例
Case

精准规划，生态产业“富农心”

Precise Planning, Ecological Industry "Enriches Farmers' Lives"

公司驻村工作队在深入摸排村情的基础上，结合当地林地资源丰富、气候适宜的特点，科学论证并选定红松嫁接作为中长期支柱产业。投入帮扶资金 50 万元，规划种植红松 10 公顷（20,000 棵），通过“公司出资 + 村集体组织实施 + 村民参与管护”的模式，将闲置林地转化为“绿色银行”。红松成材后，松塔销售预计可为村集体带来每亩约 3,000 元的可持续收益，有效盘活了沉睡资源，为村民打造了一张“生态存折”。

Based on thorough village surveys, the Company's resident work team scientifically evaluated and selected Korean pine grafting as a medium-to-long-term pillar industry, leveraging the region's abundant forest resources and favorable climate. With RMB 500,000 in assistance funding, the project planned to plant 10 hectares (20,000 trees) of Korean pines. through the "Company funding + village collective implementation + villager participation in maintenance" model, idle forest land was transformed into a "green bank." Upon maturity, pinecone sales are projected to generate sustainable income of approximately RMB 3,000 per mu (1 mu=1/15 hectare) for the village collective, effectively revitalizing dormant resources and creating an "ecological savings account" for villagers.



案例
Case

文化赋能，宜居环境“悦农心”

Cultural Empowerment Creates Livable Environment That "Delights Farmers' Hearts"

针对村民文化休闲设施匮乏的问题，公司资助在村部院内修建集广场舞、健身、球类运动、休憩于一体的村民文化广场，并融入朝鲜族特色景观元素。同时，发挥自身在能源领域的专业优势，将村委会原有燃煤采暖系统升级为清洁高效的空气能供热系统，既改善了办公条件，也示范推广了绿色低碳技术，提升了村庄整体人居环境品质。

Addressing the lack of cultural and recreational facilities, the Company funded the construction of a multifunctional village cultural square in the village compound, integrating square dancing, fitness equipment, ball sports, and resting areas while incorporating distinctive Korean ethnic landscape elements. Meanwhile, leveraging its professional expertise in the energy sector, the Company upgraded the village committee's coal-fired heating system to a clean and efficient air-source heat pump system. This not only improved office conditions but also demonstrated and promoted green, low-carbon technologies, enhancing the overall quality of the village's living environment.



案例
Case

多维联动，暖心服务“聚农心”

Multi-Dimensional Collaboration and Heartwarming Services "Gather Farmers' Hearts"

公司驻村工作队积极融入村庄治理，利用驻村第一书记专项资金举办“三八”妇女节联谊等活动，激发村民参与热情；主动参与春耕防火巡查，保障农业生产安全；借助“第一书记代言”等平台推广依力村农产品，拓宽销售渠道。此外，公司已前瞻性联系吉林农业大学专家，为后续发展榛蘑、天麻等林下经济项目储备技术，开展“映山红”助学和医疗义诊活动，持续提升村民的获得感和幸福感。

The Company's village-based task force actively integrated into local governance. Utilizing special funds allocated to the first village secretary, they organized events such as International Women's Day gatherings to boost villager participation. They proactively joined spring ploughing fire patrols to ensure agricultural safety and promoted Yili Village's agricultural products through platforms like "First Secretary Endorsements," expanding sales channels. Additionally, the Company proactively engaged experts from Jilin Agricultural University to build technical capacity for future understory economic projects like hazel mushrooms and gastrodia. They also carried out "Azalea" student aid programs and free medical clinics, continuously enhancing villagers' sense of fulfillment and happiness.



以开放促共赢

Promoting Win-Win Outcomes through Openness

公司积极践行共建“一带一路”倡议，深入学习贯彻党的二十届四中全会精神，紧扣“均衡增长战略”核心导向，锚定高质量发展根本要求与公司“新能源+”、绿色氢能双赛道发展工作需求，全面复盘年度工作成效，科学研判发展形势与核心任务，系统谋划后续工作思路、发展目标及实施路径，全力确保阶段性规划圆满收官，为下一阶段战略布局平稳开局、持续推进筑牢坚实基础，以战略引领赋能企业可持续发展与价值提升。

The Company actively implements the Belt and Road Initiative, thoroughly studies and applies the spirit of the Fourth Plenary Session of the 20th CPC Central Committee, and aligns with the core guidance of the "Balanced Growth Strategy". Anchored in the fundamental requirements of high-quality development and the dual-track development needs of "new energy+" and green hydrogen-based energy, the Company comprehensively reviews annual work achievements, scientifically assesses development trends and core tasks, and systematically plans follow-up work ideas, development goals, and implementation paths. It strives to ensure the successful completion of phased plans, laying a solid foundation for the smooth launch and sustained advancement of the next stage of strategic layout, empowering sustainable development and value enhancement through strategic leadership.

以诚信尽义务

Fulfilling Obligations with Integrity

公司制定《税务管理办法》等相关制度，坚持依法合规纳税原则，认真履行纳税义务，严格遵守国家和业务所在地区的相关税收政策规定、公司管理制度和操作规范，以真实、完整的涉税资料作为支持依据，依法、准确、及时缴纳各项税款，按规定进行税收信息披露，确保符合相关税务监管要求。

The Company has established the *Tax Management Measures and related systems*, adhering to the principle of lawful and compliant tax payment. It diligently fulfills tax obligations, strictly complies with relevant tax policies, company management systems, and operational standards in both domestic and operational regions, and uses authentic and complete tax-related materials as supporting evidence. Taxes are paid accurately and timely in accordance with the law, and tax disclosures are made as required to ensure compliance with relevant tax regulatory requirements.

- 报告期内，公司合理控制税务风险，按时缴纳各项税费，合计缴纳各项税费 **13.18** 亿元，公司纳税信用等级为 **A** 级。

During the reporting period, the Company effectively controlled tax risks and paid all taxes and fees on time, totaling RMB **1.318** billion. The Company's tax credit rating is Class **A**.



合规稳善政

Ensuring Sound Governance through Compliance

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以党建铸魂魄

Forging the Soul through Party Building

公司党委坚持以习近平新时代中国特色社会主义思想为指导，深入学习贯彻党的二十大和二十届历次全会精神，围绕党中央决策部署和聚焦国家电投党组“一流党建”部署，以高质量发展为主线，强基提质、增效创优，为公司实现高质量发展提供坚强的政治保证、组织保证、纪律保证。

The Party Committee of the Company adheres to the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, thoroughly studies and implements the spirit of the 20th CPC National Congress and its plenary sessions of the 20th CPC Central Committee, and focuses on the decisions and deployments of the Party Central Committee as well as the "First-Class Party Building" initiative of the SPIC Party Leadership Group. With high-quality development as the main theme, it strengthens foundations, improves quality, enhances efficiency, and pursues excellence, providing solid political, organizational, and disciplinary guarantees for the Company's high-quality development.

强化政治领航 根魂优势充分彰显

坚持政治建设首位，深入贯彻落实习近平总书记重要指示批示和党的二十届四中全会精神，推动 208 项贯彻落实习近平重要指示批示精神举措落地见效，编制公司“十五五”发展规划，引领实干笃行。全力推动党中央决策部署落实落地，大安风光制绿氢合成氨一体化示范项目建成投产并创五项“全球之最”，绿色氢基能源柔性管控系统入选国家能源局 2025 年度能源行业十大科技创新成果。扎实开展深入贯彻中央八项规定精神学习教育，大力整治形式主义为基层减负，党风企风持续向好。

By strengthening political guidance, our unique root-and-soul advantages have been fully demonstrated. Prioritizing political construction, we thoroughly implemented General Secretary Xi Jinping's important instructions and the spirit of the Fourth Plenary Session of the 20th CPC Central Committee. It has effectively advanced 208 measures to implement Xi's important directives, formulated the Company's 15th Five-Year Plan, and guided practical and steadfast actions. We have fully promoted the implementation of the Party Central Committee's decisions and deployments. The Da'an Wind-Solar Green Hydrogen-Ammonia Integration Demonstration Project was completed and put into operation, achieving five "world's best" records. The Green Hydrogen-Based Energy Flexible Management System was selected as one of the Top Ten Scientific and Technological Innovations in the Energy Industry for 2025 by the National Energy Administration. We earnestly conducted a study campaign for fully implementing the central Party leadership's eight-point decision on improving work conduct, vigorously addressed formalism to reduce burdens on grassroots units, and continuously improved Party conduct and corporate culture.

突出强基固本 组织堡垒更加坚实

实施党建工作专项提升行动，建立党建工作对标管理体系，发布标准化“文件包”，深化“1+1”结对帮扶新增 3 个国家电投示范党支部。深入实施国家电投党务干部“518”“213”工程，积极探索“AI+ 党建”，助力党务干部提素增智。构建“1+3+N”党业融合体系，建立党支部建功清单 148 份，实施党员身边无违章“一分钱·支部在攻坚”等党业融合项目 670 个，将党的组织优势转化为发展优势。

We focused on strengthening foundations and consolidating fundamentals, making organizational fortresses more robust. We implemented a special campaign to enhance Party building, established a benchmarking management system for Party building, released standardized "document packages," and deepened the "1+1" pairing assistance program, adding three more SPIC model Party branches. We thoroughly implemented the SPIC's "518" and "213" projects for Party affairs cadres, actively explored "AI + Party building," and helped Party affairs cadres enhance their capabilities and knowledge. We built a "1+3+N" system integrating Party building with business operations, established 148 Party branch achievement lists, and implemented 670 integrated projects such as "No Violations Around Party Members" and "One Cent-Party Branches Tackling Challenges," transforming the Party's organizational strengths into developmental advantages.

着力改革焕新 队伍活力持续激发

持续优化组织体系与管控模式，推动“三级四层五化”新型战略管控体系落地见效，为公司战略落地提供有力的组织支撑。强化干部人才队伍建设，实施末等调整和不胜任退出机制，选拔青年骨干双向交流，实现干部能上能下、员工能进能出、收入能增能减。加强专业化人才引进补给，产业工人队伍进一步充实。

We focused on reform and renewal and continuously invigorated team vitality. We continued to optimize the organizational system and management model, effectively implementing the "Three Levels, Four Layers, Five Transformations" new strategic management system to provide robust organizational support for the Company's strategic execution. We strengthened the development of cadre and talent teams by implementing mechanisms for adjusting underperformers and exiting those unfit for their roles, selecting young key personnel for two-way exchanges, and enabling cadres to move up or down, employees to join or leave, and incomes to increase or decrease dynamically. We enhanced the recruitment and replenishment of specialized talents, further bolstering the industrial workforce.

坚持自我革命 政治生态更加清朗

加强“一把手”和班子成员监督，面向“一把手”、年轻干部、新提拔干部、关键岗位等重点群体谈话 160 人次，推动“第一责任”“一岗双责”压紧压实。加强“关键少数”教育管理，赴井冈山、沂蒙山、红旗渠举办 4 期处级干部政治能力暨履职能力提升培训班，常态化开展党章党规党纪教育、警示教育活动 345 场次，实现重要节日廉洁“零报告”。以严的基调正风肃纪，深化“纪巡审”联动，运用“四种形态”审查调查违纪违法案件着力铲除腐败滋生的土壤和条件。

We remained committed to self-reform, fostering a cleaner political ecosystem. We strengthened oversight over "top leaders" and leadership teams, conducting 160 individual talks with key groups including "top leaders," young officials, newly promoted cadres, and personnel in critical positions. This reinforced the implementation of "primary responsibilities" and the "dual responsibilities" system. We enhanced education and management of the "critical few," organizing four training sessions for division-level cadres in Jinggangshan, Yimeng Mountain, and the Red Flag Canal to improve political competence and job performance. Regular education on Party regulations and discipline, along with 345 warning sessions, ensured zero reports of misconduct during major holidays. We upheld strict discipline to rectify conduct, deepened coordination among disciplinary inspection, inspection tours, and auditing, and applied the "four forms of supervision" to investigate disciplinary and legal violations. This aimed to eradicate the breeding ground for corruption.

强化宣传引领 品牌形象整体跃升

品牌建设实现历史性突破，发布“绿能 FRESH”品牌战略，“氢洲 HYGLOBAL”品牌走向世界。新闻宣传实现高位传播，4 次登陆中央电视台《新闻联播》。文明创建获得重要成果，成功获评“第七届全国文明单位”。严格落实意识形态工作责任制，深入开展“清朗”网络专项行动，实现意识形态领域持续安全稳定。

We amplified communication efforts, achieving a comprehensive elevation of our brand image. Brand building achieved a historic breakthrough with the launch of the "Green Energy FRESH" brand strategy, while the "HYGLOBAL Hydrogen" brand gained global recognition. News dissemination reached new heights, with four appearances on CCTV's "News Simulcast". Significant results were attained in cultural and ethical development, earning the title of "Seventh National Civilized Unit." We strictly implemented the responsibility system for ideological work, and carried out in-depth "Clear and Bright" online campaigns, ensuring sustained safety and stability in the ideological sphere.



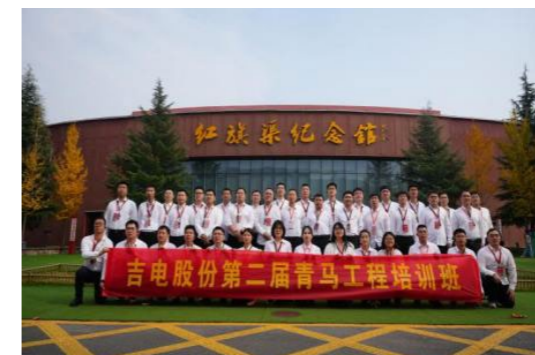
全体干部员工集中观看历史题材电影《731》

Collective Viewing of the Historical Film Evil Unbound by All Cadres and Employees



深入落实“均衡增长战略”

Comprehensively Implement the "Balanced Growth Strategy"



第二届“青年马克思主义者培养工程”培训班

Second Session of the "Young Marxists Training Program" Workshop



吉电股份处级干部政治能力暨履职能力提升培训班（第二期）
2025.08.24—08.30



处级干部政治能力暨履职能力提升培训班

Political and Leadership Capacity Enhancement Training for Division-Level Cadres

以治理强支撑

Building Strong Support through Effective Governance

董事会建设情况

Board of Directors Development Status

公司遵循上市公司的规范运作和监管要求，持续完善治理架构，公司设有可持续发展（ESG）委员会，致力于提高决策管理的科学化水平和内部控制效能。公司董事会下设 5 个专门委员会——战略与投资委员会、审计委员会、薪酬与考核委员会、提名委员会、可持续发展（ESG）委员会。各专门委员会就专业性事项进行研究，为董事会决策提供专业建议，其成员均由董事担任。

The Company adheres to the standardized operations and regulatory requirements of listed companies, continuously improving its governance structure. It has established a Sustainability Development (ESG) Committee dedicated to enhancing the scientific decision-making level and internal control effectiveness. The Company's Board of Directors has five specialized committees — the Strategy and Investment Committee, Audit Committee, Compensation and Evaluation Committee, Nomination Committee, and Sustainability Development (ESG) Committee. These specialized committees conduct research on professional matters and provide expert recommendations to the Board for decision-making. All committee members are directors.

- 报告期内，公司召开董事会 **11** 次，审议议题 **113** 项，听取报告类 **25** 项。

During the reporting period, the Company held **11** Board meetings, deliberated on **113** agenda items, and reviewed **25** reports.

董事会组织结构

Board of Directors Organizational Structure

战略与投资委员会
Strategy and
Investment
Committee

对公司长期发展战略和重大投资决策进行研究并向董事会提出建议。

Conduct research on the Company's long-term development strategies and major investment decisions, and provide recommendations to the Board of Directors.

审计委员会
Audit Committee

监事会撤销后，承接其职能。负责提议聘请及更换外部审计机构；监督公司内部审计制度及其实施；负责内部和外部审计机构之间的沟通；审核公司的财务信息及其披露；审查公司的内控制度等，并向董事会提出建议。

Assume the functions of the Supervisory Board after its dissolution. Propose the appointment and replacement of external audit firms; oversee the Company's internal audit system and its implementation; facilitate communication between internal and external audit teams; review the Company's financial information and disclosures; evaluate the Company's internal control systems, among other duties, and provide recommendations to the Board of Directors.

薪酬与考核委员会
Compensation
and Evaluation
Committee

研究和审查经理层成员的薪酬政策与方案；研究经理层成员的综合业绩考核标准，并向董事会提出建议。

Research and review the compensation policies and plans for members of the management team; study the comprehensive performance evaluation criteria for management team members and provide recommendations to the Board of Directors.

提名委员会
Nomination
Committee

研究董事和高级管理人员的选择标准和程序，对董事会的规模和构成向董事会提出建议等。

Research the selection criteria and procedures for directors and senior management personnel, and provide recommendations to the Board of Directors regarding the size and composition of the Board, among other matters.

可持续发展
(ESG) 委员会
Sustainability
Development
(ESG) Committee

对公司可持续发展相关的重大决策向董事会提出建议；监督公司可持续发展策略、规划的实施和进展；监督公司应对气候变化、保障健康安全和履行社会责任等关键议题的承诺和表现等。

Provide recommendations to the Board of Directors on major decisions related to corporate sustainability; oversee the implementation and progress of the Company's sustainability strategies and plans; monitor the Company's commitments and performance on key issues such as climate change response, health and safety assurance, and social responsibility fulfillment.

公司董事经由股东会选举产生，每届董事会任期三年。董事任期届满可以连选连任，独立董事连任时间不得超过6年。公司充分考虑董事会成员的行业经验、背景、性别等因素，以确保董事会构成最优化、平等化及多元化，公司董事专业经验覆盖安全、生产、发展、财务、法律、电力、人力资源、化工等领域。公司独立董事候选人由公司董事会、单独或者合并持有公司有表决权的股份总数1%以上的股东提名，除独立董事之外的其他董事候选人由董事会、单独或者合并持有公司有表决权的股份总数1%以上的股东提名，董事候选人名单以提案的方式提请股东会决议。公司第十届董事会由9名董事组成，其中包括5名股东代表董事、3名独立董事、1名职工代表董事。董事会成员中兼任公司高级管理人员以及由职工代表担任的董事人数总计未超过公司董事总数的二分之一，独立董事的人数超过公司董事总数的三分之一，符合相关法规的要求。

公司经理层成员薪酬管理由董事会薪酬与考核委员会审议后，提交董事会审议批准后实施。公司经理层成员薪酬依据同行业报酬水平，结合公司薪酬制度和年度经营业绩等综合因素确定。公司每年在年度报告中披露报告期内现任及离任董事、高级管理人员持股变动及薪酬情况，保障薪酬合理性及透明度。

以合规筑防线

Building Defenses through Compliance

内部控制

Internal Control

公司严格遵守《中华人民共和国公司法》《中华人民共和国证券法》《企业内部控制基本规范及配套指引》等相关法律法规，制定《内部控制管理规定》《资金内部控制监督管理细则》《内部控制评价实施细则》《专项审计管理办法》《内部控制手册》等内部管理制度，形成分工协调、各司其职、紧密衔接的内部控制治理架构。

Company directors are elected by the shareholders' meeting, with each Board term lasting three years. Directors may be re-elected upon expiration of their term, but independent directors may not serve for more than six consecutive years. The Company carefully considers factors such as industry experience, background, and gender of Board members to ensure optimal, equitable, and diverse Board composition. Directors' professional expertise spans safety, production, development, finance, law, power, human resources, and chemical industries. Independent director candidates are nominated by the Board or shareholders holding at least 1% of the Company's voting shares individually or collectively. Other director candidates are nominated by the Board or shareholders holding at least 1% of voting shares individually or collectively. The list of director candidates is submitted as a proposal for resolution at the shareholders' meeting. The Company's 10th Board of Directors consists of 9 members, including 5 shareholder representative directors, 3 independent directors, and 1 employee representative director. The number of directors concurrently serving as senior management personnel and those elected as employee representatives does not exceed half of the total board members. The number of independent directors exceeds one-third of the total board members, complying with relevant regulatory requirements.

The compensation management of the Company's executive team members is reviewed by the Board's Compensation and Evaluation Committee and submitted to the Board of Directors for deliberation and approval before implementation. The compensation for the Company's executive team members is determined based on industry benchmarking, combined with the Company's compensation system and annual operational performance, among other comprehensive factors. The Company annually discloses in its annual report the shareholding changes and compensation details of current and former directors and senior management personnel during the reporting period, ensuring compensation rationality and transparency.

The Company strictly adheres to relevant laws and regulations, including the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China*, and the *Basic Standards and Implementary Guidelines for Enterprise Internal Control*. It has established internal management systems such as the *Internal Control Management Regulations*, the *Detailed Rules for the Supervision and Management of Fund Internal Control*, the *Implementation Rules for Internal Control Evaluation*, the *Special Audit Management Measures*, and the *Internal Control Manual*. These systems form a well-coordinated, clearly defined, and tightly integrated internal control governance framework.

内部控制治理架构 Internal Control Governance Framework



公司按照财政部、交易所要求建立了一套相对完善的内部控制体系，随着业务发展，公司采取日常监督、专项评价、年度评价和内控审计等多种形式“以评促建”，推动内控体系向纵深建设。公司使用的数智审计系统实现审计计划、项目开展、问题下发、整改落实全流程线上化管控，核心是打通了审计工作从前端部署到后端闭环的数字化链路，既实现了审计管理的标准化、留痕化，也能通过系统数据沉淀实现审计工作的可追溯、可分析的管控需求。

In compliance with the requirements of the Ministry of Finance and the stock exchanges, the Company has established a relatively comprehensive internal control system. As business develops, the Company adopts various forms, such as daily supervision, special evaluations, annual assessments, and internal control audits, to "promote construction through evaluation", driving the in-depth development of the internal control system. SPIC's Digital Intelligence Audit System enables online management of the entire audit process, including planning, project execution, issue assignment, and rectification implementation. At its core, it establishes a digital link from front-end deployment to back-end closure of audit work. This not only standardizes audit management and ensures traceability, but also meets the control requirements for traceable and analyzable audit work through system data accumulation.

管理体系 Management system

坚持“少全畅”原则，以职能框架为基础完成制度体系评估，通过优化整合，制度总数压降 10%，构建位阶明确、结构清晰的制度体系。

聚焦权责清单与“三重一大”决策事项，开展系统性的流程权限梳理，编印《流程权限手册》，为强化内部治理、防范决策风险提供了坚实保障。

Adhere to the principle of "less, comprehensive, and smooth"; complete an evaluation of the Company's regulatory framework based on functional structure; reduce the total number of regulations by 10% through optimization and integration; establish a clear and well-structured regulatory system.

Focus on the list of responsibilities and the "Three Importance and One Big" decision-making matters; conduct a systematic review of processes and authorities; compile the *Process and Authority Manual*; provide a solid foundation for strengthening internal governance and mitigating decision-making risks.

日常监督 Daily supervision

将资金内控监督、内控缺陷整改等纳入日常监督范围，开展常态化监督。

Incorporate internal control oversight of funds and rectification of control deficiencies into the scope of daily supervision; carry out routine monitoring.



年度评价 Annual evaluation

按照内控三年监督计划安排，公司采用全面自评 + 监督评价方式开展年度内控评价，内控自评按照问题导向原则，聚焦所管各单位问题易发领域，设计了规范的内控评价标准 + 结构化的评价表单模板，引导所管各单位自我发现问题，推进内控自评机制与责任的落实。内控监督评价按照风险导向原则，确定了纳入评价范围的主要单位、业务和事项以及高风险领域，年内纳入评价范围单位资产总额占公司合并财务报表资产总额的 65%，营业收入合计占公司合并财务报表营业收入总额的 58%。

Conduct the annual internal control evaluation in accordance with the three-year internal control supervision plan through a combination of comprehensive self-assessment and supervisory evaluation; focus the self-assessment on high-risk areas within subordinate units guided by the problem-oriented principle; employ standardized evaluation criteria and structured assessment form templates to facilitate self-identification of issues and advance the implementation of internal control self-assessment mechanisms and accountability. Adopt a risk-oriented approach in internal control supervision and evaluation to identify the main units, businesses, matters, and high-risk areas included in the assessment scope; ensure that within the year, the total assets of units covered in the evaluation account for 65% of the Company's consolidated financial statement assets, and that their combined revenue from main operations represents 58% of the total revenue from main operations in the Company's consolidated financial statements.

内控审计 Internal control audit

公司每年聘请会计师事务所对公司开展内控审计。截至报告期末，公司已纳入审计（评价）范围的业务与事项均已建立了内部控制，并得到有效执行，未发现内部控制重大和重要缺陷。

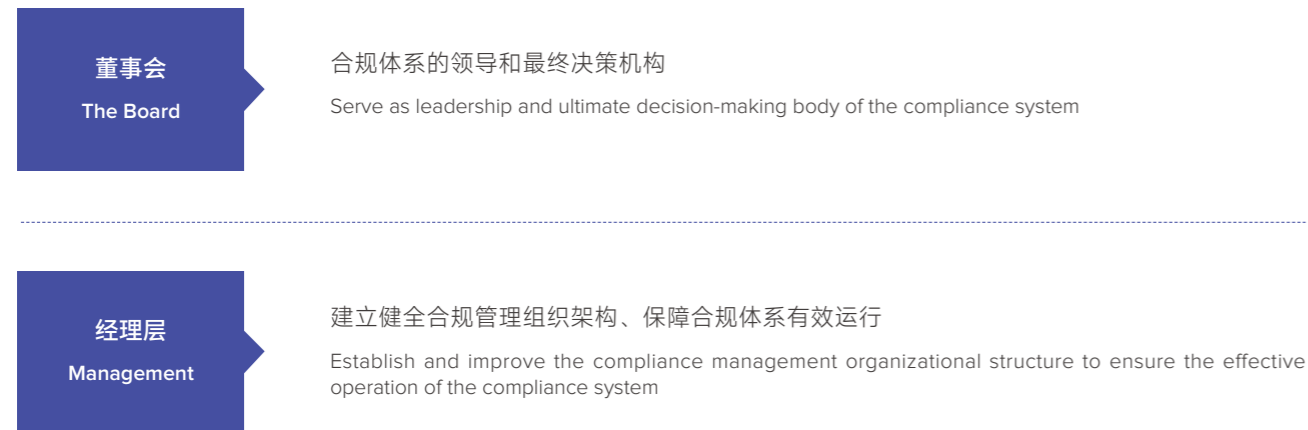
Engage an accounting firm annually to conduct internal control audits. Establish and effectively implement internal controls for all businesses and matters within the audit (evaluation) scope as of the reporting period, with no material or significant deficiencies identified.

合规管理 Compliance Management

公司根据《中华人民共和国公司法》《中央企业合规管理办法》《中央企业合规管理指引（试行）》等规定，制定并实施《合规管理办法》《风险内控合规一体化实施细则》《企业合规手册》《员工合规手册》《新能源项目投资合规指引》《招投标合规指引》等内部管理制度，把党的领导贯穿合规管理全过程，推动公司合规要求得到严格遵循和落实，不断提升依法合规经营管理水平，从而形成分工协调、各司其职、紧密衔接的合规组织架构。报告期内，公司本部和吉电新能源公司通过合规管理体系 GB/T35770—2022 国家标准认证。

In accordance with the *Company Law of the People's Republic of China, the Measures for the Compliance Management of Central Enterprises, and the Guidelines for the Compliance Management of Central Enterprises (Trial)*, the Company has formulated and implemented internal management systems such as the *Compliance Management Measures, the Detailed Rules for the Integration of Risk, Internal Control, and Compliance, the Corporate Compliance Manual, the Employee Compliance Manual, the Compliance Guidelines for New Energy Project Investment, and the Compliance Guidelines for Tendering and Bidding*. These systems ensure that the Party's leadership runs through the entire compliance management process, promotes strict adherence to and implementation of compliance requirements, continuously improves the level of lawful and compliant business management, and ultimately establishes a coordinated, well-defined, and tightly integrated compliance organizational structure. During the reporting period, the Company's headquarters and Jidian New Energy Company obtained GB/T 35770-2022 national standard certification for their compliance management systems.

合规管理体系



合规委员会与 法治央企建设 领导小组 Compliance Committee and the Leading Group for the Construction of Law- Based Central Enterprises

小组成员包括公司部分董事、高级管理人员、本部部门及所管单位负责人
负责合规管理的组织领导和统筹协调工作
对公司依法治企工作提出专业性意见或建议，组织开展法治建设相关具体工作
负责贯彻落实国家依法治企相关规定、文件及工作要求、审议、研究、协调、处理依法治企有关制度、方案、报告和重大事项等工作
Include some directors, senior executives, heads of headquarters departments, and responsible persons of subordinate units as group members
Take charge of the organizational leadership and overall coordination of compliance management
Provide professional opinions or suggestions on corporate governance in accordance with the law; organize specific legal construction initiatives
Implement national regulations, documents, and requirements on corporate governance in accordance with the law; review, study, coordinate, and handle systems, plans, reports, and major matters related to governance by law

法律与风险 管理部 Legal and Risk Management Department

合规工作的归口管理部门
组织、协调和监督合规管理工作，为其他部门提供合规支持
Serve as the designated department for compliance management
Organize, coordinate, and oversee compliance management; provide compliance support to other departments

业务部门 Business Departments

职能范围内的合规体系建设和运行
Establish and operate compliance systems within their functional scope

审计巡察等部门 Audit and Inspection Departments

充分发挥监督职能，对业务进行合规审查。
Fully leverage supervisory functions to conduct compliance reviews of business operations.

报告期内，公司组织签署合规承诺书、开展合同合规培训、完成全部制度合规审查、合同合规审查，保持业法业规更深融合，合规体系持续稳健运行，为业务健康发展提供了坚实保障。

During the reporting period, the Company organized the signing of compliance commitment letters, conducted contract compliance training, completed compliance reviews of all systems and contracts, and deepened the integration of business and legal regulations. The compliance system continued to operate steadily, providing a solid foundation for the healthy development of business operations.

合规机制

Compliance Mechanisms

组织公司全体员工签署合规承诺书，将合规要求和防控措施嵌入流程。

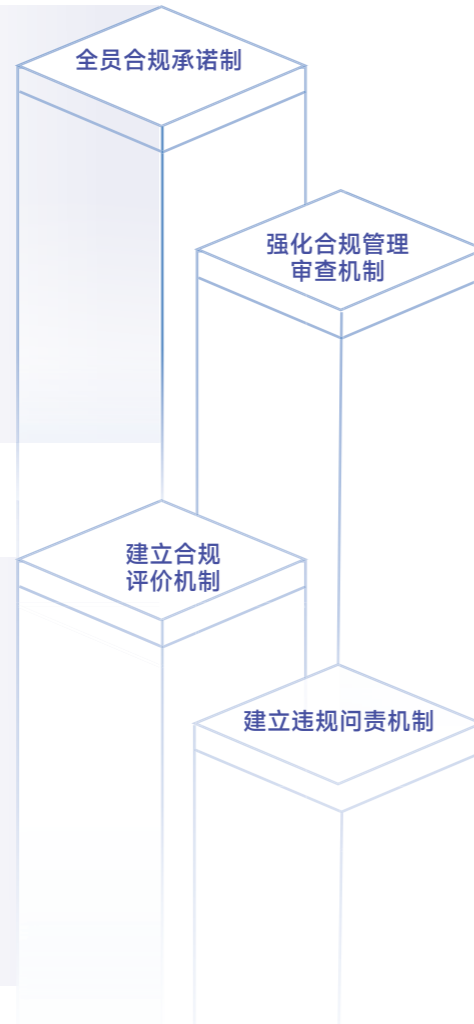
Company-wide compliance commitment system

Organize all employees to sign compliance commitment letters; embed compliance requirements and prevention and control measures into workflows.

通过整改消缺促进合规体系持续完善和管理提升，为合规体系常态化运行奠定基础。

Establish a compliance evaluation mechanism

Promote continuous improvement of the compliance system and management enhancement through rectification and deficiency elimination; lay the foundation for the regular operation of the compliance system.



针对规章制度制定、重大事项决策、重要合同签订、重大项目运营等改革发展和经营管理活动重要业务领域关键节点加强合规审查，强化过程管控。

Strengthen compliance management review mechanisms

Strengthen compliance reviews and enhance process control for critical nodes in key business areas such as regulatory formulation, major decision-making, important contract signing, and significant project operations during reform, development, and management activities.

通过畅通举报渠道，针对反映的问题和线索，及时开展调查，严肃追究违规人员责任。

Establish a violation accountability mechanism

Facilitate reporting channels; promptly investigate reported issues and leads; rigorously hold violators accountable.

风险管理

Risk Management

公司严格遵守《中央企业全面风险管理指引》《企业内部控制基本规范》等相关要求，构建《风险管理规定》《投资项目及重大资本运作决策事项风险管理实施细则》《风险监控预警及重大经营风险事件报告管理办法》等内部管理制度，建立覆盖目标与计划设定、风险识别、风险评估、风险应对、风险监控预警、监督与改进的风险闭环管理机制，并引入数字化工具，推进风险管理工作常态化、有序开展。报告期内，公司未发生重大风险事件。

The Company strictly adheres to relevant requirements such as the Guidelines for Comprehensive Risk Management of Central Enterprises and the Basic Standards for Enterprise Internal Control. It has established internal management systems including the Risk Management Regulations, the Implementation Rules for Risk Management of Investment Projects and Major Capital Operation Decision-Making Matters, and the Management Measures for Risk Monitoring, Early Warning, and Reporting of Major Operational Risk Events. A closed-loop risk management mechanism has been implemented, covering goal and plan setting, risk identification, risk assessment, risk response, risk monitoring and early warning, as well as supervision and improvement. Digital tools have been introduced to promote the normalization and orderly execution of risk management. During the reporting period, no major risk incidents occurred.

风险管理体系

Risk Management System



风险管理举措

Risk Management Measures

系统构建风险识别评估体系 Systematically establish a risk identification and assessment framework

依托数字风控平台，构建涵盖“风险预警指标、经营目标达成、战略任务推进、问题导向”四维联动的风险评估模型，实现对公司全域风险的穿透式识别与精准评估。累计收集高质量风险信息 313 条，辨识关键三级风险点 40 余项，全面覆盖国资委《中央企业风险分类标准》核心要求，有效贯通“自上而下压实责任、自下而上动态预警”的双向运行机制，进一步提升重大风险识别、评估和防范化解能力。

Leverage the digital risk control platform; establish a four-dimensional risk assessment model integrating "risk early warning indicators, operational goal achievement, strategic task advancement, and problem orientation"; enable comprehensive identification and precise evaluation of risks across the Company. Collect a total of 313 high-quality risk data points; identify over 40 key third-level risk points that fully cover the core requirements of the SASAC's *Risk Classification Standards for Central Enterprises*; effectively implement the bidirectional mechanism of "top-down accountability reinforcement and bottom-up dynamic early warning"; significantly enhance capabilities in major risk identification, assessment, prevention, and resolution.

不断完善风险监控机制 Continuously improve risk monitoring mechanisms

建立健全“年度全面评估、季度滚动跟进”的风险监控长效机制。通过组织各部门、所管各单位研判重大风险态势变化，按季度输出《重大风险防控情况报告》，对 TOP10 风险实施清单化、动态化靶向监控，并依据风险变化及时优化调整应对策略，筑牢风险防线。

Establish and refine a long-term risk monitoring mechanism featuring "annual comprehensive assessments and quarterly rolling follow-ups". Organize various departments and subordinate units to analyze changes in major risk trends; produce quarterly *Major Risk Prevention and Control Reports*; implement targeted monitoring through dynamic lists for the Top 10 risks; promptly optimize response strategies based on risk evolution; strengthen the risk defense line.

强化投资项目风险审查 Strengthen risk review of investment projects

牵头建立跨部门联合审查机制，聚焦合规性、内容完整性、识别评估准确性、应对措施有效性及报告逻辑性，对投资项目风险评估报告进行结构化、标准化深度审查，输出专业审查意见，有效强化投资目前端风险防控质效。

Spearhead the establishment of a cross-departmental joint review mechanism, focusing on compliance, content completeness, accuracy of identification and assessment, effectiveness of response measures, and report logic; conduct structured and standardized in-depth reviews of investment project risk assessment reports through this mechanism; provide professional review opinions to effectively enhance the quality and efficiency of front-end risk prevention and control for investment projects.

反不正当竞争

Anti-Unfair Competition

公司恪守公平竞争原则，维护行业商业生态的良性循环和价值根基，将反不正当竞争内化为规范公司商业行为、提升公司治理质量的重要准则、刚性约束和内在逻辑，守护自身品牌信誉，保障投资者与消费者等利益相关方合法权益，为维护公平竞争的市场秩序贡献力量。

公司严格遵守《中华人民共和国反垄断法》《中华人民共和国反不正当竞争法》《中华人民共和国广告法》等法律法规，维护公平竞争秩序，坚决抵制虚假宣传、垄断、侵犯商业秘密等不正当竞争行为，不以违背商业道德的手段谋取交易机会或损害其他经营者的竞争优势，切实保护客户及合作伙伴合法权益。

The Company adheres to the principle of fair competition, safeguarding the virtuous cycle and value foundation of the industry's commercial ecosystem. It internalizes anti-unfair competition as a critical guideline, rigid constraint, and inherent logic to standardize business conduct and elevate corporate governance quality. By protecting its brand reputation and safeguarding the legitimate rights and interests of stakeholders such as investors and consumers, it contributes to maintaining a fair and competitive market order.

The Company strictly complies with laws and regulations such as the *Anti-Monopoly Law of the People's Republic of China*, the *Anti-Unfair Competition Law of the People's Republic of China*, and the *Advertising Law of the People's Republic of China*. It upholds fair competition, resolutely opposes unfair practices such as false advertising, monopolistic behaviors, and trade secret infringement, and refrains from seeking business opportunities or undermining competitors' advantages through unethical means. It is committed to protecting the legitimate rights and interests of customers and partners.

以廉洁守底线

Upholding Integrity as the Bottom Line

公司遵照《中华人民共和国刑法》《中华人民共和国反洗钱法》《国有企业管理人员处分条例》等法律法规，制定并实施《员工奖惩管理规定》《党风廉政建设责任制管理规定》等内部管理制度，通过运用典型案例强化警示教育，形成了有效震慑。

The Company complies with laws and regulations such as the *Criminal Law of the People's Republic of China*, the *Anti-Money Laundering Law of the People's Republic of China*, and the *Regulations on Disciplinary Action Against the Managerial Professionals of State-Owned Enterprises*. It has established and implemented internal management systems including the *Employee Reward and Punishment Management Regulations* and the *Regulations on the Responsibility System for Party Conduct and Integrity Construction*. By leveraging typical cases to strengthen warning education, the Company has created an effective deterrent.

反腐败措施

Anti-Corruption Measures

反贪反腐治理 Anti-corruption governance

- 建立并持续健全反商业贿赂及反贪污政策制度体系，包括《问题线索集中统一管理办法》《领导人员廉洁档案管理办法》等。相关政策制度全面覆盖公司及下属机构、业务和人员，为公司长期稳健发展提供坚实保障。
- 建立了全面覆盖“党委 - 纪委 - 纪委会 - 所属企业”的反腐败管理架构。党委负责从决策层面推进公司反腐败管理工作；纪委协助公司党组织、协调开展反腐败工作；纪委会具体落实公司党委、纪委会要求；各所属企业设立纪检机构，配备专（兼）职纪检工作人员，依规依纪开展反腐败工作。
- 严格按照国家法律法规以及国家电投和公司的规章制度，采取零容忍的态度惩治贪污腐败行为，并建立案件复盘机制，分析形成贪腐事件的原因，在日后的生产经营过程中加强廉洁风险管控。
- Establish and continuously improve the anti-commercial bribery and anti-corruption policy system, including the *Measures for the Centralized and Unified Management of Problem Clues* and the *Measures for the Management of Integrity Archives of Leading Personnel*. Ensure relevant policies and systems comprehensively cover the Company, its subsidiaries, businesses, and personnel; provide a solid foundation for the Company's long-term and stable development.
- Establish a comprehensive anti-corruption management framework, covering the "Party Committee – Discipline Inspection Committee – Discipline Inspection Office – Affiliated Enterprises". The Party Committee is responsible for advancing anti-corruption management at the decision-making level; the Discipline Inspection Committee assists the Party Committee in organizing and coordinating anti-corruption efforts; the Discipline Inspection Office implements the requirements of the Party Committee and the Discipline Inspection Commission; and each affiliated enterprise has established a disciplinary inspection body with full-time or part-time staff to carry out anti-corruption work in accordance with regulations and discipline.
- Adopt a "zero-tolerance" approach to punish corrupt practices in strict accordance with national laws and regulations, as well as the rules of SPIC and the Company; establish a case review mechanism to analyze the causes of corruption incidents and strengthen integrity risk control in future production and operations.

廉洁举报机制 Integrity reporting mechanism

- 遵照《纪检监察机关处理检举控告工作条例》要求，规范检举人保护机制，维护检举人的合法权益。
- 建立完善的举报管理与处理机制，确保全体员工及相关方可以在保密情况下，通过举报电话、举报邮箱等渠道举报怀疑涉及本公司领导干部的违纪和职务违法行为。对举报者信息及权益保障做出严格要求，确保举报者的身份得到保密，承诺员工不会因举报而受到不公平解雇、伤害或不当的纪律处分。
- 制定标准的信访举报受理、问题线索处置、案件审查程序，并通过集中研判，层层审签，及时上传案管系统等方式，科学办理检举控告。
- Standardize the protection mechanism for whistleblowers in compliance with the *Regulations on the Handling of Reports and Accusations by Discipline Inspection and Supervision Organs*; safeguard their legitimate rights and interests.
- Establish a comprehensive reporting management and handling mechanism to ensure all employees and relevant parties can confidentially report suspected disciplinary violations and job-related misconduct by the Company's leadership through channels such as dedicated hotlines and email boxes. Implement stringent requirements to protect whistleblowers' information and rights, ensuring their identities remain confidential; guarantee that employees will not face unfair dismissal, harm, or inappropriate disciplinary action due to reporting.
- Develop standard procedures for accepting reports, handling case leads, and reviewing cases; process reports and accusations systematically through centralized analysis, multi-level approval, and timely uploads to case management systems.

廉洁风险控制 Integrity risk control

- 建立以案促改机制，剖析案件原因，在日后的运营过程中加强廉洁风险管控
- 积极构建大监督体系，充分发挥纪检监督、职能监督、审计监督和巡察监督的协同作用，通过专项监督检查、建立风险库等方式，有效防控燃料管理、招标采购、工程建设等重点领域、关键环节的廉洁风险。
- 发挥反腐败协调小组作用，推动公司党风廉政建设和反腐败工作走深走实，整合监督力量，凝聚工作合力，构建权责清晰、协同高效的反腐败工作体系，聚焦工程建设、招投标等关键领域，深入排查廉洁风险隐患，研判问题线索，深挖腐败问题。针对监督检查发现的突出问题和薄弱环节，坚持标本兼治、源头治理，健全完善长效监管机制，堵塞制度漏洞，规范权力运行，为企业高质量发展提供坚强纪律保障。
- Establish a case-driven rectification mechanism to analyze case causes and strengthen integrity risk management in future operations.
- Actively build a comprehensive supervision system; leverage the synergy of disciplinary inspection, functional oversight, audit supervision, and inspection supervision; conduct specialized supervision checks and establish a risk database; effectively prevent and control integrity risks in key areas and critical links such as fuel management, bidding and procurement, and engineering construction.
- Leverage the role of the anti-corruption coordination team to deepen and solidify its efforts in improving Party conduct, building integrity, and combating corruption; integrate supervision resources; consolidate collaborative efforts; build an efficient anti-corruption system with clear responsibilities and authorities; focus on key areas such as engineering construction, tendering, and bidding, thoroughly investigates integrity risks, assesses problem clues; uncover corruption issues. Address prominent issues and weak links identified during supervision and inspections by adopting a holistic approach that tackles both symptoms and root causes; improve long-term regulatory mechanisms; close institutional loopholes; standardize power operations to provide robust disciplinary safeguards for the Company's high-quality development.

反腐倡廉教育 Anti-corruption and integrity education

- 针对各层级员工统筹融合开展廉洁从业教育与业务培训，通过集中学习教育、谈话提醒等方式，实现教育培训全覆盖。在新员工入职培训中专门增加廉洁从业内容，加强年轻干部反腐倡廉教育。
- 分层分类系统性开展廉洁教育工作。强化党员干部纪律教育，建立新提拔干部任前党纪测试机制，面向“一把手”、年轻干部、关键岗位人员、新入职员工等不同群体，通过专题培训、纪律党课等形式开展针对性廉洁教育与警示教育。将纪法知识纳入各类培训、竞赛考试范畴，营造日常学纪浓厚氛围，推动廉洁教育常态长效。
- Integrate integrity education with professional training for employees at all levels; achieve full coverage through centralized learning sessions, reminder talks, and other methods. Add special integrity modules to new employee onboarding programs; enhance anti-corruption and integrity education for young cadres.
- Implement systematic integrity education through tiered and categorized approaches. Strengthen discipline education for Party members and cadres; establish a pre-appointment Party discipline test mechanism for newly promoted cadres; provide targeted integrity and warning education to key groups—including top leaders, young cadres, personnel in critical positions, and new hires — through specialized training and disciplinary Party lectures. Integrate disciplinary and regulatory knowledge into various training programs and competition exams; foster a strong daily learning atmosphere; promote the long-term effectiveness of integrity education.

以沟通聚共识

Building Consensus through Communication

投资者关系管理

Investor Relations Management

公司严格执行落实《投资者关系管理办法》，设立一系列投资者关系管理流程，持续优化投资者沟通内容和方式、加强投资者关系管理的组织与实施。公司在提高沟通效率的同时，保证投资者关系工作的合规性和公平性。

董事会秘书为公司投资者关系管理事务的负责人，在全面深入了解公司运作和管理、经营状况、发展战略等情况下，负责策划、安排和组织各类投资者关系管理活动；公司资本运营部（董事会办公室）是投资者关系管理工作的职能部门，在董事会秘书的领导下，设专人具体承办投资者关系日常工作，包括各种投资者沟通渠道的维护，同时做好内部信息的收集与传递。

公司积极建立公平透明共赢的投资者关系，主动倾听投资者声音，完善市值管理，保障投资者长远利益。报告期内，公司在深圳证券交易所上市公司 2024-2025 年度信息披露评价中，获得信息披露最高级A级（优秀）评价，连续四年获得信息披露“A”级评价，体现了监管机构对公司信息披露工作的全面持续认可。

The Company strictly implements the *Investor Relations Management Measures*, and establishes a series of investor relations management processes to continuously optimize communication content and methods while strengthening the organization and execution of investor relations management. While improving communication efficiency, the Company ensures the compliance and fairness of investor relations activities.

The Board Secretary serves as the responsible person for the Company's investor relations management affairs. With a comprehensive understanding of the Company's operations, management, business status, and development strategies, they are tasked with planning, arranging, and organizing various investor relations management activities. The Capital Operations Department (Board Office) functions as the dedicated department for investor relations management. Under the leadership of the Board Secretary, designated personnel handle the day-to-day management of investor relations, including maintaining various communication channels and facilitating the collection and dissemination of internal information.

The Company actively fosters fair, transparent, and mutually beneficial investor relations, proactively listens to investor feedback, enhances market value management, and safeguards long-term investor interests. During the reporting period, the Company received the highest "A" (Excellent) rating in the Shenzhen Stock Exchange's 2024-2025 Information Disclosure Assessment of Listed Companies, marking the fourth consecutive year of achieving this top-tier rating. This reflects the regulatory authorities' sustained and comprehensive recognition of the Company's information disclosure practices.

认真履行上市公司信息披露义务，严格按照监管机构要求和公司信息披露的相关规定，向全体股东和广大投资者披露公司经营管理过程中的重大事项，使投资者能够充分了解公司的经营动态。

通过股东会、路演、反向路演、分析师会议、接待来访、热线电话、公司网站专栏、新媒体平台等多种途径，拓展利益相关方沟通的广度和深度，通过与投资者的充分交流，及时更新公司经营状况，促进公司与资本市场的长期协调发展。

The Company diligently fulfills its information disclosure obligations as a listed entity, and strictly adheres to regulatory requirements and internal disclosure policies to communicate significant operational and managerial developments to all shareholders and investors, ensuring they are fully informed of the Company's progress.

Through shareholder meetings, roadshows, reverse roadshows, analyst conferences, investor visits, hotlines, dedicated website sections, and new media platforms, the Company broadens and deepens stakeholder engagement. By maintaining open dialog with investors and promptly updating them on business developments, the Company fosters long-term alignment with the capital markets.

- 举办投资者交流会 **5** 次

Number of investor exchange meetings held: **5**

- 服务机构投资者超 **18** 家

Number of institutional investor served: over **18**

- 投资者沟通平台回复次数 **348** 次

Number of responses posted on investor communication platforms: **348**

- 披露定期报告 **4** 个

Number of periodic reports disclosed: **4**

- 发布临时公告 **121** 个

Number of interim announcements issued: **121**

股东权益保护

Protection of Shareholders' Rights and Interests

公司制定了《股东会议事规则》，进一步明确了股东会职权、提案方式、表决程序等内容，严格依据章程规定，依法行使职权，平等对待所有股东，充分保障股东的合法权益，同时邀请证券专业律师事务所到会见证并出具法律意见书，确保会议召集、召开、审议和表决程序合法合规。

公司设立资本运营部(董事会办公室)，发挥沟通桥梁、展示窗口、信息中心”作用，专门负责向股东及投资者提供所需材料和服务，与股东、投资者和其他资本市场参与人员保持积极沟通，让股东及投资者充分了解公司运营和发展情况。

公司制定股东沟通政策，并定期检视以确保其成效，确保与股东之间保持有效沟通。股东会开通网络投票，为中小股东行使投票权节省了成本、提供了便利；实行累积投票制，为中小股东选举出代表自己利益的董事提供制度和程序保障；中小股东单独计票，保护中小股东知情权；在审议关联交易议案时，严格落实关联股东回避机制，由中小股东投票表决，切实保障中小股东合法权益；建立起与中小股东畅通的沟通机制，在股东会前充分听取股东意见，争取中小股东的支持。

The Company has formulated the *Rules of Procedure for Shareholders' Meetings*, further clarifying the authority of shareholders' meetings, proposal methods, voting procedures, and other details. In strict accordance with the Articles of Association, the Company exercises its authority lawfully, treats all shareholders equally, and fully safeguards their legitimate rights and interests. Additionally, the Company invites professional securities law firms to witness the meetings and issue legal opinion letters, ensuring that the convening, conduct, deliberation, and voting procedures of the meetings are lawful and compliant.

The Company has established the Capital Operations Department (Board Office) to serve as a "communication bridge, display window, and information center". This department is specifically responsible for providing materials and services to shareholders and investors, maintaining active communication with shareholders, investors, and other capital market participants, and ensuring that shareholders and investors are fully informed about the Company's operations and development.

The Company has established a shareholder communication policy and conducts regular reviews to ensure its effectiveness, maintaining efficient communication with shareholders. The General Meeting of Shareholders provides online voting, reducing costs and offering convenience for minority shareholders to exercise their voting rights. A cumulative voting system is implemented to provide institutional and procedural safeguards for minority shareholders in electing directors who represent their interests. Separate vote counting for minority shareholders protects their right to information. When reviewing related-party transaction proposals, the Company strictly enforces the recusal mechanism for related shareholders, allowing minority shareholders to vote and effectively safeguarding their legitimate rights and interests. A smooth communication mechanism with minority shareholders has been established, with their opinions fully solicited before shareholder meetings to secure their support.

- 报告期内，公司召开股东会 **7** 次，审议通过 **39** 项议案。

During the reporting period, the Company held **7** shareholders' meetings and approved **39** proposals.

- 根据公司《章程》《未来三年（2023-2025）股东回报规划》等相关安排，2024 年度全年分红 **3.84** 亿元，分红率 **34.98%**，合计每股分红 **0.133** 元。报告期内，开展中期分红两次，合计 **1.48** 亿元，分红率达 **19.003%**；预计 2025 年年度分红 **0.58** 亿元，预计 2025 年度全年分红合计 **2.07** 亿元。协助实际控制人国家电投集团及其一致行动人完成金额达 **2.01** 亿元的股份增持计划，向市场传递发展信心。

In accordance with the Company's *Articles of Association and the Shareholder Return Plan for the Next Three Years (2023-2025)*, the total annual dividend distribution for 2024 amounted to RMB 384 million, with a payout ratio of 34.98%, equivalent to RMB 0.133 per share. During the reporting period, two interim dividends were distributed, totaling RMB 148 million, with a payout ratio of 19.003%. The projected annual dividend for 2025 is expected to reach RMB 58 million, bringing the total annual dividend for 2025 to RMB 207 million. The Company assisted its actual controller, SPIC, and its concerted parties in completing a share purchase plan worth RMB 201 million, conveying development confidence to the market.

债权人权益

Creditors' Rights and Interests

公司历来重视债权人合法权益保护，在各项重大经营决策过程中，均充分考虑了债权人的合法权益，严格按照有关合同或协议中的有关条款约定按时履行义务，加强与债权人的沟通联系，确保其及时了解公司生产经营状况，切实维护债权人的合法权益。

The Company has always prioritized the protection of creditors' legitimate rights and interests. In all major operational decisions, it fully considers creditors' lawful rights and interests, strictly adheres to relevant contractual terms, and fulfills obligations on schedule. It strengthens communication with creditors to ensure they are promptly and adequately informed about the Company's production and operational status, thereby safeguarding their legitimate rights and interests.

- 报告期内，公司无不良信用记录、未发生债务违约，并获得中诚信国际信用评级有限责任公司确认为 **AAA** 主体信用评级，评级展望为“稳定”。

During the reporting period, the Company maintained a clean credit record with no debt defaults. It was awarded an **AAA** issuer credit rating by China Chengxin International Credit Rating Co., Ltd., with a "stable" outlook.

ESG 数据表与附注

ESG Data Tables and Notes

环境范畴

Environmental Dimension

一级指标 Primary Indicator	二级指标 Secondary Indicator	三级指标 Tertiary Indicator	单位 Unit	2025	2024
资源消耗 Resource consumption	水资源 Water resources	耗水总量 ¹ Total water consumption	万吨 10,000 tons	68,639.87	73,747.64
		新鲜水用量 Fresh water consumption	万吨 10,000 tons	2,203.12	2,484.32
	能源 Energy	能源消耗总量 Total energy consumption	吨标准煤 Tons of standard coal	4,331,662.95	4,561,995.03
		百万营收综合能耗 ² Energy consumption per RMB million revenue	吨标准煤 / 百万元 Tons of standard coal / RMB million	330.29	332.03
		化石能源消耗量 Fossil energy consumption	吨标准煤 Tons of standard coal	4,283,846.63	4,490,388.77
		煤炭消耗量 Coal consumption	吨标准煤 Tons of standard coal	4,282,172.87	4,488,597.87
		柴油消耗量 Diesel consumption	吨标准煤 Tons of standard coal	1,673.76	1,790.90
		非化石能源消耗量 Non-fossil energy consumption	吨标准煤 Tons of standard coal	36,458.78	2,274.66
		外购能源消耗量 Purchased energy consumption	吨标准煤 Tons of standard coal	11,357.54	877.57
		外购电力 Purchased electricity	吨标准煤 Tons of standard coal	11,357.54	877.57
		清洁能源消耗量 Clean energy Consumption	吨标准煤 Tons of standard coal	36,458.78	68,454.04
		非化石能源消耗量占比 Proportion of non-fossil energy consumption	%	0.84	0.05
	清洁能源消耗量占比 Proportion of clean energy consumption	%	0.84	1.50	
	物料 Materials	不可再生物料消耗量 (燃煤) Non-renewable material consumption (coal)	吨 Ton	9,112,242.00	9,743,586.00

¹ 耗水总量 = 新鲜水用量 + 水资源重复利用量

¹ Total water consumption = Freshwater consumption + Recycled water usage

² 百万营收综合能耗 = 能源消耗总量 / 百万营收

² Energy consumption per RMB million revenue = Total energy consumption / RMB million revenue

³ 上表能源统计口径为生产口径

³ The above energy statistics follow production-caliber accounting

一级指标 Primary Indicator	二级指标 Secondary Indicator	三级指标 Tertiary Indicator	单位 Unit	2025	2024
污染防治 Pollution prevention	废水 Wastewater	废水排放量 Wastewater discharge	吨 Ton	659,050	459,900.00
	固体废物 Solid waste	固体废弃物处置总量 Total solid waste disposal	吨 Ton	1,840,246.96	2,236,852.96
		一般工业固体废物产生量 Generation volume of general industrial solid waste	吨 Ton	1,838,304.93	2,236,493.00
		一般工业固体废物处置量 Disposal volume of general industrial solid waste	吨 Ton	1,838,287.59	2,236,493.00
		一般工业固体废物产生密度 ⁴ Generation density of general industrial solid waste	吨 / 百万元 Tons/RMB million	140.17	162.78
		一般工业固体废物综合利用量 ⁵ Comprehensive utilization volume of general industrial solid waste	吨 Ton	1,838,287.59	2,236,493.00
		一般工业固体废物综合利用率 Comprehensive utilization rate of general industrial solid waste	%	100.00	100.00
		危险废物产生量 Generation volume of hazardous waste	吨 Ton	2,197.67	359.96
		危险废物处置量 Disposal volume of hazardous waste	吨 Ton	2,199.97	361.03
	危险废物产生密度 ⁶ Hazardous waste generation density	吨 / 百万元 Tons/RMB million	0.1676	0.0262	
气候变化 Climate change	温室气体排放 Greenhouse gas emissions	温室气体排放总量 ⁷ Total greenhouse gas emissions	吨二氧化碳当量 Tons of CO ₂ equivalent	12,337,499.66	12,897,083.60
		范围一排放量 Scope 1 emissions	吨二氧化碳当量 Tons of CO ₂ equivalent	12,335,126.92	12,896,189.04
		范围二排放量 Scope 2 emissions	吨二氧化碳当量 Tons of CO ₂ equivalent	2,372.74	893.56
		温室气体减排量 Greenhouse gas emission reduction	吨二氧化碳当量 Tons of CO ₂ equivalent	—	—
		温室气体排放强度 (1+2) Greenhouse gas emission intensity (Scope 1+ Scope 2)	吨二氧化碳当量 / 万元 Tonnes of CO ₂ equivalent/ RMB 10,000	9.41	9.39

⁴ 一般工业固体废物产生密度 = 一般工业固体废物产生量 / 百万营收

⁴ Generation density of general industrial solid waste = Generation of general industrial solid waste / RMB million revenue

社会范畴 Social Dimension

一级指标 Primary Indicator	二级指标 Secondary Indicator	三级指标 Tertiary Indicator	单位 Unit	2025	2024
环境管理 Environmental management	环保投入 Environmental protection investment	环保总投入 Total environmental protection investment	亿元 RMB 100 million	4.74	1.09
		环保总投入占营业收入比例 Ratio of total environmental protection investment to operating revenue	%	3.61	0.79

⁶ 危险废物产生密度 = 危险废物产生量 / 百万营收

Hazardous waste generation density = Hazardous waste generation / RMB million revenue

⁷ 范围一温室气体排放主要源于公司生产运营过程消耗化石燃料产生的直接温室气体排放（如汽油、柴油、天然气等），化石燃料燃烧产生的二氧化碳排放量 = (汽油活动水平 * 0.0679) + (柴油活动水平 * 0.0726) + (天然气活动水平 * 0.0555)，能源碳排放因子来自《工业其他行业企业温室气体排放核算方法与报告指南》。Scope 1 greenhouse gas emissions primarily originate from direct emissions generated by the Company's production and operational processes through the consumption of fossil fuels (such as gasoline, diesel, natural gas, etc.). The CO₂ emissions from fossil fuel combustion are calculated as follows: (gasoline activity level × 0.0679) + (diesel activity level × 0.0726) + (natural gas activity level × 0.0555). The carbon emission factors for energy are sourced from the Guidelines for Greenhouse Gas Emission Accounting and Reporting for Enterprises in Industrial and Other Sectors.

范围二温室气体排放主要源于公司生产运营过程中消耗的电力、热力所产生的间接温室气体排放，间接温室气体排放量 = (耗电量 * 各区域电力平均二氧化碳排放因子 + 热力消耗量 * 0.11；热力碳排放因子来自《工业其他行业企业温室气体排放核算方法与报告指南》，区域电力平均二氧化碳排放因子采用国家发展和改革委员会发布的 2022 年区域电网平均二氧化碳排放因子的公告值。

Scope 2 greenhouse gas emissions mainly arise from indirect emissions resulting from the Company's consumption of electricity and heat during production and operations. The indirect greenhouse gas emissions are calculated as: (electricity consumption × regional average CO₂ emission factor for electricity) + (heat consumption × 0.11). The carbon emission factor for heat is derived from the Guidelines for Greenhouse Gas Emission Accounting and Reporting for Enterprises in Industrial and Other Sectors, while the regional average CO₂ emission factors for electricity are based on the 2022 values announced by the National Development and Reform Commission for regional power grids.

本数据尚未经过第三方核查。

This data has not yet undergone third-party verification.

一级指标 Primary Indicator	二级指标 Secondary Indicator	三级指标 Tertiary Indicator	单位 Unit	2025	2024		
员工 Employees	员工结构 Employee structure	员工总数 Total employees	人 Person	3,637	3,731		
		少数民族员工 Ethnic minority employees	人 Person	385	371		
		残疾员工 Employees with a disability	人 Person	13	18		
		按性别结构划分： By gender:					
		男性 Male	人 Person	2,895	2,959		
		女性 Female	人 Person	742	772		
		按教育背景划分： By education background:					
		博士 Doctoral degree	人 Person	8	7		
		硕士 Master's degree	人 Person	272	201		
		本科 Bachelor's degree	人 Person	2,497	2,475		
		专科 Associate degree	人 Person	660	746		
		专科以下 Below associate degree	人 Person	200	302		
		按年龄划分： By age:					
		30岁(含)以下 30 and below	人 Person	705	564		
		30岁-50岁(含) 30-50 (inclusive)	人 Person	2,094	2,162		
50岁以上 Above 50	人 Person	838	1,005				

一级指标 Primary Indicator	二级指标 Secondary Indicator	三级指标 Tertiary Indicator	单位 Unit	2025	2024
员工 Employees	员工结构 Employee structure	按区域划分： By region:			
		中国大陆员工 Chinese mainland employees	人 Person	3,637	3,731
		港澳台员工 Employees from Hong Kong, Macao, and Taiwan	人 Person	0	0
		海外员工 Overseas employees	人 Person	0	0
		按专业构成划分： By professional category:			
		生产人员 Production personnel	人 Person	2,104	2,131
		销售人员 Sales personnel	人 Person	105	84
		技术人员 Technical personnel	人 Person	407	545
		财务人员 Financial personnel	人 Person	244	223
		行政人员 Administrative Personnel	人 Person	777	748
		新入职员工人数 New employees	人 Person	212	194
		按性别结构划分： By gender:			
		男性 Male	人 Person	190	147
		女性 Female	人 Person	22	47
		按招聘渠道划分： By Recruitment channel:			
		应届毕业生 Fresh graduates	人 Person	193	100
		社会招聘 Social recruitment	人 Person	19	94
		劳动合同签订率 Labor contract signing rate	%	100	100

一级指标 Primary Indicator	二级指标 Secondary Indicator	三级指标 Tertiary Indicator	单位 Unit	2025	2024	
员工 Employees	员工结构 Employee structure	社保缴纳比率 Social insurance coverage ratio	%	100	100	
		人均带薪休假时间 Per capita paid leave time	天 Day	11	11	
	员工职业健康安全 管理 Employees occupational health and safety management	职业伤害及职业病频次 Occupational injury and disease frequency	人 Person	0	0	
		安全培训覆盖率 Safety training coverage rate	%	100	100	
		安全生产责任险投入金额 Investment in work safety liability insurance	万元 RMB 10,000	17.12	11.12	
		安全生产责任险人员覆盖率 Work safety liability insurance coverage	%	70.04	51.90	
		工作场所员工发生事故的数量 Number of workplace employee accidents	件 Cases	0	0	
		工作场所员工发生事故的比率（工伤率） Workplace employee accident rate (work-related injury rate)	%	0	0	
		工作场所员工发生事故的变化情况 Changes in workplace employee accidents	%	0	0	
		因工亡故人数 Number of Work-related Fatality	人 Person	0	0	
		因工亡故比率 Work-related fatality rate	%	0	0	
		因工伤损失工作时数 Work hours lost due to occupational injuries	小时 Hours	0	0	
		职业病发生率 Incidence rate of occupational diseases	%	0	0	
		因工死亡人数 Number of work-related deaths	人 Person	0	0	
		关爱与帮扶 Care and assistance	员工帮扶投入 Employee assistance investment	万元 RMB 10,000	22.9	44.20
			慰问金投入 Condolence fund investment	万元 RMB 10,000	61.44	61.26

一级指标 Primary Indicator	二级指标 Secondary Indicator	三级指标 Tertiary Indicator	单位 Unit	2025	2024	
员工 Employees	发展与培训 Development and training	全年培训场次 Annual training sessions	次 Times	60	52	
		年度培训支出 Annual training expenditure	万元 RMB 10,000	1,791	1,364.04	
		培训总人次 Total training participants	人次 Person-times	3,676	8,700	
		员工培训覆盖率 Training coverage rate	%	100	100	
		男性员工受训比例 Male employee training rate	%	100	100	
		女性员工受训比例 Female employee training rate	%	100	100	
		高级管理层员工受训比例 Senior management training rate	%	100	100	
		中级管理层受训比例 Middle management training rate	%	100	100	
		基层员工受训比例 Frontline employee training rate	%	100	100	
	劳动纠纷解决机制 Labor dispute resolution mechanism	劳动纠纷案件数量 Number of labor disputes	件 Cases	0	0	
	员工流动 Employee turnover	员工流失率 Employee turnover rate	%	0.85	0.29	
		按性别结构划分 By Gender				
		男性 Male	人	23	64	
女性 Female		人	8	36		
按年龄结构划分 By age						
	30岁(含)以下 30 and below	人	10	36		

一级指标 Primary Indicator	二级指标 Secondary Indicator	三级指标 Tertiary Indicator	单位 Unit	2025	2024	
员工 Employees	员工流动 Employee turnover	30岁-50岁(含) 30-50 (inclusive)	人	17	55	
		50岁以上 Above 50	人	4	9	
		按所在区域划分 By region				
		中国大陆员工 Chinese mainland employees	人	31	100	
		港澳台员工 Employees from Hong Kong, Macao, and Taiwan	人	0	0	
		海外员工 Overseas employees	人	0	0	
	数据安全 Data security	网络安全事件数量 Number of cybersecurity incidents	件 Cases	0	0	
	客户服务与权益 Customer service and rights	客户满意度调查参与人数 Number of respondents in customer satisfaction survey	人 Person	1,316	1,568	
		客户投诉数量 Number of Client Complaints	件 Cases	0	0	
		客户投诉解决数量 Number of resolved customer complaints	件 Cases	0	0	
	创新发展 Innovation and development	研发投入金额 R&D investment	万元 RMB 10,000	7,515.09	9,454.08	
		研发投入占营业收入比例 Proportion of R&D investment to operating revenue	%	0.57	0.69	
		研发人员数量 Number of R&D Personnel	人 Person	314	315	
研发人员占比 Proportion of R&D Personnel		%	8.63	8.21		
知识产权保护 Intellectual property protection	申请专利数量 Number of patent applications	个 Items	61	108		
	发明专利申请数量 Number of invention patent applications	个 Item	60	101		

一级指标 Primary Indicator	二级指标 Secondary Indicator	三级指标 Tertiary Indicator	单位 Unit	2025	2024
产品与服务管理 Product and service management	知识产权保护 Intellectual property protection	实用新型专利申请数量 Number of utility model patent applications	个 Item	1	7
		外观设计专利申请数量 Number of design patent applications	个 Item	0	0
		授权专利数量 Number of patents granted	个 Item	47	83
		发明专利授权数量 Number of invention patents granted	个 Item	36	15
		实用新型专利授权数量 Number of utility model patents granted	个 Item	11	68
		外观设计专利授权数量 Number of design patents granted	个 Item	0	0
		有效专利数量 Number of valid patents	个 Item	454	418
		发明专利数量 Number of invention patents	个 Item	101	71
		实用新型专利数量 Number of Utility Model Patents	个 Item	363	346
		外观专利数量 Number of design patents	个 Item	1	1
		百万营收有效专利数量 Number of valid patents per RMB 1 million revenue	个 / 百万元 Items/RMB million	0.03	0.03
		商标权数量 Number of trademarks	个 Item	8	8
		著作权数量 Number of copyright	个 Item	80	50
		百万营收软件著作权数量 Number of software copyrights per RMB 1 million revenue	个 / 百万元 Items/RMB million	0.006	0.004

一级指标 Primary Indicator	二级指标 Secondary Indicator	三级指标 Tertiary Indicator	单位 Unit	2025	2024
产品与服务管理 Product and service management	知识产权保护 Intellectual property protection	供应商数量 Number of supplier	家 Units	1,180	563
		中国大陆供应商数量 Number of Suppliers in Chinese Mainland	家 Units	1,180	563
		港澳台及海外供应商数量 Number of suppliers from Hong Kong, Macao, Taiwan, and overseas regions	家 Units	0	0
		因不合规被中止合作的供应商数量 Number of Suppliers Suspended for Non-complianc	家 Units	437	365
		廉洁协议签订情况 Integrity agreement signing status	家 Units	1,180	563
		供应链重大风险与影响事件数量 Number of major supply chain risks and impact events	件 Cases	0	0
		缴纳税费金额 Tax payment	亿元 RMB 100 Million	13.18	12.41
		志愿者数量 Number of volunteers	人 Person	1,021	810
		志愿者服务总时长 Total volunteer service hours	小时 Hours	1,500	685
		乡村振兴捐赠金额 Rural revitalization donatio	万元 RMB 10,000	1,028	235

治理范畴

Governance Dimension

一级指标 Primary Indicator	二级指标 Secondary Indicator	三级指标 Tertiary Indicator	单位 Unit	2025	2024
治理策略与组织架构 Governance strategy and organizational structure	组织构成及职能 Organizational composition and functions	董事会人数 Number of board members	人 Person	9	9
		董事会博士占比 Proportion of board members with doctoral degrees	%	0	0
		董事会研究生占比 Proportion of board members with master's degrees	%	55.56	56
		董事会本科及以下占比 Proportion of board members with bachelor's degrees and below	%	44.44	44
		董事会男性占比 Proportion of male board members	%	100	100
		董事会女性占比 Proportion of female board members	%	0	0
		独立董事占比 Proportion of independent directors	%	33.33	33
		非独立董事占比 Proportion of non-independent director	%	66.67	67
		召开董事会次数 Number of board meetings held	次 Times	11	15
		董事会成员的平均任期 Average tenure of board members	年 Years	1.95	1.46
		高管人数 Number of senior executives	人 Person	10	8
		高管博士占比 Proportion of senior executives with doctoral degrees	%	0	0
		高管研究生占比 Proportion of senior executives with master's degrees	%	20	12.5
		高管本科及以下占比 Proportion of senior executives with bachelor's degrees and below	%	80	87.5

一级指标 Primary Indicator	二级指标 Secondary Indicator	三级指标 Tertiary Indicator	单位 Unit	2025	2024
治理策略与组织架构 Governance strategy and organizational structure	组织构成及职能 Organizational composition and functions	高管男性占比 Proportion of male senior executives	%	100	100
		高管女性占比 Proportion of female senior executives	%	0	0
		高管成员的平均任期 Average tenure of senior executives	年 Years	1.95	1.54
投资者关系与股东权益管理 Investor relations and shareholder rights management	内部控制 Internal Control	重大或重要内控缺陷数量 Number of significant or material internal control deficiencies	个 Items	0	0
	商业行为 Business conduct	反腐倡廉培训时长 Anti-corruption and integrity training hours	小时 Hours	10	3
	召开股东会次数 Number of shareholders' meetings held	投关活动次数 Number of investor relations activities	次 Times	6	13
		投资者交流会次数 Number of investor exchange meetings	次 Times	5	10
		累计接待投资者数量 Total number of investors received	人次 Person-times	94	92
	股东会董事出席率 Attendance Rate of Directors at Shareholders' Meetings	召开股东会次数 Number of shareholders' meetings held	次 Times	7	7
		股东会董事出席率 Attendance rate of directors at shareholders' meetings	%	49.18	35.90
	投资者关系管理 Investor relations management	编制与披露定期报告 Preparation and disclosure of periodic reports	个 Items	4	2
		披露的定期报告数量 Number of periodic reports disclosed	个 Items	4	2
		发布的临时公告 Number of Interim Announcements Issued	个 Items	121	106

独立鉴证声明

Independent Assurance Statement



独立鉴证声明

致：国电投绿色能源股份有限公司各利益相关方

中国质量认证中心有限公司（以下简称“CQC”）受国电投绿色能源股份有限公司（以下简称“电投绿能”）委托，对《国电投绿色能源股份有限公司2025年环境、社会和公司治理（ESG）报告》（以下简称“报告”）进行了独立的第三方鉴证工作。

电投绿能负责收集、汇总、分析和披露报告中提到的信息和数据。CQC在与电投绿能的协议中规定的范围内实施报告鉴证。

本声明基于对电投绿能按照深圳证券交易所上市公司自律监管指南第3号——可持续发展报告编制（2026年修订）、国务院国资委《央企控股上市公司 ESG 专项报告参考指标体系》、《企业可持续发展披露准则第1号——气候（试行）》、全球报告倡议组织《可持续发展报告标准》（GRI）、中国社会科学院《中国企业社会责任报告编写指南（CASS ESG 5.0）》、联合国可持续发展目标（SDGs）等要求编制的报告所开展的鉴证活动作出，电投绿能对报告内信息、数据的真实性、完整性和准确性负责。

鉴证范围

《电投绿能2025年环境、社会和公司治理（ESG）报告》中披露的ESG关键绩效数据与信息。

鉴证依据

AA1000鉴证标准V3，鉴证类型和深度为“类型二，中度鉴证”。

鉴证方法

本次鉴证所用方法包括但不限于：

- a) 报告审阅；
- b) 访谈；
- c) 文件、记录、证书、票据等资料查阅/佐证；
- d) 可信信息来源验证；
- e) 对照披露依据验证；
- f) 重新计算/测算；
- g) 统计、计算/测算过程确认。

局限性声明

1. 本次鉴证在考虑定量和定性风险分析的基础上采用抽样方法开展，抽样范围仅限于报告中选用的数据和信息，未对电投绿能的所有原始数据进行全面溯源或独立重新测算。
2. 本次鉴证仅对电投绿能进行访谈和/或查阅相关文件，未涉及外部利益相关方。
3. 报告中经第三方审计/验证的数据和信息，本次鉴证过程中不做重复验证。
4. 报告中部分数据和信息不存在可以进行对比验证的数据/信息来源。
5. 本鉴证声明不包括信息披露之外的活动。
6. 本鉴证声明不包括关于电投绿能的立场、观点、目标、未来发展方向和承诺的陈述。

独立性和能力的声明

中国质量认证中心有限公司（CQC）为具备独立法律地位的第三方认证机构，具有开展可持续发展相关鉴证服务的专业资质与经验。CQC在本次鉴证过程中保持独立性、公正性，并具备开展ESG报告鉴证所需的技术能力和行业理解，符合AA1000鉴证标准V3对鉴证机构的要求。本次鉴证团队由具备丰富经验的AA1000认证可持续报告鉴证人员（PCSAP级别），CAA（中国认证认可协会）注册质量、环境、职业健康安全、能源、合规、反贿赂等管理体系审核员及APSCA（专业社会责任审核员协会）注册社会责任审核员及ISO14064温室气体核查员组成。

CQC确保在实施本报告的鉴证过程中与电投绿能及其利益相关方没有任何利益冲突。本报告所有信息由电投绿能提供。CQC及本次报告鉴证人员未参与到报告的编制过程。

鉴证结论

报告反映了电投绿能2025年在可持续发展方面的开展情况和所取得的绩效，整体符合AA1000鉴证标准V3及AA1000AP四项原则的要求：

包容性：电投绿能识别了公司的内部和外部利益相关方（包括政府与监管机构、股东与投资者、客户、供应商与行业、员工、社区、环境），在报告编制过程中考虑了利益相关方的期望和需求。

实质性：电投绿能基于双重重要性议题识别的分析流程，通过分析行业特征与商业模式，综合考虑关键利益相关方关切及信息披露质量要求，定期开展系统性评估，并在上一年度重要性议题基础上，结合对相关及潜在重点领域的最新分析与评估结果，动态更新ESG议题清单并确认其优先级排序。

回应性：电投绿能建立了治理架构、制度、管理体系和流程、利益相关方沟通机制，能够采取及时有效的行动回应电投绿能和利益相关方具有高度财务重要性和影响重要性的关键议题。

影响性：电投绿能通过定量、定性以及二者结合的方式，披露了在ESG方面对自身以及利益相关方产生的主要影响，展现了公司对自身及利益相关方的高度责任感。

特定绩效信息：基于本次鉴证的过程和结果，我们未发现报告中的关键数据和信息在可靠性和质量方面存在不足之处。

建议

针对本次报告鉴证的具体意见已向电投绿能管理层沟通并以文字形式提供，本部分不再表述。



CQC 授权人签名：刘江

中国质量认证中心有限公司
2026年4月17日
中国·北京



Independent Assurance Statement

To: Stakeholders of SPIC Green Energy Co., Ltd.

China Quality Certification Centre Co., Ltd. (CQC), commissioned by SPIC Green Energy Co., Ltd. (hereinafter referred to as SPIC GECL), conducted the independent assurance of 2025 Environmental, Social and Governance (ESG) Report of SPIC Green Energy Co., Ltd. (hereinafter referred to as the report)

SPIC GECL was responsible for collecting, summarizing, analyzing, and disclosing the information and data mentioned in the report. CQC implemented report verification within the scope specified in the agreement with SPIC GECL.

This statement was based on the assurance activities conducted on the report prepared by SPIC GECL in accordance with the Guidelines No. 3 of Shenzhen Stock Exchange for Self-Regulation of Listed Companies - Sustainability Report, SASAC Reference Indicator System for ESG Special Reports of Central Enterprise-controlled Listed Companies, Corporate Sustainability Disclosure Standard No.1 - Climate (Trial), Global Reporting Initiative (GRI) Standards, Chinese Academy of Social Sciences Guidelines for the Preparation of CSR Reports in China (CASS-ESG 5.0), and the United Nations Sustainable Development Goals (SDGs). SPIC GECL is responsible for the authenticity, completeness, and accuracy of the information and data contained in the report.

Scope of Assurance

The key data and information disclosed in the 2025 Environmental, Social and Governance (ESG) Report of SPIC Green Energy Co., Ltd.

Basis for Assurance

AA1000 V3, Type 2, Moderate Assurance

Assurance Methods

The methods used in this assurance include but are not limited to:

- a) Report review;
- b) Interviews;
- c) Verification of documents, records, certificates, invoices, and other materials;
- d) Reliable information source verification;
- e) Verification against disclosure criteria;
- f) Recalculation/estimation; and
- g) Confirmation of statistical, calculation/estimation processes.

Limitations

1. This assurance was conducted using sampling methods based on quantitative and qualitative risk analysis and the sampling scope was limited to the data and information selected in the report, not fully tracing or independently recalculating all raw data of SPIC GECL.
2. This assurance only covered interviews and/or document review with SPIC GECL, and did not involve external stakeholders.
3. The data and information audited/verified by a third party in the report were not subject to repeated verification during this assurance process.
4. Some of the data and information in the report cannot be compared and verified through independent sources. This assurance only evaluated their reasonableness.
5. Activities outside the scope of information disclosure were not included in this assurance.
6. The statement regarding the position, viewpoints, goals, future development directions, and commitments of SPIC GECL was not included in this assurance.

Statement on Independence and Verification Capability

China Quality Certification Centre Co., Ltd.(CQC) is a third-party certification body with independent legal status, possessing professional qualifications and experience in providing in this assurance process, and possesses the technical capabilities and industry-specific knowledge required to conduct ESG report assurance, in compliance with the requirements of AA1000 Assurance Standard v3 for an assurance provider. The assurance team is composed of experienced AA1000 Practicing Certified Sustainability Assurance Practitioners (PCSAP), CCAA (China Certification and Accreditation Association) registered quality, environment, energy, occupational health and safety, compliance, anti-bribery and other management system auditors and APSCA (Association of Professional Social Compliance Auditors) registered auditors.

CQC ensured that there were no conflicts of interest with SPIC GECL and its stakeholders during the assurance process of this report. All information in the ESG report was provided by SPIC GECL. CQC and the personnel conducting this assurance of the ESG report were not involved in the preparation process of the ESG report.

Assurance Conclusions

The report reflects the ESG performance of SPIC GECL in 2025, which meets the requirements of AA1000 v3 and AA1000AP:

Inclusivity: SPIC GECL has identified both internal and external stakeholders, including government/regulatory agencies, customers, employees, shareholders/executives/investors, partners, non-profit organizations, peer enterprises, and community members of the public. In the report preparation process, the expectations and needs of stakeholders have been considered.

Materiality: SPIC GECL has established a structured double materiality assessment process, under which it conducts systematic evaluations on a regular basis by analyzing industry characteristics and its business model, taking into account key stakeholder concerns and information disclosure quality requirements. Based on the material issues identified in the previous year, and incorporating the latest analysis and assessment of relevant and potential key areas, the Company dynamically updates its ESG issue list and determines the prioritization of such issues.

Responsiveness: SPIC GECL has established a governance structure, management system and processes, as well as a communication mechanism with stakeholders, capable of taking action to respond to the material issues of high importance and impact on SPIC GECL and its stakeholders.

Impact: Through quantitative or qualitative methods, or a combination of both, SPIC GECL has disclosed the main impacts on itself and its stakeholders in terms of ESG.

Specific performance information: Based on the process and results of this assurance, we have not found any deficiencies in the reliability and quality of key data and information in the report.

Recommendations

The specific opinions regarding the assurance of this report have been communicated to the management of SPIC GECL in written form and will not be further elaborated in this section.



President of CQC: 刘江

April 17, 2026
Beijing, China

Note: In case of any inconsistency or discrepancy, the Chinese version of this assurance statement shall prevail, while the English translation is used for reference only.

指标索引

Indicator Index

维度 Dimension	议题 Topic	对应条款 Corresponding Clause	对应的本报告章节 Corresponding Section in This Report
环境 Environment	应对气候变化 Climate change response	第二十一条至第二十八条 Articles 21 to 28	绿色固绿基 以减碳强担当 Consolidating the green foundation: demonstrating responsibility through carbon reduction ESG 数据表及附注 ESG data tables and notes
	污染物排放 Pollutant emissions	第三十条 Article 30	绿色固绿基 以治污净家园 Consolidating the green foundation: purifying our homeland through pollution control ESG 数据表及附注 ESG data tables and notes
	废弃物处理 Waste management	第三十一条 Article 31	绿色固绿基 以治污净家园 Consolidating the green foundation: purifying our homeland through pollution control ESG 数据表及附注 ESG data tables and notes
	生态系统和生物多样性保护 Ecosystem and biodiversity conservation	第三十二条 Article 32	绿色固绿基 以共生护万物 Consolidating the green foundation: protecting all life through symbiosis
	环境合规管理 Environmental compliance management	第三十三条 Article 33	绿色固绿基 以制度固根基 Consolidating the green foundation: anchoring the foundation through institutional frameworks ESG 数据表及附注 ESG data tables and notes
	能源利用 Energy utilization	第三十五条 Article 35	绿色固绿基 以集约优效能 Consolidating the green foundation: optimizing efficiency through intensive development ESG 数据表及附注 ESG data tables and notes
	水资源利用 Water resource utilization	第三十六条 Article 36	绿色固绿基 以集约优效能 Consolidating the green foundation: optimizing efficiency through intensive development ESG 数据表及附注 ESG data tables and notes
	循环经济 Circular Economy	第三十七条 Article 37	绿色固绿基 以集约优效能 Consolidating the green foundation: optimizing efficiency through intensive development

维度 Dimension	议题 Topic	对应条款 Corresponding Clause	对应的本报告章节 Corresponding Section in This Report
社会 Society	乡村振兴 Rural revitalization	第三十九条 Article 39	责任传温暖 以公益传大爱 Spreading warmth through responsibility: conveying great love through public welfare ESG 数据表及附注 ESG data tables and notes
	社会贡献 Social contribution	第四十条 Article 40	责任传温暖 以公益传大爱 Spreading warmth through responsibility: conveying great love through public welfare ESG 数据表及附注 ESG data tables and notes
	创新驱动 Innovation-driven development	第四十二条 Article 42	专题：科技创新赋新能 Special topic: empowering new energy through technological innovation ESG 数据表及附注 ESG data tables and notes
	科技伦理 Technology ethics	第四十三条 Article 43	专题：科技创新赋新能 守护科技伦理 Special topic: empowering new energy through technological innovation: safeguarding tech ethics
	供应链安全 Supply chain security	第四十五条 Article 45	发展耕动能 以协同强韧性 Cultivating growth momentum: strengthening resilience through coordination ESG 数据表及附注 ESG data tables and notes
	平等对待中小企业 Equal treatment for SMEs	第四十六条 Article 46	发展耕动能 以协同强韧性 Cultivating growth momentum: strengthening resilience through coordination
	产品和服务安全与质量 Product and service safety and quality	第四十七条 Article 47	发展耕动能 以匠心稳供应 Cultivating growth momentum: ensuring stable supply with craftsmanship

释义表

Glossary

维度 Dimension	议题 Topic	对应条款 Corresponding Clause	对应的本报告章节 Corresponding Section in This Report
社会 Society	数据安全与客户隐私保护 Data security and customer privacy protection	第四十八条 Article 48	发展耕动能 以贴心优服务 Cultivating growth momentum: optimizing services with thoughtfulness ESG 数据表及附注 ESG data tables and notes
	员工 Employees	第五十条 Article 50	发展耕动能 以暖心聚人才 Cultivating growth momentum: attracting talents with warmth ESG 数据表及附注 ESG data tables and notes
持续发展 相关治理 Sustainability-related governance	尽职调查 Due diligence	第五十二条 Article 52	合规稳善政 以合规筑防线 Ensuring sound governance through compliance: building defenses through compliance
	利益相关方沟通 Stakeholder engagement	第五十三条 Article 53	治理筑善治 议题重要性评估 Fostering good governance: assessing materiality
	反商业贿赂及反贪污 Anti-commercial bribery and anti-corruption	第五十五条 Article 55	合规稳善政 以廉洁守底线 Ensuring sound governance through compliance: upholding integrity as the bottom line
	反不正当竞争 Anti-unfair competition	第五十六条 Article 56	合规稳善政 以合规筑防线 Ensuring sound governance through compliance: building defenses through compliance ESG 数据表及附注 ESG data tables and notes

简称 Abbreviations		全称 Full Names
中国证监会 CSRC	指 refers to	中国证券监督管理委员会 China Securities Regulatory Commission
国家发改委 NDRC	指 refers to	中华人民共和国国家发展和改革委员会 National Development and Reform Commission of the People's Republic of China
国务院国资委 SASAC	指 refers to	国务院国有资产监督管理委员会 State-owned Assets Supervision and Administration Commission of the State Council
深交所 SZSE	指 refers to	深圳证券交易所 Shenzhen Stock Exchange
《指引》 Guidelines	指 refers to	《深圳证券交易所上市公司自律监管指引第 17 号——可持续发展报告（试行）》 Self-Regulatory Guidelines No.17 for Companies Listed on Shenzhen Stock Exchange — Sustainability Report (For Trial Implementation)
国家电投 SPIC	指 refers to	国家电力投资集团有限公司 State Power Investment Corporation Limited
电投绿能 / 本公司 / 公司 SPIC GECL/The Company/we/	指 refers to	国电投绿色能源股份有限公司 SPIC Green Energy Co., Ltd.
吉电新能源公司 Jidian New Energy Company	指 refers to	吉林吉电新能源有限公司 Jilin Jidian New Energy Co., Ltd.
江西新能源公司 Jiangxi New Energy Company	指 refers to	江西中电投新能源发电有限公司 Jiangxi CPI New Energy Power Co., Ltd.
安徽新能源公司 Anhui New Energy Company	指 refers to	安徽吉电新能源有限公司 Anhui Jidian New Energy Co., Ltd.
陕西能源公司 Shaanxi Energy Company	指 refers to	陕西吉电能源有限公司 Shaanxi Jidian Energy Co., Ltd.
长春热电公司 Changchun Thermal Power Company	指 refers to	国电投绿色能源股份有限公司长春热电分公司 SPIC Green Energy Co., Ltd. Changchun Thermal Power Branch
白城热电公司 Baicheng Thermal Power Company	指 refers to	国电投绿色能源股份有限公司白城热电分公司 SPIC Green Energy Co., Ltd. Baicheng Thermal Power Branch
松花江热电公司 Songhua River Thermal Power	指 refers to	吉林松花江热电有限公司 Jilin Songhua River Thermal Power Co., Ltd.
四平热电公司 Siping Thermal Power Company	指 refers to	国电投绿色能源股份有限公司四平热电分公司 SPIC Green Energy Co., Ltd. Siping Thermal Power Company
创新投资公司 Innovation Investment Company	指 refers to	国家电投集团创新投资有限公司 SPIC Innovation Investment Co., Ltd.