



30/F, North Tower, Energy Building, No. 2026 Jintian Road, Futian District, Shenzhen

+86-755-83680288

+86-755-83680298

<http://www.sec.com.cn>



Shenzhen Energy Group co., Ltd.



2024 Sustainability Report

2024

Shenzhen Energy Group Co., Ltd.

(Stock Code: 000027)

Sustainability Report

Environmental Considerations for Report Publication
Paper: Printed with eco-friendly paper
Inks: Eco-friendly inks used to minimize air pollution



Scan the QR code
to follow our
official account
Learn more about
Shenzhen Energy



Create a Better New Life with Green Energy

CONTENTS

About this Report	01
Statement of the Board of Directors	02
Chairman's Statement	03
About Shenzhen Energy	05
Sustainable Development (ESG) Management	09
2024 Key Figures of Shenzhen Energy	19

Feature Story:

Building a Harmonious Ecosystem – The Green Transformation from "Waste-to-Energy Plant" to "Energy Eco-Park"

21

Prospect	79
Appendices	80

1

Governance with Integrity and Rule of Law

Strengthening systems for effective governance and regulatory compliance

Guiding corporate governance through party building	27
Optimizing corporate governance	28
Enhancing compliance operation	31
Strengthening integrity development	33

2

Stable Supply

Building a smart, secure, and reliable energy system

Upholding safety as the bottom line	37
Innovative smart energy	41
Ensuring stable energy supply	45

3

Green Transformation

Advancing sustainable, low-carbon development

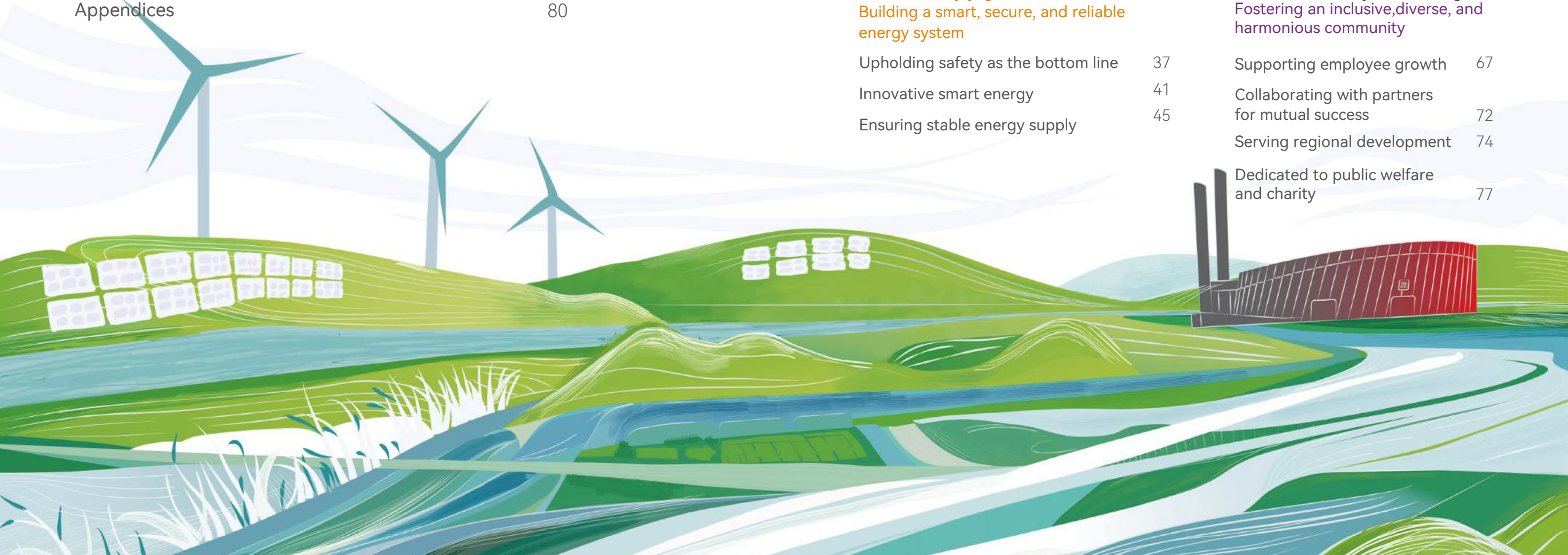
Advancing green management	51
Optimizing resource utilization	55
Protecting the ecological environment	57
Responding to climate change	58

4

Sense of Responsibility

Fostering an inclusive, diverse, and harmonious community

Supporting employee growth	67
Collaborating with partners for mutual success	72
Serving regional development	74
Dedicated to public welfare and charity	77



About this Report

This report marks the third annual Sustainability (ESG) report officially released by Shenzhen Energy Group Co., Ltd. (referred to as "Shenzhen Energy," "the Company," or "we"). It highlights the efforts and performance of Shenzhen Energy and its subsidiaries in addressing environmental, social, and governance (ESG) issues across their operations. The report aims to foster transparent communication with stakeholders and provide a thorough response to their expectations and concerns.

Reporting Period

This annual report covers the period from January 1, 2024, to December 31, 2024, with some content extending beyond this timeframe.

Reporting Entity

Unless otherwise specified, the scope of this report aligns with the consolidated financial statements in the Company's annual financial report.

Data Sources

The data and information presented in this report are drawn from the Company's official documents, statistical reports, financial reports, and verified ESG (Environmental, Social, and Governance) information collected by the Company.

Reporting Standards

Global Reporting Initiative Sustainability Reporting Standards (GRI Standards)
 United Nations Sustainable Development Goals (SDGs) Corporate Action Guide
 Shenzhen Stock Exchange Self-Regulatory Guidelines for Listed Companies No. 17 – Sustainability Report (Trial)
 Shenzhen Stock Exchange Self-Regulatory Guidelines for Listed Companies No. 3 – Sustainability Report Preparation
 Reference Indicator System for ESG Special Reports of Central State-Owned Enterprise-Controlled Listed Companies

Report Access

This report is published in Simplified Chinese and is available to stakeholders and the public in PDF format. The PDF version can be downloaded from the Company's official website.
 For a printed copy, please contact us via:
 Address: 30/F, North Tower, Energy Building, No. 2026 Jintian Road, Futian District, Shenzhen
 Tel: 86-755-83684138
 Fax: 86-755-83684128
 Postal code: 518031

Statement of the Board of Directors

The Board of Directors is the highest authority and decision-making body on ESG matters, fully responsible for setting the Company's ESG strategy and reporting. They oversee all ESG-related issues that may affect the Company's business, operations, shareholders, and other stakeholders. The Board of Directors oversees the Company's commitments and performance on key ESG issues, ensuring that ESG principles are integrated into the corporate strategy.

The Company recognizes the potential impact of ESG risks on its operations. In light of the broader socio-economic environment and its corporate development strategy, it regularly assesses key ESG topics and submits the findings to the Board for review. The Board of Directors evaluates and identifies the Company's ESG risks and opportunities, prioritizing the management and improvement of key issues as core ESG initiatives. These initiatives are incorporated into the Company's overall strategy, with ongoing oversight of their management and performance.

The Company has implemented an ESG target management system that tracks key performance indicators, including carbon emissions, pollutant emissions, and energy security, with regular reviews to assess progress towards these goals. ESG metrics, such as workplace safety, energy conservation, environmental protection, and compliance, are incorporated into the annual performance evaluation system for both management and subsidiaries, driving the achievement of the Company's ESG objectives.

This report provides a comprehensive overview of Shenzhen Energy's ESG progress and achievements in 2024 and was reviewed and approved by the Board of Directors on April 16, 2025.



Chairman's Statement



“

2024 marked a pivotal year for fully implementing the guiding principles of the 20th CPC National Congress and advancing the goals of the 14th Five-Year Plan. Throughout the year, the Company remained deeply aligned with Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, and firmly committed to our "Four-Core, Dual-Drive" development strategy. By emphasizing differentiation, navigating challenges, and seizing megatrends, we delivered outstanding performance across the board. As part of our journey toward achieving carbon peaking and carbon neutrality, we continued to apply our expertise to deliver green solutions. Our goal is to become a globally influential provider of integrated clean energy and environmental protection services. Guided by the vision of living in harmony with nature, we are committed to building a world where lucid waters and lush mountains endure, contributing to a vibrant chapter in the story of green development.

”

This year, we advanced reform and innovation with determination and focus.

We continued our efforts to build a world-class publicly listed company by enhancing corporate governance, strengthening standardized operations, and improving board effectiveness. We prioritized transparent information disclosure, cultivated strong investor relations, and made steady progress in market value management. In the area of ESG (Environmental, Social, and Governance), we voluntarily released our ESG report for the second consecutive year, earning a place among the "Top 100 Pioneer ESG Listed Companies in China". We also ranked second in the "Greater Bay Area State-Owned Enterprises ESG Development Index". Our State-Owned Enterprise (SOE) reform initiatives have shown strong results. In the annual performance evaluation by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC), the Company received an "Excellent" rating in the "Double Hundred Enterprises" assessment. Our environmental protection subsidiary was also recognized as an "Excellent" Sci-Tech Reform

Demonstration Enterprise. Additionally, we made progress in promoting industrial-regional synergy, including the successful piloting of a cross-sector collaborative management model in Xinjiang.

We made significant progress in enhancing our compliance management framework, laying the groundwork for a fully integrated system across the parent company and its subsidiaries. At the same time, we steadily advanced reforms in our overseas investment strategies, providing robust support for our international growth ambitions. Throughout the year, we remained firmly committed to upholding full and rigorous Party self-governance, strengthening ethical standards, and fostering a culture of integrity that underpins high-quality development.

This year, we stayed true to our founding vision-working together to build a harmonious and sustainable ecosystem.

In response to the global shift toward green, low-carbon energy, we accelerated our carbon peaking and carbon neutrality strategy, driving a fundamental transformation of our industrial structure. We significantly scaled up the development of clean energy sources, including wind and solar power, bringing our installed clean energy capacity to 74.63% by the end of 2024, marking a year-on-year increase of 7.63 percentage points. Our efforts to enhance energy efficiency and reduce emissions through technological innovation have yielded tangible results. We successfully minimized the discharge of waste, earning recognition as an "Excellent" key enterprise in Shenzhen's ecological civilization assessment for fifth consecutive years. By increasing investment in energy-saving retrofit technologies and improving operational management, we tapped into new potential for energy conservation and improving overall energy efficiency. In the realm of environmental protection, we focused on urban solid waste treatment, implementing initiatives such as waste-to-energy incineration, recycling programs, and landfill remediation. These efforts contribute to the development of a resource-efficient and environmentally friendly society. Keeping pace with the ongoing energy revolution, we also accelerated the development of a new, high-quality integrated energy system. We expanded into emerging areas such as advanced energy storage, hydrogen energy, smart power plants, and intelligent energy solutions.

This year, we stayed true to our mission and remained steadfast in our responsibilities.

With unwavering dedication, we ensured reliable energy supply during summer and winter peaks, extreme weather conditions, and major holidays, meeting demand with the highest standards of service and commitment. Our Baoding subsidiary was honored as an "Outstanding Power Generation Enterprise for Electricity Supply in Hebei Province."

We upheld our legal and ethical responsibilities in workplace safety, focusing on eliminating root causes while maintaining stable and strong safety performance throughout the year. Demonstrating our deep commitment to social responsibility, we actively supported rural revitalization, successfully completing 33 priority tasks assigned by the Shenzhen-Shantou Pair Assistance Command. We also strengthened our social impact by establishing a comprehensive volunteer service system and launching the "Caring from Shenzhen Energy" volunteer brand. Through community engagement, science education in schools, and energy-themed public programs, we created lasting value for the communities we serve. We prioritize employee well-being and career growth, fostering a fair, inclusive and supportive work environment. By embracing open and collaborative development, we've built sustainable, win-win partnerships and contributed to a resilient, diversified ecosystem of collaboration.

Strategic planning today ensures long-term success tomorrow. The year 2025 marks both the conclusion of the 14th Five-Year Plan and the launch of strategic preparations for the 15th. At this pivotal juncture, the Company will align our efforts with the "1246" strategic framework, continue developing a modernized, high-efficiency "Four-Core, Dual-Drive" energy industrial system, and roll out our "Capability Enhancement Year" initiatives. Driven by reform and innovation, and a pioneering spirit, we are committed to accelerating the journey toward a new era of high-quality, sustainable development for Shenzhen Energy!

Secretary of the party committee &
Chairman of Board of Directors

About Shenzhen Energy

Company Profile

Shenzhen Energy Group Co., Ltd. (Stock Code: 000027) was established in 1991 and went public on the Shenzhen Stock Exchange in September 1993. It was the first major joint-stock enterprise in China's power industry listed in Shenzhen and the first public utility company to do so. In December 2007, the Company completed a full listing, becoming the first domestic power enterprise to achieve complete market listing. As of the end of 2024, Shenzhen Energy reported total assets of CNY 161.371 billion, with net assets attributable to shareholders totaling CNY 48.416 billion. The Company's total share capital stood at 4,757,389,916 shares, with the following ownership structure: Shenzhen SASAC held 43.91% directly, Huaneng Power International, Inc. held 25.02%, and the remaining 31.07% was held by other shareholders.

Shenzhen Energy is primarily engaged in the development, production, and trading of both conventional and renewable energy, along with urban solid waste treatment, wastewater treatment, and city gas supply. Since its founding over 30 years ago, Shenzhen Energy has kept pace with emerging trends, made strategic choices in its development path, and achieved steady growth while remaining an industry leader. Headquartered in Shenzhen, the Company has consistently expanded its industrial footprint with a clear strategic focus on "deepening its presence in the Greater Bay Area, strengthening its regional influence, and exploring international opportunities". This approach has enabled Shenzhen Energy to evolve from a local player into a national and multinational enterprise. As a pioneer in waste-to-energy initiatives, Shenzhen Energy has embraced cutting-edge power management practices and seized key opportunities amid the global energy transition. The Company has developed a diverse range of projects spanning wind, solar, hydro, and thermal power, while also expanding into environmental protection and gas-related services. What began as a traditional power generation business has transformed into a comprehensive service provider with a diversified energy portfolio. Today, Shenzhen Energy operates across low-carbon power, environmental services, integrated gas supply, and digital intelligence solutions. Its reach now extends across 29 provinces, autonomous regions, and municipalities in China, as well as overseas markets including Ghana, Vietnam, and Papua New Guinea.

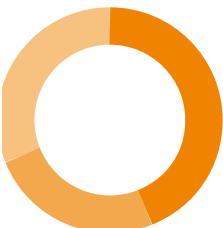
Looking ahead, Shenzhen Energy will stay committed to the national goals of carbon peaking and carbon neutrality, maintaining its focus on high-quality, sustainable development. Guided by the its "1246" strategy, the Company will continue building a modern and advanced energy system driven by its "Four-Core Dual-Drive" approach. With a strong emphasis on clean energy operations, leadership in environmental protection, and innovation in energy technologies, Shenzhen Energy is set to deepen its international presence. The Company aims to become a globally recognized integrated service provider in clean energy and ecological environmental protection solutions.

As of the end of 2024

Total Assets
CNY **161.371** billion

Net assets attributable to parent company
CNY **48.416** billion

Capital stock
4,757,389,916 shares

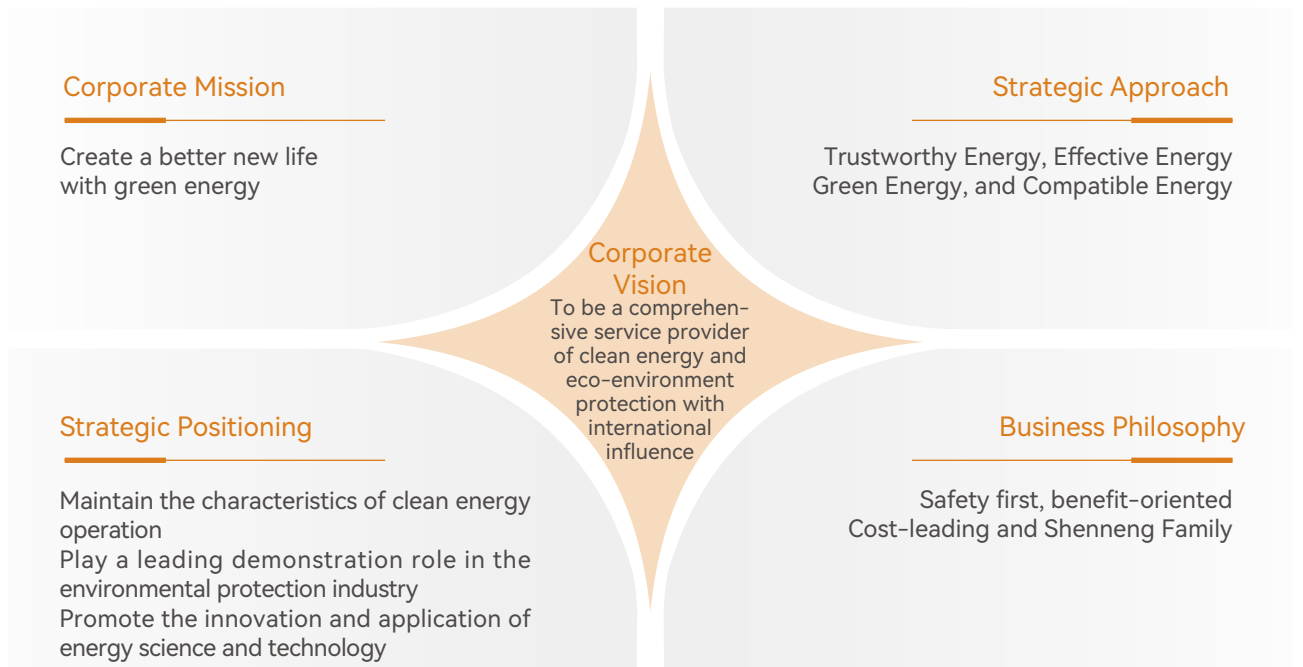


Directly held by the State-owned Assets Supervision and Administration Commission of Shenzhen Municipal People's Government
43.91 %

Held by Huaneng Power International, Inc.
25.02 %

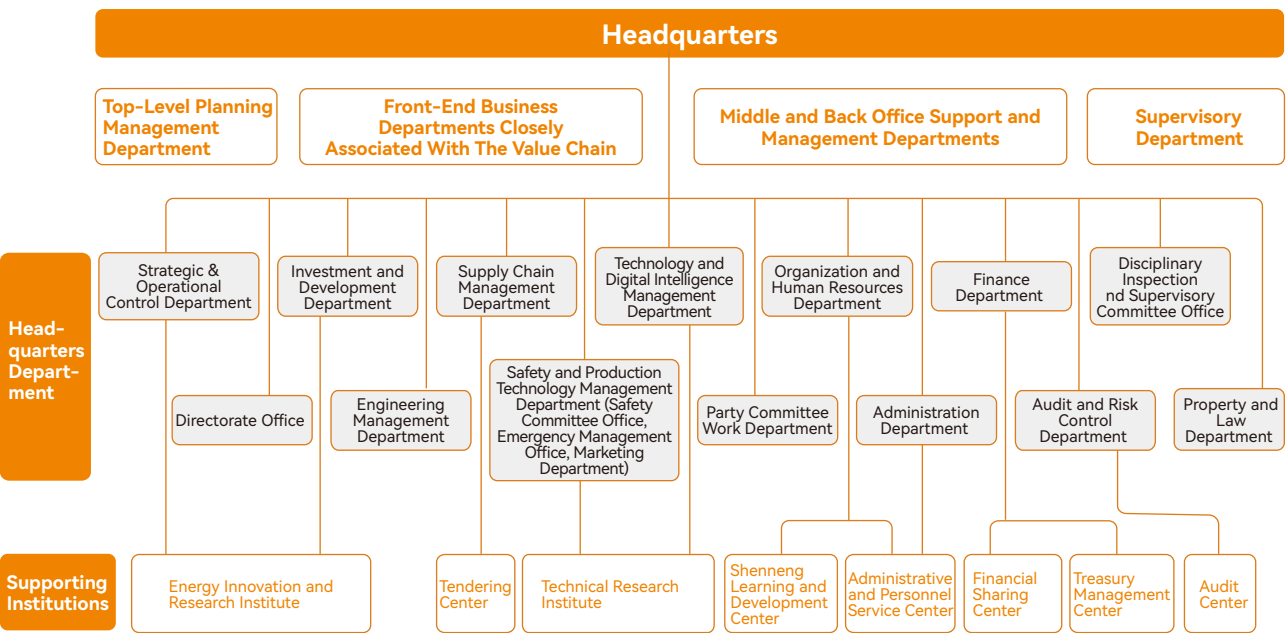
Other Shareholders
31.07 %

Corporate Culture



Organizational Structure

14 Departments and 8 Supporting Institutions



Industrial Layout

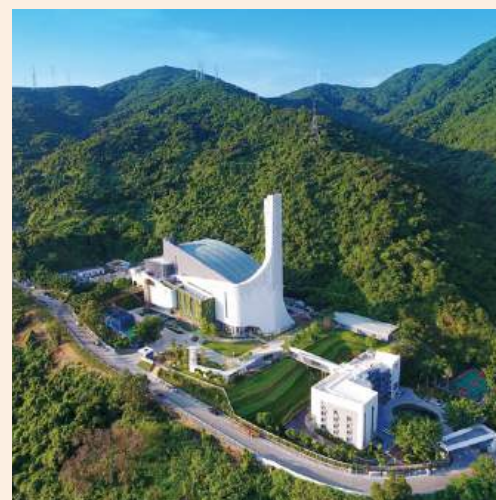
Low-carbon Power

By the end of 2024, the Company's total controllable installed power generation capacity reached 23,729 megawatts. This includes: 6,019 megawatts from coal-fired power, accounting for 25.37%; 9,051.4 megawatts from natural gas, accounting for 38.14%; 1,013 megawatts from hydropower, accounting for 4.27%; 3,829.5 megawatts from wind power, accounting for 16.14%; 2,653.1 megawatts from photovoltaic power, accounting for 11.18%; and 1,163 megawatts from waste-to-energy, accounting for 4.90%. As of the end of 2024, clean energy accounted for 74.63% of the Company's total installed capacity, with renewable energy comprising 36.49%. All coal-fired units achieved ultra-low emissions, with performance metrics significantly exceeding national environmental standards.



Environmental Protection

By the end of 2024, the Company had successfully completed and put 42 solid waste treatment facilities into operation, expanding into areas such as sanitation, food waste processing, industrial wastewater treatment, sludge management, and construction waste recycling. The Company's total integrated daily solid waste treatment capacity reached 50,515 tons, marking an increase of 6,240 tons per day compared to the end of 2023, representing year-on-year growth of 14.09%. In 2024, the total volume of waste treated reached 13.9823 million tons, a 7.79% increase from the previous year. The Shenzhen project alone achieved a daily processing capacity of 16,300 tons, making Shenzhen the first megacity in China to achieve zero landfill disposal of domestic waste. The Company has established a full-service industrial chain for solid waste treatment, encompassing R&D, design, equipment manufacturing, investment, construction, and operations. With single-facility scales among the largest globally and emission standards surpassing those of the European Union, the project has set a new benchmark for the industry—widely recognized as the "Shenzhen Standard."



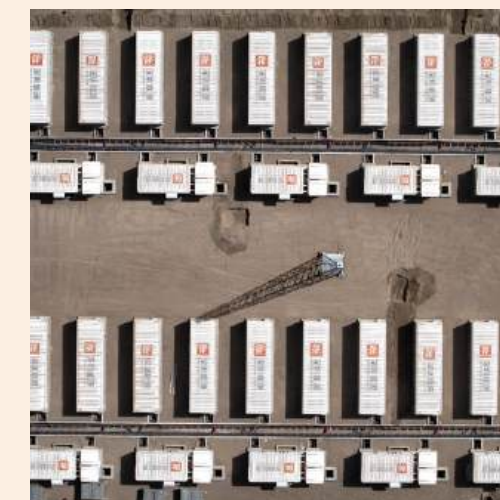
Integrated Gas

In 2024, the Company made significant progress in key projects, successfully completing the integration and acquisition of Chaozhou Towngas and securing equity in Korla Gas Company through a public auction. By the end of the year, the Company was providing city gas services in several regions, including Huizhou and Chaozhou in Guangdong; Bayingol and Kizilsu in Xinjiang; Zhoushan in Zhejiang; Zhaoxian in Hebei; and Xiangxiang in Hunan. The Company holds equity stakes in 8 city gas companies, 1 gas value-added services company, 1 natural gas trading company, and 2 integrated energy companies. It also has investments in 3 LNG receiving terminals, 1 LNG sales company, and 1 high-pressure branch pipeline network company. The Company serves nearly 1.13 million residential users and around 23,000 commercial and industrial customers. Its gas pipeline network spans 7,718 kilometers. In 2024, the Company's gas segment recorded a total sales volume of 3.345 billion standard cubic meters, representing a year-on-year increase of 51.91%.



Digital Intelligence Service

In 2024, the Company completed the planning and design of its digital and intelligent systems. Through in-depth research and exploration, the Company advanced the integration of digital technologies with business operations, building a strong platform to support its strategic transition and unlock new growth opportunities. Significant progress was made in enhancing the informatization and automation of business processes, highlighted by the official launch of the Company's treasury management system. The development of smart thermal power plants also moved forward, with system modules going live at the Mawan, Eastern, and Guangming power plants. In terms of innovation, the Company achieved a record number of invention patents in 2024, securing a total of 309 intellectual property rights. Over the year, 244 IT projects were executed, with a total investment of CNY 129 million. The successful hosting of the 2024 Energy Green Development Conference and the International Digital Energy Exhibition further showcased the Company's leadership in the sector, offering valuable insights and practical solutions for industry advancement.



Sustainable Development (ESG) Management

ESG Philosophy and Model

ESG Principles ▼

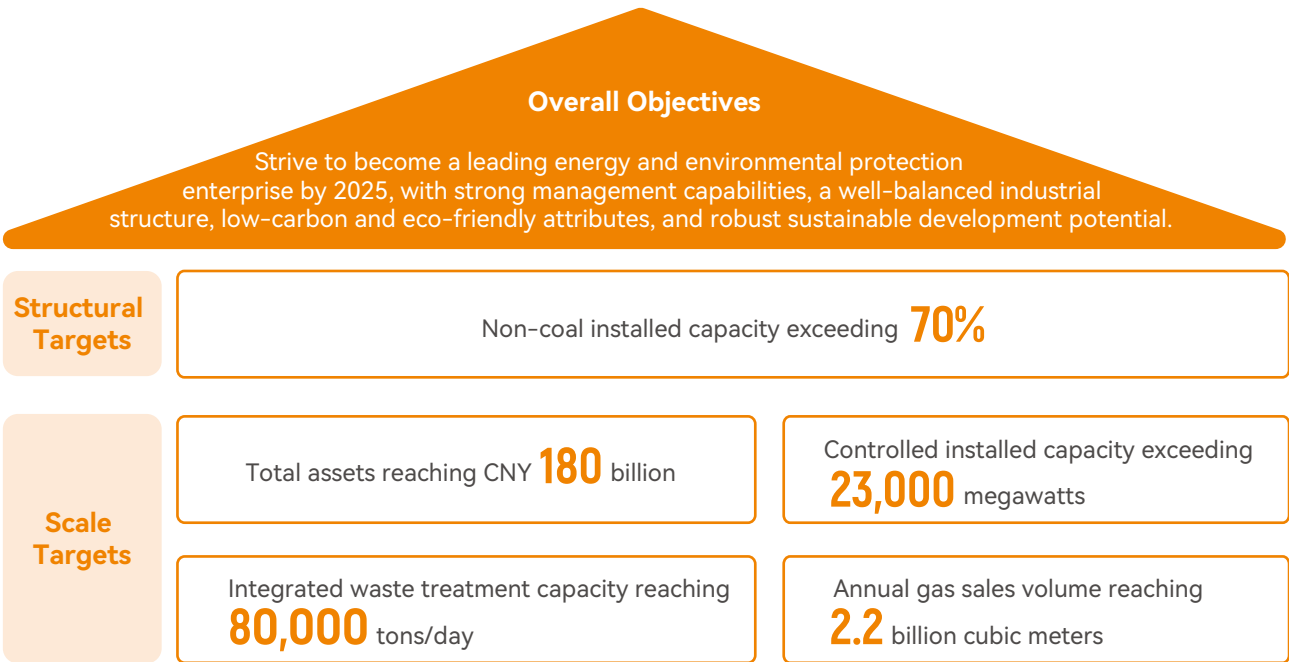
Shenzhen Energy is committed to its corporate mission of "Create a Better New Life with Green Energy" and integrates ESG (Environmental, Social, and Governance) initiatives into both its development strategy and daily operations. By focusing on two core businesses—clean energy and ecological environmental protection—the Company continues to lead the way in clean energy development, set benchmarks for environmental stewardship, and support progress toward dual-carbon goals. At the same time, Shenzhen Energy remains actively engaged in tackling urban environmental challenges while continuously advancing its ESG initiatives and strengthening its role as a responsible corporate citizen.

ESG Strategy ▼

In December 2023, the Company's Board of Directors reviewed and approved the "Proposal on the Mid-term Evaluation and Adjustment Report of the 14th Five-Year Plan Strategic Plan" which lays out a clear roadmap, target-setting approach, and strategic framework for advancing ESG initiatives. During the 14th Five-Year Plan period, Shenzhen Energy has adapted to a shifting economic landscape, with a strong focus on the national goals of carbon peaking and carbon neutrality. Driven by the ambition to become an internationally influential integrated service provider in clean energy and environmental protection, the Company has established a development framework built around four core businesses pillars: low-carbon power, environmental protection, integrated gas, and digital intelligence services.

ESG Goals and Responses to SDGs ▼

Shenzhen Energy has integrated ESG governance into its 14th Five-Year Plan, taking a thoughtful and strategic approach to ESG development. The Company has established clear ESG goals that align closely with its overall strategic objectives, ensuring that key ESG priorities remain central to its business direction. These principles are fully integrated into day-to-day operations, guiding decision-making at every level.



Note: The above data is sourced from the outline of the Company's 14th Five-Year Plan Mid-Term Evaluation and Adjustment Report

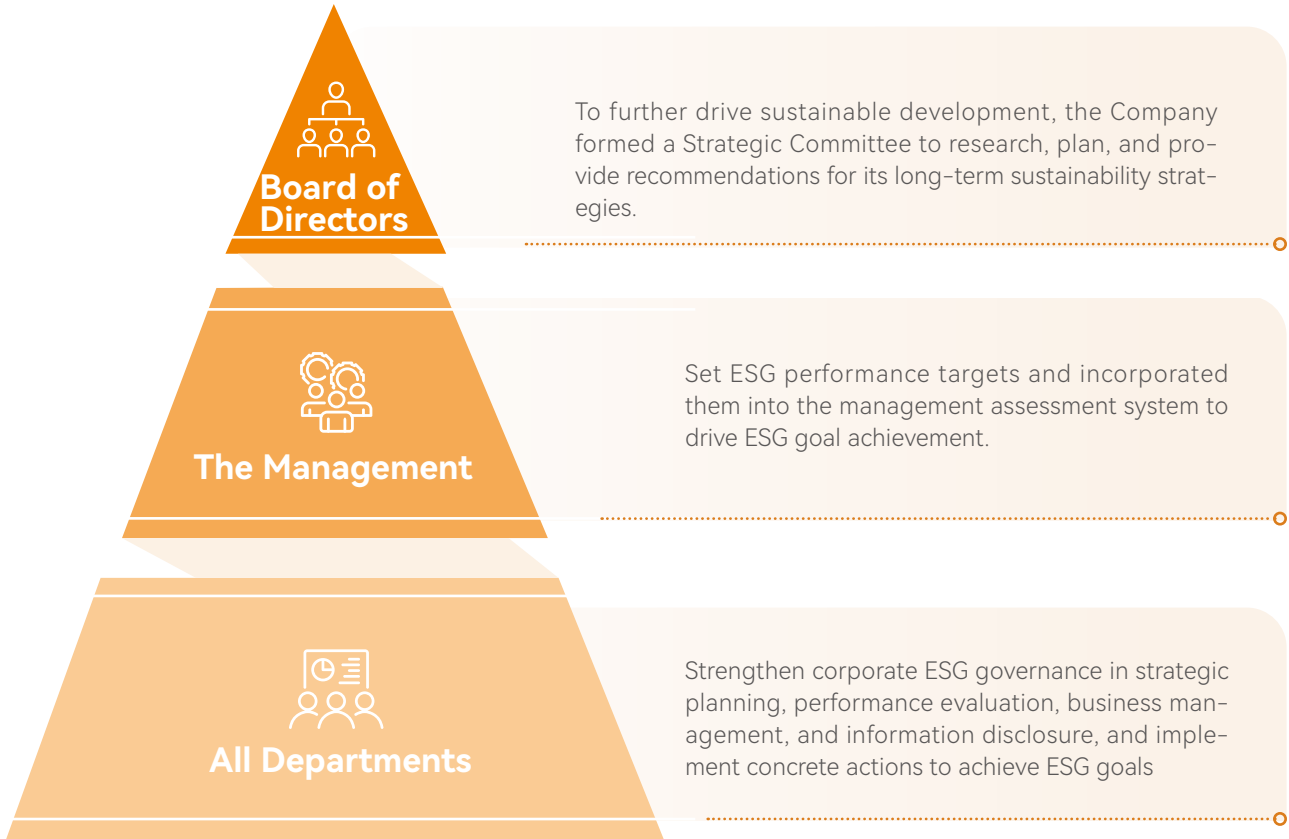
Positioning	Strategic Direction	ESG Work System	Progress in 2024
<div>Governance with Integrity and Rule of Law</div> <div>Strengthening systems for effective governance and regulatory compliance</div> <div></div>	Optimizing corporate governance	The diversity of the Company's board, supervisory board, and senior management team continued to improve steadily.	The proportion of female directors rose to 11.11%.
		Maintains regular communication with investors through various channels.	In 2024, the Company issued 149 public announcements and responded to 174 investor inquiries in writing. It also actively organized investor visits and research meetings. Additionally, the Company hosted business performance briefings and participated in strategic conferences to promote open dialogue and engagement with stakeholders.
		Enhance the Company's ESG governance framework by standardizing workflows and establishing comprehensive ESG management systems.	The Company has established a three-tier ESG governance structure.
		Improve the disclosure framework for financially material topics and explore the use of quantitative analysis models.	The Company has completed qualitative disclosure on the financial and impact dimensions of dual materiality topics.
		Enhance disclosure and communication in corporate sustainability	Disclosure of sustainability report and quantitative performance statistics
		Improve market ESG ratings steadily	Wind ESG Rating: A CCX Green Finance ESG Rating: A CSI ESG Rating: BBB
	Strengthening integrity development	Maintain anti-corruption training coverage for employees	The proportion of employees receiving anti-corruption training is 100%
		Convey the Company's anti-corruption policies and procedures to all business partners	The signing rate of the "Integrity Agreement" for Company suppliers reached 100%
<div>Stable Supply</div> <div>Building a smart, secure and reliable energy system</div> <div></div>	Upholding Safety as the Bottom Line	Enhance safety production management and prevent major safety incidents	In 2024, the Company experienced no major or above production safety incidents
	Innovative Smart Energy	Strengthen safety management training by extending training duration and expanding participant coverage	In 2024, the Company and its subsidiaries carried out safety education and training programs, covering over 17,547 participants
		We have continuously increased investment in R&D, while optimizing our R&D team structure and improving system development	In 2024, the Company's R&D investment amounted to CNY 321 million, representing a YOY increase of 5.12%
	Ensuring stable energy supply	Ensuring stable power supply	In 2024, the Company released the "2024 Power Supply Guarantee Work Plan" and successfully completed power supply assurance tasks.

Positioning	Strategic Direction	ESG Work System	Progress in 2024	
<div>Green Transformation</div> <div>Advancing sustainable, low-carbon development</div> <div><div><div>3</div><div>GOOD HEALTH AND WELL-BEING</div></div><div><div>6</div><div>CLEAN WATER AND SANITATION</div></div><div><div>7</div><div>AFFORDABLE AND CLEAN ENERGY</div></div><div><div>11</div><div>SUSTAINABLE CONSUMPTION AND RESPONSIBILITY</div></div><div><div>13</div><div>CLIMATE ACTION</div></div><div><div>14</div><div>LIFE BELOW WATER</div></div><div><div>15</div><div>LIFE ON LAND</div></div></div>	Advancing green management	No environmental liability incidents occurred	In 2024, the Company encountered no environmental liability incidents and was not subject to any significant administrative penalties or criminal liabilities.	
	Optimizing resource management	Continuously optimize the energy management system and increase the use of clean energy	In 2024, clean energy consumption amounted to 5,944.62 MWh	
		Continuously optimize the water resource management system	In 2024, the Company set comprehensive water consumption rate targets for all production units in its annual integrated operational plan.	
		Gradually increase the recycling scale of non-hazardous waste	In 2024, the cumulative waste treatment volume reached 13.9823 million tons, with improved non-hazardous waste recycling rates.	
	Protecting the ecological environment	Enhance waste treatment capacity	In 2024, the Company's total solid waste treatment capacity reached 50,515 tons per day.	
	Response to climate change	Explore setting greenhouse gas emission reduction targets aligned with the Paris Agreement and the Company's development stage.	Carbon target setting has been progressively advanced.	
		Develop low-carbon clean energy and increase the proportion of wind, solar, and other clean energy installations.	The proportion of clean energy installed capacity reached 74.63%.	
	<div>Sense of Responsibility</div> <div>Fostering an inclusive, diverse and harmonious community</div> <div><div><div>1</div><div>NO POVERTY</div></div><div><div>2</div><div>ZERO HUNGER</div></div><div><div>3</div><div>GOOD HEALTH AND WELL-BEING</div></div><div><div>5</div><div>GENDER EQUALITY</div></div><div><div>8</div><div>DECENT WORK AND ECONOMIC GROWTH</div></div><div><div>9</div><div>INDUSTRY, INNOVATION AND INFRASTRUCTURE</div></div><div><div>10</div><div>REDUCED INEQUALITIES</div></div><div><div>11</div><div>SUSTAINABLE CONSUMPTION AND RESPONSIBILITY</div></div><div><div>17</div><div>PARTNERSHIPS FOR THE GOALS</div></div></div>	Supporting employee growth	Safeguard employee rights in accordance with the law	In 2024, the Company achieved a 100% labor contract signing rate, with no major human rights violations
			Maintain 100% coverage of health checkups for in-service employees	In 2024, the physical examination coverage rate for employees reached 100%
			Improve the employee training system	In 2024, employee training coverage reached 100%, with an average training duration of 97.02 hours per person
Serving regional development		Strengthen energy infrastructure in key national strategic regions	In 2024, the Company supported major initiatives such as the Belt and Road, rural revitalization, and Beijing-Tianjin-Hebei coordinated development	
Collaborating with partners for mutual success		Conduct ESG assessments and audits of suppliers	Integrate ESG factors into the entire supplier lifecycle, including onboarding, evaluation, and management	
Dedicated to public welfare and charity		Increase investment in public welfare and rural revitalization	In 2024, the Company donated a total of CNY 1.9363 million, and employees contributed 12,547.2 hours of volunteer service	

ESG Management System

ESG Governance Structure ▼

Shenzhen Energy continuously strengthens its ESG framework by refining its governance system to ensure effective implementation. The Company has established a modern corporate governance structure consisting of the General Meeting of Shareholders, the Board of Directors, the Supervisory Board, and executive management. This structure supports a multi-tiered ESG management system, with the board providing oversight, management driving execution, and departments working together to ensure coordinated implementation across the organization.



ESG Indicator System ▼

The Company has established a comprehensive ESG indicator framework to guide its sustainability reporting and improve the quality of its disclosures. This framework aligns with both domestic and international disclosure standards, regulatory policies, investor concerns, and industry best practices. It covers key functional areas such as corporate governance, technological innovation, safety management, and environmental protection.

ESG Capacity Building ▾

Reporting System	Periodic Reports: Annual / Semi-annual / Quarterly Sustainability Report
Press Platform	Shenzhen Energy Magazine
Media Platform	Shenzhen Energy Official WeChat Account: shenzhenenergy Shenzhen Energy official website: //www.sec.com.cn
Public Engagement	The project park conducted a "Public Open Day" event. Corporate performance briefing

ESG Honors and Ratings ▾

In 2024, Shenzhen Energy made significant progress in its ESG efforts, demonstrating strong performance and best practices across environmental, social, and governance areas.

ESG Rating

Rated A in Wind ESG Ratings

Rated A in CCXGF ESG Ratings

Rated BBB in CSI ESG Ratings

ESG Rankings

Listed among "China ESG Listed Companies Pioneer 100"

Included in State-Owned Listed Companies · ESG Pioneer 100 Index (2024)

Selected for "China ESG Listed Companies Greater Bay Area Pioneer 50"

Selected for the "Greater Bay Area State-Owned Enterprises ESG Development Index"

Awarded the "2024 ESG Whale Bull Award - Dual Carbon Pioneer Award"

证书

鉴于贵公司在环境、社会和治理（ESG）方面的卓越实践，在中央广播电视总台“中国ESG（企业社会责任）《2024年度ESG行动报告》”中，荣获“中国ESG上市公司先锋100”榜单（2024）企业。特发此证，期待与贵公司携手，共促ESG发展，共创绿色未来。

中央广播电视总台财经节目中心
2024年12月

CMG

ESG鲸牛奖

Stakeholder Communication

Shenzhen Energy is dedicated to delivering greater value for its stakeholders, including shareholders, customers, employees, and partners. By establishing effective communication channels, we ensure stakeholders are well-informed, actively engaged, and have opportunities to participate. This approach helps strengthen their understanding of and trust in the Company. Through ongoing, proactive engagement, we incorporate stakeholder expectations and concerns into our strategic planning and day-to-day operations, fostering strong relationships built on collaboration and shared success.

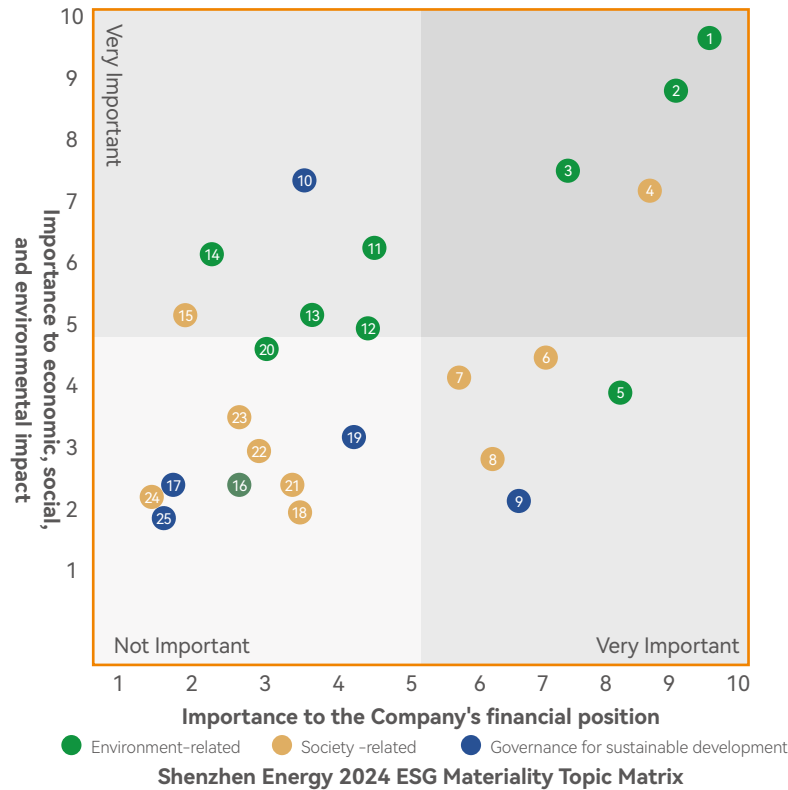
Stakeholder Category	Communication channel	Needs and expectations	Communication and response
Government and regulatory bodies	Routine reporting Government research visits Participation in formulation of industry planning	Compliance with laws and regulations Safety & environmental protection Occupational health Regional development Employment & taxation Information disclosure	Complying with laws and regulations, and improving the compliance system Promoting energy conservation and emission reduction, and accelerating low-carbon transition Implementing workplace safety and prioritizing occupational health Participating in local development and creating employment opportunities Implementing tax policies and paying taxes on time Disclosing corporate information and accepting supervision and evaluation
Shareholders and investors	General meeting of shareholders Performance briefing Investor exchange sessions	Corporate governance Risk compliance Earnings return Corporate value ESG governance Investor relations	Enhancing governance structure and mechanisms Strengthening compliance management to mitigate major risks Enhancing quality and efficiency to increase asset value Facilitating market influence and transformation Improving ESG performance and fulfilling social responsibilities Safeguarding shareholder rights and strengthening investor relationship management
Customer	Customer visit Customer complaint handling Customer satisfaction survey	Product quality Customer rights Customer service Continuous innovation	Strengthening the accountability system to ensure product quality Upgrading management systems to solidify rights protection Enhancing service experience to improve customer satisfaction Boosting innovation vitality and advancing pioneering innovation
Employee	Employee Council Employee training programs Employee assessment	Employee rights and interests Compensation and benefits Career development Employee care Health and Safety	Complying with employment guidelines and safeguarding legitimate rights and interests Refining compensation system and enhancing employee benefits Conducting employee training and improving promotion mechanisms Enriching cultural activities and supporting employees in need Prioritizing physical and mental well-being and ensuring workplace safety
Suppliers and partners	Transparent procurement Industry forum Supplier audit	Timely contract fulfillment Integrity and ethics Equality and mutual benefit Win-Win cooperation Industry advancement	Emphasizing order management and contract fulfillment Conducting integrity education and transparent procurement Advocating fair competition and building a responsible supply chain Establishing a cooperation platform and expanding collaboration opportunities Participating in relevant research and industry exchanges
Environment and community	Disclose EIA information Participating in community volunteer activities	Ecological environment Community development Public welfare and charity Local employment	Prioritizing ecological protection and green production Enhancing community engagement Developing public welfare initiatives and volunteer programs Supporting local employment
Media	Feature stories Disclosure announcements	Information disclosure Media interaction	Maintaining transparent communication channels Open to medium oversight to enhance communication

Identification of Materiality Topics

The Company adheres to the *Shenzhen Stock Exchange's Guidelines No. 17 and No. 3 for Self-Regulation of Listed Companies*, as well as international standards such as the United Nations Sustainable Development Goals (SDGs), the GRI Standards 2021, ISO 26000, SASB, and other sustainability-related frameworks. These references guide the development of our ESG topic list and help us identify issues with potential financial or material impact.

- **Analysis of Activities and Business Relationships:** We conduct a comprehensive review of the operational aspects of our core businesses, including energy generation, municipal solid waste treatment, and urban gas supply. Additionally, we assess the stakeholders affected by our operations and business relationships, along with current stakeholder engagement practices.
- **Establishing the Topic List:** Based on both international and domestic sustainability standards, we have identified 25 key ESG topics.
- **Assessment and Validation of Topic Importance:** To evaluate impact materiality, we apply the three-element model of FMEA (Failure Modes and Effects Analysis) to quantify the significance of impacts across four dimensions: scale, scope, irreversibility, and likelihood. These factors are combined using a multiplier-based method to calculate the Risk Priority Number (RPN), which reflects the overall level of impact. For financial materiality, we assess the potential financial effects over short-term, medium-term, and long-term time horizons, applying a weighted scoring system to capture the varying significance across these time frames. Ultimately, by integrating both impact and financial materiality assessments, we identify a list of topics with dual materiality.
- **Topic Report:** Shenzhen Energy develops an ESG materiality matrix based on evaluation results and establishes thresholds for topic significance. For high-priority topics, the Company provides in-depth disclosures, ensuring that resources are focused on the most critical ESG issues to enhance the effectiveness and efficiency of its sustainability efforts.

In 2024, Shenzhen Energy continued its ESG materiality assessment process, evaluating and prioritizing key issues. The report addresses the management approach and performance outcomes for all 25 identified topics. The Company's core ESG priorities mainly focus on tackling climate change, seizing green business opportunities, managing environmental compliance, and ensuring the safety and quality of its products and services.



Materiality	No.	Materiality Topics	Category
1: Core Topics	1	Response to climate change	Environment-related
	2	Green business opportunities	Environment-related
	3	Environmental compliance management	Environment-related
	4	Product and service safety and quality	Society-related
2: Financial Materiality Topics	5	Corporate Governance	Governance for sustainable development
	6	Innovation-driven	Society-related
	7	Employee	Society-related
	8	Supply chain security	Society-related
	9	Anti-commercial bribery and anti-corruption	Governance for sustainable development
3: Impact Materiality Topics	10	Information disclosure and transparency	Governance for sustainable development
	11	Pollutant emissions	Environment-related
	12	Water resource utilization	Environment-related
	13	Ecosystem and biodiversity conservation	Environment-related
	14	Waste disposal	Environment-related
	15	Social contribution	Society-related
4: General Topics	16	Green operations	Environment-related
	17	Due diligence investigation	Governance for sustainable development
	18	Fair treatment of SMEs	Society-related
	19	Stakeholder communication	Governance for sustainable development
	20	Circular economy	Environment-related
	21	Technology ethics	Society-related
	22	Rural revitalization	Society-related
	23	Community engagement and support	Society-related
	24	Data security and customer privacy protection	Society-related
	25	Anti-unfair competition	Governance for sustainable development

Analysis of Risks and Opportunities in Dual Materiality Topics ▼

Response to Climate Change

Financial Materiality Analysis

- 1 Extreme weather events driven by climate change could increase operational costs, disrupt the supply of fuels like coal and natural gas, and threaten the stability of thermal power and gas supply. Additionally, such events may damage power generation infrastructure such as wind turbines and photovoltaic systems, jeopardizing the reliability of the power supply.
- 2 Tighter carbon emission policies could raise the Company's compliance costs, potentially affecting its financial performance.

Impact Materiality Analysis

Government and regulatory bodies

The Company's proactive approach to climate change can build trust and support from the government, potentially unlocking policy incentives.

Community and Environment

Reducing carbon emissions and minimizing environmental impact can improve local ecosystems, raise community living standards, and enhance the overall quality of life.

Customer

The Company implements environmental protection measures to enhance its brand image and strengthen customer loyalty.

Green Business Opportunities

Financial Materiality Analysis

- 1 As the dual carbon strategy takes hold, increased government backing for new energy policies will benefit the clean energy and environmental protection sectors, driving revenue growth for the Company.
- 2 As policies around green electricity and China Certified Emission Reduction (CCER) evolve, carbon asset management and trading will open up new revenue opportunities.
- 3 Financial tools like green loans and green bonds are supporting the energy industry's transition, helping to reduce financing costs.

Impact Materiality Analysis

Environment-related

The growth of green businesses helps improve the ecological environment, boost biodiversity, reduce pollution, and has a positive impact on environmental restoration and protection.

Customer

Leveraging our diverse business strengths, we offer integrated energy services that cater to our customers' varied energy needs, maximizing cost savings and delivering optimal economic and social benefits.

Investors and Shareholders

Strong ESG ratings for green businesses can attract sustainability-focused investors, aligning with their green investment goals.

Environmental Compliance Management

Financial Materiality Analysis

- 1 Rising compliance costs due to changes in environmental regulations may impact the Company's operational expenses.
- 2 Environmental violations can lead to fines and compensation costs, which could harm the Company's financial position and reputation.

Impact Materiality Analysis

Environment

Strict environmental compliance helps minimize harm to the natural environment, protects biodiversity, and supports the health and stability of ecosystems.

Community

Robust environmental compliance helps prevent pollution incidents, protect the health and safety of local residents, improve quality of life, and build greater community trust and support for the Company.

Product and Service Safety and Quality

Financial Materiality Analysis

- 1 Workplace safety incidents can lead to injuries, fatalities, and property damage, resulting in compensation costs for the Company.
- 2 A reliable and stable energy supply ensures consistent revenue and helps mitigate financial risks.

Impact Materiality Analysis

Customer

Production safety risks may disrupt the stability of energy supply, affecting service continuity and impacting customers' electricity usage and business operations.

Employee

Workplace safety incidents also pose a threat to employee health and well-being.

2024 Key Figures of Shenzhen Energy

Governance Performance

Total assets	Net assets attributable to the shareholders of the parent company	Operating revenue	Total tax payment	Board resolution approval rate	Shareholders' resolution approval rate	Annual disclosures
161.371 billion yuan	48.416 billion yuan	41.214 billion yuan	2.968 billion yuan	100 %	100 %	149 Copies
Total profit	Net profit attributable to the shareholders of the parent company	Total dividends paid		Proportion of independent directors	Proportion of female directors	Board directors' attendance rate
3.699 billion yuan	2.005 billion yuan	0.666 billion yuan		33.3 %	11.1 %	100 %

Environmental Performance

Installed capacity under control	Gas-fired power installed capacity	Wind power installed capacity	Photovoltaic power installed capacity	Annual on-grid electricity	Annual natural gas sales	Proportion of clean energy installed capacity
23,729.0 megawatts	9,051.4 megawatts	3,829.5 megawatts	2,653.1 megawatts	56,043 GWh	3.345 billion cubic meters	74.63 %
Hydropower installed capacity	Waste-to-energy power generation installed capacity	Daily waste treatment capacity	Annual domestic waste treatment volume	Length of gas pipeline network	Investment in energy-saving technological upgrades	Clean energy consumption
1,013.0 megawatts	1,163.0 megawatts	50,515 Tons	13.9823 million tons	7,718 kilometers	74.6535 million yuan	5,944.62 MWh

Social Performance

Safety training participants (person-times)	Consecutive safe operation days	Labor contract signing rate	Social insurance coverage rate	Training coverage for employees	Employee satisfaction	Total volunteering hours	Volunteer participation (person-times)
17,547 Person-times	365 Days	100 %	100 %	100 %	94.5 %	12,547.2 Hours	2,616 Person-times
Newly authorized patents	R&D investment	Number of suppliers	Number of major work safety incidents	New jobs created	Total number of employees	Number of female employees	Number of employee volunteers
248 Items	0.321 billion yuan	38,937	0	737 Persons	12,527 Persons	2,868 Persons	4,054 Persons

Feature Story: Building a Harmonious Ecosystem – The Green Transformation from "Waste-to-Energy Plant" to "Energy Eco-Park"

1 Innovating Ecological Concepts Help Build Resident-Friendly Communities

Waste management remains a significant challenge in urban development. Despite notable advances in waste treatment technologies and increasingly efficient processes, waste disposal facilities often face negative perceptions, such as unpleasant odors and unsanitary conditions, especially among local residents. For example, the fly ash generated by waste incineration has sparked public concerns, fueling community resistance.

In 2015, the Company introduced the pioneering concept of "Build a Factory and Give Back a Park". This innovative approach not only redefines traditional waste treatment models but also reflects a strong commitment to eco-friendly urban development. Through this vision, waste-to-energy plants have been transformed into "community assets" that blend seamlessly with nature and integrate harmoniously into the urban landscape. At Longgang Park, the "Dome of Life" connects with nature through its artistic design, while Yantian Park beautifully complements the picturesque Wutong Mountain. The wave-shaped buildings and shell-like exhibition halls of Nanshan Park echo the nearby Lingding Ocean, transforming industrial facilities into iconic urban landmarks.

The Energy Eco-Park has removed both physical and psychological barriers, transforming the site into an inviting public space where residents can relax and enjoy panoramic views of the mountains and sea. The park features amenities such as a community swimming pool, hiking trails, and a science exhibition hall, enhancing the urban landscape while offering a variety of recreational activities for locals. By embracing openness and fostering a spirit of sharing, the eco-park has overcome the typical "not in my backyard" resistance. It has turned citizens from passive "bystanders" into active "co-builders" of their community. This shift has not only shattered preconceived notions about waste-to-energy plants but also redefined the public's perception of waste treatment facilities, fully realizing the vision of "Build a Factory and Give Back a Park."



Nanshan Energy Ecological Park - Circular Regeneration Art Exhibition Hall

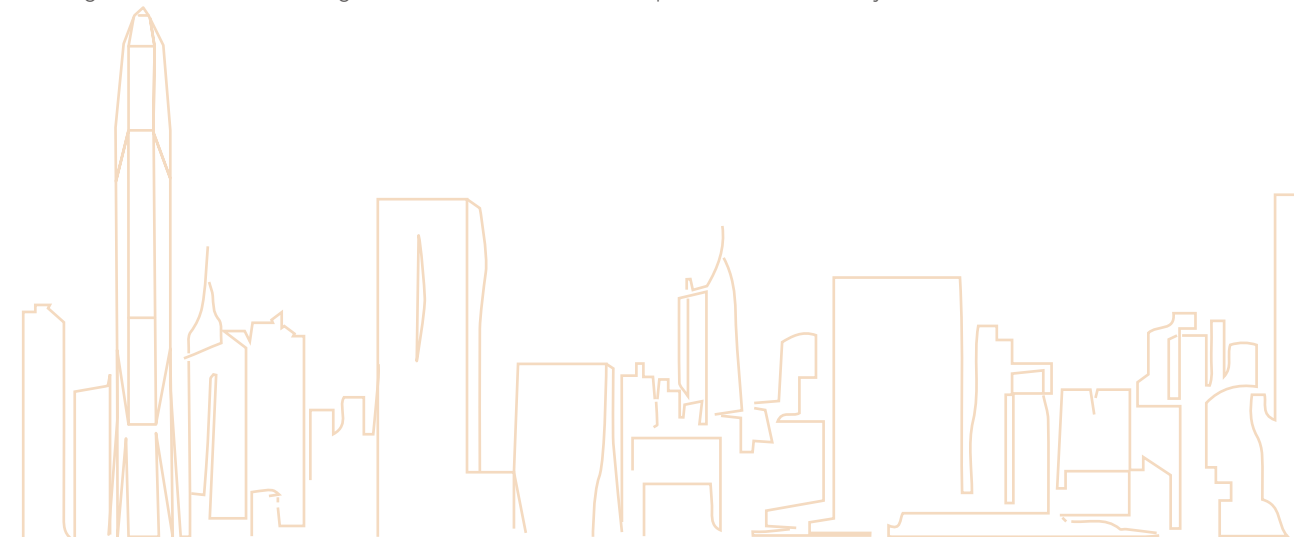
As global environmental challenges intensify, the development of ecological civilization has become a key priority both in China and worldwide. In particular, urban development must find ways to balance human activity with the environment. This is not just an opportunity to mitigate sustainability risks but also to drive the green economic transformation we urgently need. Shenzhen Energy, driven by the mission of "Create a Better New Life with Green Energy" is at the forefront of this transformation. Through the innovative shift from "waste-to-energy plants" to "energy eco-parks", the Company is leading a new era of urban green revolution, making a meaningful contribution to the sustainable development of both urban energy systems and the environment.

2 Technological Innovation Drives Industry-leading Emission Standards

The Company's eco-environmental sector is driven by two core objectives: the "industrialization of scientific and technological achievements" and the "digital-intelligent transformation of enterprises". With a strategy centered on "digital-intelligent efficiency enhancement, resource regeneration, and green low-carbon solutions", the Company continues to make strides in key technological areas such as equipment autonomy and controllability, efficient solid waste synergy, precise pollution control, and AI-driven full-chain empowerment. Concurrently, the Company is deepening reforms and driving innovations in its scientific and technological systems, maintaining its leadership in the high-quality development of the environmental protection industry and setting a benchmark for innovation and transformation in the sector.

Through industry-leading investment, the Company fuels technological breakthroughs and innovation models, providing strong momentum for the development of cutting-edge and practical environmental technologies. In 2024, the Company's eco-environmental sector filed over 100 intellectual property applications and received corresponding authorizations. It also played an active role in drafting national, industry, and local technical standards, and was recognized with five major scientific awards, including the Second Prize at the Environmental Protection Science and Technology Awards.

In the area of emission standards, the Company has built an independent R&D system for core technologies, accelerating the transformation and application of scientific advancements. This has led to significant economic and environmental benefits. The self-developed Automatic Combustion Control (ACC) system for waste incineration has improved combustion stability by approximately 50% since its introduction. At Dalian Energy Ecological Park, electricity generation per ton of waste increased by around 55 kWh/t year-on-year, while Xining Energy Ecological Park saw an increase of 70 kWh/t compared to the same period last year. At Wuhan Energy Ecological Park Phase II, home to the world's largest 1,100-ton incinerator, the ACC system led to a year-on-year increase of over 9% in electricity generation per ton of waste. The deployment of the independently developed Intelligent Combustion Control (ICC) system has improved boiler load stability by over 80%, while steam production per ton of waste rose by 5%. With the introduction of the intelligent flue gas pre-control system, the fully automated operation rate of the flue gas purification system exceeded 95%. The consumption of environmental protection consumables decreased by more than 10% year-on-year, while the direct costs of denitrification and deacidification per furnace have been reduced by CNY 500,000 annually. These technological advancements have not only significantly reduced operational costs but also raised emission standards above EU levels, setting a new benchmark for green and low-carbon development in the industry.



Case Garbage Treatment Process

Domestic waste is transported by dedicated vehicles to the Energy Eco-Park, where it is weighed before being unloaded into sealed waste pits for fermentation. During this process, gas generated from the waste pool is captured and directed into the incinerator to assist with combustion, preventing any odor leakage. The waste is then incinerated at high temperatures, and the resulting flue gas is passed through a waste heat boiler to recover thermal energy, which drives the power generation unit to produce electricity. The flue gas treatment system uses a cutting-edge, seven-stage process, ensuring emissions that exceed both national and EU standards, setting the industry-leading "Shenzhen Standard." Landfill leachate is treated and recycled through a multi-step process—"pretreatment + anaerobic digestion + external MBR + nanofiltration + reverse osmosis"—achieving zero discharge. The incineration slag is fully recycled through comprehensive utilization, while the fly ash undergoes stabilization treatment before being safely landfilled. This ensures compliance with pollution emission standards, highlighting the benefits of advanced technology and regulatory compliance.



Bao'an Energy Ecological Park

3 Synergistic Industrial Development Empowers Urban Sustainability

The Company's modern Energy Eco-Park integrates the concepts of "production, education, research, promotion, and tourism," transforming waste-to-energy plants from simple treatment facilities into multifunctional eco-parks that support sustainable urban development. In terms of Production, we efficiently process domestic waste and convert it into clean electricity, closing the loop of resource recycling. The Education and Research sectors foster collaborations with scientific institutions and universities, driving innovations in waste treatment technology. The Promotion aspect raises environmental awareness through science education, while the Tourism component invites the public to experience the park's environmental achievements firsthand, bridging the gap between sustainability and everyday life. With its multifunctional design, the Energy Eco-Park integrates environmental education, technological research, and tourism, making a significant contribution to urban economic transformation and the development of ecological civilization. This initiative stands as a clean, green, and low-carbon urban landmark.

In 2024, the Company made significant strides in renovating and building 14 science education bases, including those in Nanshan and Longgang. The newly completed Longgang and Bao'an Energy Eco-Parks officially opened to the public, while the Yantian and Nanshan Eco-Parks were selected as part of Shenzhen's "Premium Eco-Tourism Routes." Three of the energy eco-parks, including Bao'an, were recognized as national "Model Education Bases for Waste Classification." Additionally, Longgang and Nanshan Energy Eco-Parks were honored with the title of "Shenzhen Five-Star Industrial Tourism Demonstration Sites."

2024

The Shenzhen Regional Energy Eco-Parks recorded a total of **2,004** visits, welcoming more than **49,800** visitors; It hosted **197** international receptions, with over **4,900** attendees

Additionally, the Eco-Parks organized a series of themed events, including "Environmental Protection + Cultural Arts" and "Environmental Protection + Family Bonding," which attracted over **3,300** participants and received widespread praise from the public.

The Eco-Parks also hosted **24** supporting events, such as "World Environment Day," "Waste Sorting Week," and "Community and School Bonding Day," drawing over **6,000** participants.

Case Building a City Tourism Brand

In November 2024, Longgang Energy Eco-Parks was awarded the title of "Shenzhen Five-Star Industrial Tourism Demonstration Site" and became a key destination on Longgang District's industrial tourism route. Since its opening in July 2023, the park has hosted over 1,000 reception events, welcoming more than 20,000 visitors. Visitors have been impressed by the innovative concepts, cutting-edge technologies, and environmental achievements of the park. They view it not only as a modern facility for efficiently managing municipal solid waste but also as a compelling example of how humans and nature can coexist in harmony.

The eco-park also features a science education hub, the Lotus Reflection Digital Art Gallery. With its curatorial theme of "wandering through a painting," the gallery uses the lotus as a metaphor and the circle as a symbolic element for the park, blending environmental protection with art. It takes visitors on a journey through artistic paintings, encouraging continuous exploration and interaction.

Looking ahead, the park will continue to serve as a model, further contributing to the growth of industrial tourism in Shenzhen and beyond.



Longgang Energy Eco-Park - Environmental Book Bar



Governance with Integrity and Rule of Law

Strengthening Systems for Effective Governance and Regulatory Compliance

Shenzhen Energy aligns with the leadership of the Party, upholds the rule of law, and strengthens its governance and compliance frameworks. By embedding ESG principles into its commitment to high-quality development, the Company strives to create greater value for society. We have thoroughly studied and applied the Party's advanced theories, continuously improving our Party-building efforts. The Company has refined its governance system, improved board structure, and ensured the effective functioning of key meetings, while incorporating ESG metrics into our performance evaluation system. We have also strengthened compliance management, enhanced risk prevention and control, and protected intellectual property rights. Additionally, we have established an anti-corruption management system, fostering a culture of integrity throughout the organization.

Shenzhen Energy and the SDGs:



Guiding Corporate Governance Through Party Building

Conducting Party Building and Ideological Training ▼

The Party Committee adheres to the principle of pursuing progress while maintaining stability, guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era. It follows the Party's organizational strategy and implements the key requirements for Party building in the new era. The Company thoroughly studied and applied the spirit of the 20th CPC National Congress, along with the outcomes of the Second and Third Plenary Sessions, actively promoted Party discipline education, and strengthened Party-building quality through targeted guidance. This leadership plays a crucial role in driving high-quality development.

2024 The Group Party Committee Meeting was convened 31 times.

2024 350 major issues were deliberated.



The party secretary of Shenzhen Energy delivers a lecture at the special discipline party class and warning education meeting.

Enhancing the Quality of Party Building ▼

The Company fully implemented the Shenzhen SASAC's "1+4" Party-building Quality Improvement Classification Guidance initiative. Building on its international presence, it developed a customized "1+1+5" framework for Party-building Quality Improvement, tailored to Shenzhen Energy's unique characteristics. An innovative mechanism was established, featuring "one training session per sub-district/zone," "one advancement initiative per quarter," and "one distinctive feature per enterprise." The "Party Building Vanguard Initiative with Responsibility as the Top Priority" was introduced to drive the effective implementation of Party-building improvements and classification guidance. Based on the Company's specific needs, a detailed list of 1,545 tasks was created to enhance the quality of Party-building and ensure the successful completion of key foundational projects.



Guangming Power Plant established a Party member team for key projects



Shenzhen Energy West Kunming Subdivision conducts a themed party day activity on inheriting the "red gene"

Focusing on Strengthening Organizational Development ▼

In 2024, the Company made significant strides in developing Party organizations. It supported the establishment of two new Party committees, oversaw the re-election of three enterprise Party organizations, upgraded two enterprise Party branches to general Party branches, and expanded membership in 11 directly managed enterprise Party organizations. New Party branches were set up in three recently incorporated companies, and branch committees were formed in two existing Party branches. A thorough review of affiliated enterprises was conducted, ensuring that joint Party branches were established in all companies with fewer than three Party members, achieving full coverage and reinforcing the organizational foundation.

Optimizing Corporate Governance

Improving Governance Framework ▼

The Company is dedicated to high-quality development, and continually strengthens its governance structure. By refining key bodies like the Shareholders' General Meeting, Board of Directors, Supervisory Board, and Executive Management, we have established a clear and effective corporate governance framework. This ensures well-defined responsibilities, strong checks and balances, and smooth coordination across operations.

- General Meeting of Shareholders** In 2024, the Company held its general shareholder meetings in full compliance with applicable laws, regulations, and the Articles of Association. A total of five meetings were conducted, with all proposals receiving unanimous approval.
- Board of Directors** In 2024, the Company held 13 Board of Directors meetings, 16 specialized committee meetings, and 1 special meeting for independent directors. A total of 109 proposals were reviewed and approved, achieving a 100% approval rate and full attendance for all Board meetings. Key discussions included a range of ESG-related proposals, such as the *2023 Board of Directors Work Report*, the *Proposal on the 2023 Annual Report and Its Summary*, the *Proposal on the 2023 Internal Control Evaluation Report*, the *Proposal on the 2023 ESG Report*, and the *Proposal on the 2023 Corporate Social Responsibility Report*. These initiatives played a crucial role in advancing the Company's ESG management, with strong leadership driving progress at every level.
- The Supervisory Board** The Company's Supervisory Board consists of 6 members, including 3 employee representative supervisors. In 2024, the board held 4 meetings, reviewing 14 proposals with full attendance at each session. The board effectively supervised the actions of the directors, management, and the Company's financial affairs.

Board Construction ▼

The Company's *Articles of Association* outline the process for nominating directors. Directors serve a term of three years and may be re-elected at the end of their term. They are elected or replaced by the shareholders' general meeting and can be dismissed before their term expires, subject to shareholder approval. The Company has a total of 9 directors, including 3 independent directors. To ensure transparency in corporate governance, the Company regularly discloses information about directors' external positions. For more details, please refer to the Company's *2024 Annual Report*.

The Board of Directors has established four specialized committees: the Strategy Committee, the Audit and Risk Management Committee, the Nomination Committee, and the Compensation and Evaluation Committee. These committees report directly to the Board and operate according to the Company's *Articles of Association* and the Board's authorization. All committee members are Company directors. In the Audit and Risk Management Committee, the Nomination Committee, and the Compensation and Evaluation Committee, independent directors hold the majority and serve as committee chairs.

Audit and Risk Management Committee	The committee is chaired by an independent director.	60% of the members are independent directors.
Nomination Committee	The committee is chaired by an independent director.	60% of the members are independent directors.
Remuneration and Evaluation Committee	The committee is chaired by an independent director.	60% of the members are independent directors.
Strategy Committee	The Chairman serves as the Director of the Committee.	20% of the members are independent directors.

The Company values the diversity, professionalism, and independence of its board of directors to ensure strong corporate governance. This approach brings a wide range of perspectives, ensuring that corporate strategies and decision-making are both well-founded and effective. Board members come from diverse sectors including energy, financial management, risk management, and legal affairs, contributing a wealth of industry experience and expertise to guide the Company's long-term value creation. On January 8, 2025, during the First Extraordinary General Meeting of the year, Ms. Liu Shilei was elected as a director, increasing the proportion of female directors to 11.11%.

The proportion of female directors in the Company has increased to

11.11%

•Enhancing Governance Capabilities

In 2024, the Company organized training sessions for management across various departments and affiliated enterprises focusing on the responsibilities and risks faced by directors, supervisors, and senior management under the new Company Law. This initiative aims to promote lawful and compliant operations, ensuring that directors, supervisors, and senior executives exercise their powers and fulfill their duties in line with the law, thereby further strengthening the Company's governance capabilities.

Payment and Assessment of Directors and Executives ▼

•Compensation Decisions

The Remuneration and Appraisal Committee is a specialized body established by the Board of Directors in line with the resolutions of the General Meeting of Shareholders. It operates under the Company's *Articles of Association* and the *Working Rules of the Remuneration and Appraisal Committee*. The committee is responsible for developing appraisal standards, remuneration policies, and plans for directors and senior management, as well as drafting proposals for the Company's equity incentive plan, and overseeing the implementation of the Company's remuneration system. During the reporting period, the committee held 5 meetings and reviewed 12 proposals.

•ESG Performance and Compensation Assessment

To ensure the success of its ESG initiatives, the Company sets annual targets in key areas such as safety management, ecological sustainability, anti-corruption, advancing SOE reforms, legal compliance, risk management, and classified information handling. These targets are integrated into the performance evaluations of executives, with deductions made if they are not met. Performance ratings, determined by final scores and rankings, directly impact compensation. Additionally, the Company includes remuneration details for directors, supervisors, and senior management in its annual report.

ESG Performance Indicators:

Safety Indicators	There were no major production safety incidents under the Company's responsibility, no natural disasters causing three or more fatalities, and no significant breaches in cybersecurity or data security.
Ecological Civilization Indicators	The Company successfully implemented its ecological civilization initiatives, with no incidents of environmental protection liability reported.
Integrity Development Indicators	We consistently reinforced Party discipline and integrity, prioritizing anti-corruption efforts and compliance. We strengthened our integrity risk prevention and control system, with the Party Committee taking primary responsibility and the Discipline Inspection Commission playing a key role in overseeing corporate integrity. By improving governance and oversight, we set a strong leadership example.
Compliance Indicators	Board governance & operational standardization; compliance management system development.
Risk Management Indicators	Major risk prevention and control, as well as legal risk prevention and control.
Confidential Work Management Indicators	No incidents of information leakage or loss occurred.

Protection of Investor Rights ▼

•Information Disclosure

The Company fully complies with the laws and regulations regarding information disclosure for listed companies, having established the "Information Disclosure Management Standards" and the "Interbank Bond Market Debt Financing Instruments Information Disclosure Management Standards." We proactively studied updates to business rules and guidelines to stay aligned with evolving securities regulations, policy changes, and investor expectations. In 2024, the Company adhered to the China Securities Regulatory Commission's regulations, ensuring the timely, accurate, truthful, and comprehensive disclosure of 149 announcements.

•Communication and Interaction

We actively engage in a variety of investor relations activities to maintain accurate and timely communication with the capital markets. In 2024, we responded to 174 investor inquiries in writing, hosted on-site research visits for institutional investors, and participated in brokerage strategy conferences. Our annual performance briefing drew a live audience of 74,000 viewers. Our dedicated investor relations team efficiently managed inquiries, ensuring prompt responses to phone calls from investors.

•Company Dividends

While driving rapid growth, the Company remains dedicated to delivering value to its shareholders. In 2023, with 4,757,389,916 outstanding shares at year-end, the Company paid a cash dividend of CNY 1.40 per 10 shares, totaling CNY 666 million in dividends, ensuring consistent and stable returns for investors.

•Credit Status

In 2024, the Company showed strong debt management, with no significant defaults, debt evasion, litigation, interest arrears, regulatory violations, non-performing liabilities, or unresolved letters of credit.

Deepening Reform and Development ▼

In 2024, the Company made significant strides in reforming key sectors, achieving important milestones that fueled our high-quality development.

Guided by the principle of "holistic integration and deep convergence," we drove comprehensive reforms. We accelerated the implementation of innovation-driven development strategies, making technological innovation a core strategic priority. We established mechanisms to foster innovation and deepened initiatives like the "Double Hundred Action," the "World-Class Value Creation Action," the "Environmental Protection Leader Demonstration Enterprise," and the "Sci-Tech Reform Demonstration Enterprise." These efforts are designed to cultivate industry leaders in fields such as smart energy. We also continued to enhance regional coordination reforms in Xinjiang, promoted cross-industry collaboration, and significantly improved management efficiency. At the same time, we made steady progress in institutional reforms to support our international expansion, reinforcing our global development strategy.

Disclosed **149** announcements throughout the year, ensuring they were timely, accurate, transparent, and comprehensive.

The Company held its annual performance briefing, attracting

74,000 live-stream viewers.

Distribute cash dividends of CNY 1.4 per 10 shares to all shareholders

CNY **1.40**

Total dividends paid

CNY **0.666** billion

In the annual special evaluation conducted by the SASAC of the State Council, the Company was rated **"excellent" in the "Double Hundred Enterprises" initiative**, awhile its environmental protection subsidiary earned **"excellent" status in the "Sci-Tech Reform Demonstration Enterprises" program**.

Enhancing Compliance Operations

Legal and Compliance Management ▼

To strengthen compliance management, the Company developed the Comprehensive Compliance Management Standards and established a Compliance Committee responsible for overseeing and coordinating all compliance activities. The Compliance Committee operates through a dedicated office that manages daily activities, organizes meetings, ensures the implementation of resolutions, and carries out the committee's directives.

In 2024, the Company further strengthened its compliance management system. The scope was broadened to cover five affiliated platform companies, creating a cohesive and coordinated compliance framework between the parent company and its subsidiaries. In terms of depth, the Company introduced a compliance manual, four compliance guidelines, five management checklists, and a series of other compliance systems. It also launched a trial run of the compliance management system, bolstering "hard controls" through initiatives such as compliance risk forecasting, proactive compliance reviews, daily process management, post-event inspections, and year-end evaluations. Additionally, the Company improved its "soft power" by rolling out training and awareness programs to cultivate a strong compliance culture across the organization.



Publication of the Integrity and Compliance Handbook



Release of the Integrity and Compliance Manual and Training & Implementation Conference for the Compliance System Construction Project

Paying Taxes in Accordance with the Law ▼

The Company fully adheres to national tax laws and regulations, and diligently fulfills its tax obligations. In 2024, the Company's total tax payment amounted to CNY 2.968 billion.

Strengthening Risk Prevention and Control ▼

The Company is dedicated to strengthening its risk management system, steadily enhancing its ability to address risks through improved organizational structures, refined policies, and regular monitoring mechanisms. At the organizational level, an Audit and Risk Management Committee has been established under the Board of Directors to reinforce the Board's leadership in risk prevention and control. Additionally, a special task force was created to address and resolve major risks, ensuring a coordinated effort in mitigating significant threats. The Company has adopted an "1+N" internal control system, focusing on core internal control and oversight, complemented by detailed operational standards to enhance risk management and regulatory compliance.

The Company conducts thorough annual risk assessments, develops response strategies to address key risks, and monitors them on a quarterly basis. Both the headquarters and directly managed subsidiaries hold monthly risk analysis sessions, ensuring coordinated efforts that bolster the Company's overall resilience. For overseas greenfield projects and mergers & acquisitions, specialized risk assessments are carried out before investment decisions are made, with mitigation strategies in place to protect against potential investment risks.

In 2024, the Company coordinated with its headquarters and over 30 directly managed subsidiaries to conduct annual systematic risk assessments. Key risks identified included governance structure, decision-making processes, workplace safety, environmental protection, public sentiment, petition handling, stability maintenance, talent management, employee training and other ESG-related risks. For each identified risk, tailored response measures were developed to strengthen preventive controls. As part of the *2023-2025 Internal Control System Supervision and Evaluation Plan*, risk control and compliance assessments were carried out across 106 subsidiaries at various levels. Any weaknesses in internal control design or implementation were addressed by the relevant subsidiaries. A rectification tracking system was established to ensure prompt resolution of issues uncovered during internal audits, assigning accountability to specific entities and individuals. In 2024, the Company effectively maintained control over its major risks.

Related Party Transaction Management ▼

To ensure transparency and standardization in related-party transactions and mitigate the risks of interest transfer, the Company's *Articles of Association* clearly outline the approval process. This includes oversight by the Shareholders' Meeting, the Board of Directors, and the Chairman. Such transactions must not negatively impact the interests of non-related shareholders. The decision-making process is strictly regulated, and relevant information is disclosed through periodic reports, promoting strong corporate governance and building investor trust.

Anti-unfair Competition ▼

The Company is committed to fair competition and fully complies with laws and regulations such as the *Anti-Unfair Competition Law of the People's Republic of China* and the *Anti-Monopoly Law of the People's Republic of China*. It upholds ethical business practices, promoting fair competition and opposing commercial bribery, money laundering, monopolistic behavior, and any form of unfair competition. These efforts protect the Company's legitimate rights, interests, and the integrity of the market. In 2024, the Company had no litigation or significant penalties related to unfair competition.

Intellectual Property Protection ▼

The Company has established an Intellectual Property Management Standard to strengthen the protection and management of intellectual property, promote the effective commercialization of innovation, and safeguard its rights and interests. This standard applies to various types of intellectual property, including patents, trademarks, and copyrights, and defines standardized processes for creation, management, protection and utilization. The Company also invests in employee training to raise awareness of intellectual property, ensuring these standards are effectively implemented across the organization.

Strengthening Integrity Development

Integrity Management System ▼

The Company prioritizes integrity as the cornerstone of its sustainable growth. By strengthening institutional systems, enhancing oversight, standardizing leadership management, and promoting integrity education, it has established strong safeguards to support reform and development. These efforts have resulted in significant progress in areas such as Party discipline, clean governance, and anti-corruption initiatives.

·System Building

The Company is committed to building a robust clean governance system, and has established a series of policies such as the *Decision-Making Management Standards for Major Matters*, *Joint Supervision Management Standards*, *Reform and Innovation Error-Tolerance Management Standards*, and *Reminder Conversation Management Standards*. These standards establish clear protocols for maintaining integrity throughout decision-making, oversight, error correction and leadership accountability. The Company's Discipline Inspection and Supervisory Board Office operates in line with the Party Constitution and internal regulations, while adhering to the directives from the Shenzhen SASAC and the Company. Its responsibilities include supervising, enforcing discipline, and ensuring accountability, ensuring full compliance with all policies. Additionally, our affiliated enterprises have established similar oversight bodies, staffed with both full-time and part-time personnel to uphold Party conduct, integrity, and anti-corruption measures in accordance with applicable laws and regulations. This multi-layered system ensures that integrity is upheld at all levels of the organization.

·Supervision and Inspection

The Company places a strong emphasis on supervising Party members and officials to uphold integrity and self-discipline, particularly focusing on the prompt identification and resolution of emerging issues. For minor compliance breaches, timely reminder conversations are held to ensure early detection, warning, and correction. The integrity review process for officials has been further standardized. The Company's Discipline Inspection Commission provides ongoing feedback on Party conduct and integrity based on daily oversight, effectively preventing issues such as "promotion despite problems," "commendation despite problems," and "assignment despite problems". This approach helps maintain the purity and integrity of the leadership team. Additionally, the Company strengthens joint supervision by implementing a system where the Joint Supervision Office leads on-site inspections of construction projects. Functional departments at headquarters identify weak points, analyze root causes, and establish a closed-loop system for continuous monitoring, immediate corrective action, and long-term governance improvements.

In 2024, the Company set ambitious targets for Party conduct, integrity, and anti-corruption efforts, rolling out systematic initiatives in key areas such as political oversight, daily supervision, disciplinary investigations, and special campaigns. We also established annual priorities for supervision, with clear actions to optimize processes and monitor key areas. By enhancing routine supervision and focusing specialized oversight on critical aspects such as construction projects and bidding processes, we were able to quickly identify management gaps and conduct in-depth analysis to refine our operational management and risk prevention strategies. As a result, the Company's commitment to integrity and ethical governance has continuously improved, with overall risks being effectively managed, fostering a clean and transparent environment that drives high-quality development.

Integrity Culture Development ▼

To deepen awareness of discipline and rules among Party members and officials, and to foster a culture of integrity and clean governance, the Company has made significant efforts in promoting a culture of transparency.

In 2024, the Company held a collective integrity briefing for newly appointed officials, focusing on three key areas: strengthening political loyalty, fulfilling duties responsibly, and maintaining integrity. More than 60 new officials participated, receiving clear expectations for their roles, marking their "first lesson" in clean governance.

Anti-Bribery and Anti-Corruption Training Implementation in 2024

Total number of directors receiving anti-bribery and anti-corruption trainings: **9**

Percentage of directors receiving anti-bribery and anti-corruption trainings: **100%**

Total number of management personnel receiving anti-bribery and anti-corruption trainings: **60**

Percentage of Management Personnel receiving anti-bribery and anti-corruption trainings: **100%**



Case Guangming Power Conducts Integrity Warning Education Activities

In 2024, Guangming Power launched a clean governance awareness campaign titled "Integrity Through Paper Art and Craftsmanship." The event centered around the lotus as a symbol of integrity. The interactive event encouraged employees to craft quilling art that depicted stories of integrity. Using techniques such as rolling, pinching, and collage, participants expressed their understanding of "integrity" through creative, meaningful artwork. The campaign was a resounding success, inspiring employees to stay committed to responsibility, self-discipline and integrity in their daily work.

Whistleblower Protection ▼

The Company has established multiple reporting channels, including letters, phone calls, visits, emails, and direct assignments from senior leadership to ensure open and effective communication. The reporting hotline and email address are publicly displayed on the official website, making it easy for employees and others to voice concerns. Additionally, the Company has set up Work Rules for Disciplinary Inspection and Supervision Authorities to handle reports and complaints. All reports are processed by the Discipline Inspection, Supervision, and Board of Supervisors Office. Verified reports are addressed following established procedures, while unverified reports are closed. Any identified management issues prompt immediate corrective action by the relevant departments and affiliated enterprises.

The Company has also put in place robust protections for whistleblowers, guaranteeing the confidentiality of their identities. Retaliation against whistleblowers, their families, or anyone suspected of whistleblowing is strictly prohibited under any circumstances.

Reporting Hotline: 0755-83684144

Reporting E-mail: jtjw@sec.com.cn





Stable Supply

Building a Smart, Secure, and Reliable Energy System

Power supply is essential for economic growth and improving quality of life. Shenzhen Energy takes on the critical responsibility of ensuring energy security, and is committed to providing smarter, cleaner, and safer energy to society. The Company prioritizes safety by continually refining its occupational safety management system and enhancing emergency response capabilities to maintain stable production conditions. It is also at the forefront of advancing smart energy, driving digital transformation and exploring the integration of "Energy + AI" to elevate the intelligence of energy supply. Focused on secure fuel transportation and engineering quality assurance, the Company proactively plans for peak power demands, boosting electricity supply resilience during extreme weather events. We implemented multiple strategies to mitigate supply risks, and ensure a reliable and continuous energy provision.

Shenzhen Energy and the SDGs:

3

GOOD HEALTH
AND WELL-BEING

7

AFFORDABLE AND
CLEAN ENERGY

9

INDUSTRY, INNOVATION
AND INFRASTRUCTURE

12

RESPONSIBLE
CONSUMPTION
AND PRODUCTION

Upholding Safety as the Bottom Line

Work Safety Management ▼

The Company strictly adheres to safety production laws and regulations, and takes a proactive, bottom-up approach to safety management. It reinforces its primary responsibility for workplace safety by focusing on addressing root causes. Through a systematic approach, the Company ensures that safety initiatives are comprehensive, tackling both immediate concerns and underlying issues. In 2024, there were no major or significant production safety incidents.

• Management Structure

The Company has established a Work Safety Committee and an Emergency Management Committee to oversee and coordinate safety and emergency response efforts, ensuring the effective implementation of safety regulations and standards.

Work Safety Management

Work Safety Committee

The Company's leadership team for work safety is responsible for planning, guiding, and coordinating company-wide safety initiatives across the organization. This team reviews major safety matters, evaluates overall safety performance, and addresses critical work safety issues.

Work Safety Committee Office

The executive office of the Work Safety Committee, based within the Safety and Production Technology Management Department, handles the day-to-day operations of the Committee.

Emergency management

Emergency Management Committee

This committee leads emergency management and response efforts. It is responsible for implementing national, provincial, and municipal laws, regulations, and standards related to emergency management; making key decisions and plans for emergencies; coordinating resources across the Company; and overseeing the execution of emergency response actions.

Emergency Management Committee Office

The Emergency Management Committee Office is based within the Safety and Production Technology Management Department and is responsible for overseeing the day-to-day operations of the Committee.

• Work Safety Accountability System

Supervision and Assessment: The Company has developed the *Safety Supervision and Management Measures for Shenzhen Energy Group Subsidiaries*, which clearly define the safety responsibilities at all levels. These measures establish refined safety assessment standards and introduce mechanisms like safety production interviews and reviews to ensure accountability.

Performance-linked: A review team consisting of corporate safety management personnel, third-party experts, and others conducts quarterly comprehensive inspections of power generation, engineering, environmental protection, gas, and other operations. For key issues related to external workforce management, high-risk operations, responsibility fulfillment, and policy execution, the team recommends corrective actions. Performance is scored using predefined criteria, with results directly influencing safety incentive bonuses. This system ensures accountability and encourages timely corrective measures.

Risk Hazard Investigation ▼

The Company has strengthened risk management and hazard mitigation through the *Shenzhen Energy Group Work Plan for Enhancing the Dual Prevention Mechanism*. This includes implementing safety self-inspections, conducting surprise inspections under the "Four Noes and Two Directs" approach (i.e., no prior notice, no advance arrangements, no scripted briefings, no escorted receptions, with direct visits to the site and grassroots teams), and carrying out post-rectification "look-back" reviews. The Company has focused on high-risk areas such as gas, hazardous chemicals, high-risk operations, and three external sectors (outsourced projects, external commissioning operations, and third-party personnel), along with fire safety and measures for typhoon and flood prevention. Quarterly safety assessments and monthly project safety inspections ensure that risks and hazards are promptly identified, addressed, and effectively managed.

• Special Fire Safety Remediation Plan

In 2024, the Company launched a dedicated fire safety remediation plan, prioritizing the elimination of fire hazards and ensuring clear "life-saving passages" across all production, operational, and construction sites. The initiative involved thorough inspections and corrections of firefighting equipment, workplace environments, employee fire safety awareness and compliance with fire safety standards. All identified hazards were promptly addressed and resolved.

• Special Gas Safety Remediation Plan

In 2024, the Company further strengthened its dual prevention mechanism for gas safety. It strengthened measures to prevent third-party construction damage to gas pipelines, enhanced pipeline detection and risk control, and leveraged technological and digital solutions. As a result, third-party excavation damage to gas pipelines decreased by 66.7% compared to 2023.



Case Safety Inspection of the "Jiaxi" Vessel

In December 2024, the Company's leadership conducted a safety inspection on the "Jiaxi" vessel operated by the transportation company. The inspection team thoroughly examined the vessel, from stern to bow and engine room to bridge. They checked cargo handling, deck maintenance, equipment conditions and operational repairs in the engine room, as well as the communication and navigation systems on the bridge. The team also gathered detailed information about the crew, duty schedules, routine maintenance, emergency drills, and safety training. Corrective actions were issued to address the identified issues.



Third-party Safety Management ▼

The Company prioritizes third-party safety management and has implemented the *Eighteen Anti-Accident Measures for Strengthening Outsourced Project Safety Management*, with a focus on "three external sectors" safety management as a key area for regular inspections and assessments. The Company strengthens safety controls over outsourced operations through initiatives such as training on identifying major accident hazards, issuing regulatory advisories, conducting multiple rounds of on-site inspections, suspending operations for enterprises with significant hazards, overseeing companies with high risk levels, and providing specialized training for frontline construction workers.

In 2024, guided by the principles of "risk control, hazard elimination, and management enhancement", the Company carried out weekly comprehensive inspections of seven major construction projects in Guangdong Province. Regulatory advisory letters were issued, urging all parties to implement thorough safety assessments. Throughout the year, 31 specialized construction safety training sessions were held. Additionally, the Company developed the *One-Page Safety Management Diagram for Power Construction Projects* and the *Typical Hazard Atlas* to enhance safety management capabilities.

Enhancing Emergency Response Capabilities ▼

The Company follows the principle of "prevention first, combining prevention with emergency response" and has established the *Overseas Project Crisis and Emergency Management Standards* and *Emergency Incident Management Standards*. To ensure full preparedness, the Company enlisted both internal and external experts to revise the overall emergency response plan and 24 specialized emergency plans. Focusing on emergency capability assessments, the Company has strengthened its emergency response teams and optimized resource allocation. It issued flood prevention and disaster relief work plans, held special meetings to coordinate flood prevention efforts, and conducted pre-flood inspections across all operations to ensure timely risk control and mitigation. During the flood season, dynamic inspections were carried out to enhance hazard management, with strict adherence to duty shifts and information reporting protocols. These measures successfully mitigated the impact of typhoons such as "Yagi" and "Gaemi".

In 2024, the Company conducted four large-scale emergency drills, covering scenarios such as flood prevention and disaster relief, power outages at thermal power plants, and gas leak responses. Company leadership actively participated in these drills, with senior executives serving as Chief Commanders to oversee operations. The drills were well-organized and followed established command protocols, yielding positive results. They effectively tested and enhanced the Company's emergency response capabilities, self-rescue skills, and coordination between government agencies and the enterprise.



Chaozhou Gas conducted emergency drills for gas leakage.



Baoding company carried out flood prevention hazard inspections.

Cyber Security ▼

In 2024, the Company updated and strengthened its *Personal Information Management and Data Security Management Standards*, implementing comprehensive protocols that cover the entire lifecycle of information—from collection and transmission to storage and usage. These measures ensure the protection of privacy for employees, customers, suppliers, and other stakeholders while minimizing the risk of data breaches. To further enhance security, the Company conducted regular emergency drills and backup restoration exercises, testing the effectiveness of its contingency plans. These activities improved emergency response capabilities, ensuring quick system recovery in critical situations and reducing business disruptions and data loss.

In 2024, the Company maintained a strong cybersecurity stance, with no incidents of information security breaches.

Information security emergency response measures

- Enhance emergency response documentation, rules and regulations, and develop emergency response plans and strategies.
- Regularly evaluate and revise emergency response plans and strategies, clearly define the roles and responsibilities of team members during incidents, and conduct regular emergency response drills.

Data recovery strategy

- Enhance the current backup and recovery strategy to ensure accuracy and reliability; conduct regular backup restoration drills.
- Enhance the backup system to minimize vulnerabilities in data storage and backup.
- Develop documented backup and recovery strategies.

Safety Awareness and Education ▼

The Company actively promotes a safety-conscious culture through engaging initiatives like Occupational Disease Prevention Awareness Week, Work Safety Month, and First Responder training. These programs aim to enhance employees' understanding of safety and reinforce their responsibility towards it. Leveraging platforms such as the internal OA system, the company website, digital displays, and the WeChat Official Account, the Company has successfully strengthened its safety awareness campaigns, creating a sustainable framework for ongoing safety improvements.

2024

The Company and its subsidiaries have conducted safety education and training sessions, reaching over **17,547** participants.



Shenzhen Energy Environment conducts emergency rescue knowledge training.



Shenzhen Energy Gas Investment carries out gas safety publicity.

Innovative Smart Energy

Innovation System Development ▾

•Refining Innovation Mechanism

The Company has enhanced its innovation framework by implementing the *Implementation Guidelines for Scientific and Technological Innovation (2024-2030)* and launching a three-year strategic plan for key technology development. The focus is on areas such as CCUS, hydrogen energy, energy storage, marine energy, and digital intelligence services. These initiatives aim to boost technological capabilities and drive industrial growth. In 2024, the Company introduced a "Challenge and Command" mechanism to coordinate technology projects, kicking off 15 projects, including "Research on Low-Carbon, High-Efficiency Integrated Solutions and Equipment for Existing Landfill Remediation."

•Cultivating Innovation Entities

The Company is committed to fostering innovation by increasing R&D investment, driving industrial technology upgrades, and unlocking the full potential of its innovations. It focuses on strengthening its innovation platforms, establishing R&D centers in key areas like low-carbon power, environmental protection, and smart energy. These centers are dedicated to research in energy conservation, emission reduction, sludge treatment, and solid waste management, all supported by 15 dedicated innovation platforms.

In 2024, the Company established Shenzhen Energy Innovation Technology Co., Ltd. as its corporate-level S&T innovation center. Additionally, Shenzhen Energy Bazhou Gas Co., Ltd. was recognized as a new National High-Tech Enterprise, bringing the total number of National High-Tech Enterprises within the Company to five, including Shenzhen Energy Environment, Shenzhen Energy Resource, Huizhou Gas, Shenzhen Energy Smart Energy, and Bazhou Gas. Notably, Shenzhen Energy Environment was also honored by the SASAC of the State Council as a "Sci-Tech Reform Demonstration Enterprise" and a "World-Class Specialized and Innovative Demonstration Enterprise."

Industrial sector	Name of innovation carrier platform
Low-carbon Electricity	Guangdong Ultra-Supercritical Energy Conservation and Emission Reduction Engineering Research Center
	Hebei Provincial Enterprise Technology R&D Center
	Guangdong Provincial Engineering Research Center for Coal and Sludge Co-Combustion Power Generation
	Sludge Co-Combustion Power Generation Engineering Technology Research Center
	Baoding Clean and Efficient Thermal Power Generation Technology Innovation Center
Ecological and Environmental Protection	Guangdong Provincial Engineering Technology Research Center for Clean and Efficient Urban Solid Waste Treatment and Resource Utilization
	Guangdong Provincial Engineering Technology Research Center for Zero Discharge Treatment and Resource Utilization of Industrial Wastewater
	Shenzhen Municipal Solid Waste Treatment Engineering Laboratory
	Engineering Laboratory for Zero-Discharge Treatment and Resource Utilization of High-Salinity Wastewater
	Energy and Environmental Protection Enterprise Technology Center
	Urban Waste-to-Energy Public Technical Service Platform (Co-constructed)
Smart Energy	Postdoctoral Innovation Practice Bases (2)
	National Energy Storage Technology Industry-Education Integration Innovation Platform (Co-constructed)
	Smart Low-Carbon Construction Engineering Technology Innovation Center, Ministry of Housing and Urban-Rural Development (Co-constructed)

•Scientific and Technological Achievements

In 2024, the Company was granted 248 patents, including 32 invention patents, 212 utility model patents, and 4 design patents. It also registered 59 software copyrights. By the end of the year, total number of authorized patents reached 971, comprising 87 invention patents, 863 utility model patents, and 21 design patents. Additionally, the Company secured 102 PCT international patent priorities, registered 215 copyrights, and received 79 scientific and technological awards at various levels.

Time	Project	Awards	Awarding Unit
January 2024	R&D of SDA Atomizer with High-Flow, High-Speed Gear-box Speed-Increasing Design	First Prize, Science and Technology Award by the Guangdong Environmental Sanitation Association	Guangdong Environmental Sanitation Association
June 2024	Key Technologies for Ultra-Low Emission Control in Solid Waste Incineration Processes	Second Prize, Scientific and Technological Progress Award in Environmental Protection Science and Technology Awards	Chinese Society for Environmental Sciences
November 2024	Low-Carbon, Full-Scale Treatment Technology and Process System for Food Waste	Second Prize, Scientific and Technological Progress Award, China Association of Urban Environmental Sanitation	China Association of Urban Environmental Sanitation
December 2024	Research and Application of Key Technologies for Green and Low-Carbon Production in Photovoltaic Agriculture	First Prize, Sustainable Technology Award, Jiangsu Energy Research Society	Jiangsu Energy Research Society
October 2024	Key Technologies for Ultra-Low Emission Control in Municipal Solid Waste Incineration Processes	First Prize, Guangdong Electric Power Science and Technology	Guangdong Society for Electrical Engineering

Case

The Company successfully launched the trial operation of the world's first 100 kW seawater hydrogen production unit. This groundbreaking project was recognized as a 2024 Guangdong Province Application Scenario Classic Case by the Guangdong Provincial Development and Reform Commission and was featured in a special report by CCTV's *News Broadcast*.



The key technology for ultra-low emission control in solid waste incineration processes was awarded the First Prize at the 2024 Guangdong Provincial Environmental Protection Science and Technology Awards.



Driving Digital Transformation ▾

In the midst of the digital transformation wave, the Company has fully embraced its digital intelligence service strategy, establishing a comprehensive framework to drive its integration. This approach positions digital intelligence services as the core engine of the Company's business, aiming to maximize economic, social, and environmental value while supporting sustainable development in the energy sector.

• Managing Digital Transformation

The Company has officially launched its Corporate Treasury Management System, making it the first state-owned enterprise in Shenzhen to do so. Additionally, it has successfully deployed a self-developed digital intelligence management system, streamlining financial sharing and procurement management platforms, including material coding and workflow processes.

• Industrial Digital Transformation

The Company is driving the development of smart thermal power plants, with modular systems going live at the Mawan, Dongbu, and Guangming power plants. The "Digital Intelligence Middle Platform – Smart Applications," developed by Smart Energy Company, has entered trial operation at the Dongbu Power Plant. The environmental protection digital intelligence center has completed its analysis and design phases and is now progressing into implementation and development. In the gas sector, the Company has started building a comprehensive smart gas operation management system to enhance centralized control over gas operations.

Case

The "One Dashboard Per Enterprise 2.0" system has been officially launched and put into operation

Building on the strengths of Version 1.0, the system has been restructured to feature sections such as Company Overview, Industrial Layout, Low-Carbon Power, Environmental Protection, Integrated Gas, and Digital Intelligence Service. It provides an intuitive and dynamic presentation of the Company's profile, industrial development, operational metrics, production data, and key projects. This structure enables comprehensive insight, precise monitoring, panoramic visualization, and intelligent analysis at the system level, greatly enhancing the Company's digital intelligence management capabilities.



• Exploration of "Energy + AI" Applications

The Company is actively monitoring emerging technologies and exploring the integration of "Energy + AI" in various scenarios.

- The Company established the Shenzhen Energy-Huawei AI Innovation Lab.



- Bazhou Gas integrates IoT, big data, and AI algorithms into its Smart Gas Dispatch Center, enabling real-time monitoring and intelligent early warning systems. This has greatly improved the efficiency of emergency responses. In 2024, the system successfully identified and addressed 47 gas leak safety hazards through early warnings.
- The Company is actively conducting feasibility studies for a Green Power AI Computing Center, which has successfully passed an expert review by Shenzhen Development and Reform Commission's National Innovation Center.

Ensuring Stable Energy Supply

Ensuring Stable Power Supply ▾

The Company views stable energy supply as a core social responsibility and strives to fulfill this mission. During peak demand periods, extreme weather events, and major holidays, the Company guarantees high-quality power supply by maintaining full operational readiness and adhering to the highest standards. This approach reflects the core values and responsibilities of a state-owned enterprise and provides a strong energy foundation for sustainable economic and social development.

•Meticulously Planning for Winter Peak Demand Supply Security

In December 2024, the Company held a special meeting to discuss the security of winter peak power supply and the flexibility of retrofiting coal-fired power units. The session reviewed the operational status of its subsidiaries, with a focus on production, fuel supply, and ongoing projects. Detailed plans were made to ensure a stable power supply during the 2024 winter peak demand. By optimizing energy production and distribution, the Company improves the stability, reliability, and efficiency of its supply, reduces energy loss, and upholds its commitment to responsible supply and green development.

•Enhancing Power Supply Resilience Against Extreme Weather

The Company has proactively developed specialized plans to address potential power shortages caused by extreme weather conditions, including low temperatures, snow, cold waves, and frost. Comprehensive response measures have been put in place, such as strengthening emergency response teams and enhancing stockpiles of emergency equipment and supplies. These actions enhance the Company's ability to handle power emergencies effectively. Additionally, fuel supply companies ensure the availability of fuel by improving coordination between gas supply and electricity demand, securing the fuel needs of power plants during critical periods.

Managing Supply Chain Risks ▾

The Company places a high priority on the resilience and security of its fuel supply chain. Through a diversified supply system and the implementation of effective, science-based measures, it ensures a stable energy supply while actively managing and mitigating supply chain risks.

Taking responsibility to ensure fuel supply

Despite challenges posed by fluctuating electricity and fuel prices, the Company remained committed to its responsibilities, ensuring coal inventories stayed within state-mandated levels to stabilize power generation. For new projects requiring gas pipelines, the Company worked closely with various stakeholders to successfully complete the direct supply pipeline for the Guangming Power Plant and the dedicated gas line for Phase II of the Eastern Project. In 2024, there were no social disruptions caused by fuel supply issues, underscoring the Company's commitment to energy security.

Optimizing structure to enhance supply efficiency

In response to the tight natural gas supply, the Company ensured gas availability for new projects by employing strategies such as gas source substitution and coordinating alternative supply channels.

Enhancing internal synergy for efficiency

The Company has enhanced its coal supply strategy by promoting the interconnectivity of coal yards at the Heyuan coal-fired power base, enabling the blending of cost-effective, low-calorific-value coal. This facilitates better resource sharing between inland and seaborne coal, while rationalizing coal utilization plans based on peak and off-peak power generation characteristics to reduce reliance on high-priced market coal. For natural gas, the Company has optimized its internal gas dispatch mechanisms, moving beyond traditional "point-to-point" sales models. In 2024, this approach led to a gas volume balancing of 211 million cubic meters, significantly improving supply chain efficiency.

Case

Ensuring power supply during peak hours in summer

Since the start of summer, regions across the Xinjiang Uygur Autonomous Region have been experiencing extreme heat, putting significant strain on power equipment, particularly transmission lines. Shenzhen Energy's Xinjiang Regional Branch, along with its power plants, stations, and ongoing projects, has responded swiftly to this challenge, taking on the crucial responsibility of ensuring a stable power supply during peak summer demand. By enhancing equipment and facility inspections, potential safety hazards were quickly identified and addressed. Proactive hazard investigations and corrective actions were taken, establishing a robust long-term mechanism for hazard management. Through these comprehensive efforts, we have effectively ensured a stable local power supply, providing reliable energy support for the socio-economic stability of the Xinjiang region. This highlights our Company's commitment to safeguarding energy supply and maintaining social stability in the face of challenges posed by extreme weather conditions.

Safe Fuel Transportation ▾

The Company's thermal power generation units use coal and natural gas as their primary fuel sources. Coal is mainly sourced from Shanxi, Shaanxi, and Inner Mongolia. Taking into account the specific characteristics of each coal-fired power plant, as well as factors such as supply urgency, weather conditions, and cost-effectiveness, the Company adopts flexible transportation methods. While ensuring a safe and stable fuel supply, it also strives to increase the share of green transportation. Natural gas is primarily sourced from suppliers like CNPC and CNOOC, with pipeline transportation provided by these suppliers.

Maritime transportation

The Company's self-owned fleet, long-term contracted capacity, and fixed-route vessels form the backbone of its coal transportation network, ensuring a secure and reliable supply. Market-chartered vessels supplement temporary capacity needs, guaranteeing comprehensive and stable coal transportation operations.

In line with safety standard and ship safety management systems, the Company actively monitors vessel movements and extreme weather conditions, such as typhoons, heavy fog, and rainstorms. Timely risk assessments are conducted, early warnings issued, and preventive safety measures implemented, ensuring zero safety incidents with liability throughout the year.

Transportation and transfer

The coal transportation for Heyuan Electric Power Plant uses a sea-rail combined transport model. By strengthening coordination with the Guangzhou and Huizhou transshipment ports and railway authorities, the Company has improved transshipment efficiency, ensuring a more efficient and secure coal supply.

Coal yard storage

Coal stacking areas are designed based on the coal supply plan and boiler blending needs. The Company optimizes coal yard operations with dynamic, science-based management, ensuring strategic planning and efficient use of storage space. In 2024, there were no significant incidents of spontaneous combustion in the coal yard, and annual yard loss remained within acceptable limits.

Building a Diverse Energy Mix ▾

•Steadily Advancing Integrated Gas Business

The Company is steadily progressing in the development of its integrated gas business, establishing and refining a robust upstream-downstream industrial chain.

Upstream operations

The Company has taken proactive steps to optimize natural gas procurement and supply. By closely monitoring global market trends and collaborating with international suppliers, it has secured reliable gas sources to ensure steady fuel supply to its power plants. Additionally, the Company leverages shareholder support to strengthen long-term contracts, mitigate market price risks, and diversify its gas supply structure by developing a secondary supplier base.

Midstream operations

The Company leverages its resource pool to facilitate coordinated swaps between power plants and urban gas sources, enhancing resource flexibility. It optimizes internal gas scheduling, establishes relevant policies, and implements unified settlement rules to streamline operations and eliminate internal scheduling barriers.

Downstream operations

The Company is actively expanding into external markets, strengthening its agency procurement model by offering tailored solutions that build customer loyalty and increase natural gas trade volumes. It is also growing its presence in the liquid market, exploring multiple sales channels such as joint procurement, full-vessel procurement, volume and price locking, platform auctions, and spot sales. These initiatives aim to strengthen customer relationships and expand the Company's market footprint.

Annual gas sales volume reaches
3.345 billion cubic meters

Serving nearly
1.13 million households

Nearly
23,000 industrial
and commercial users

The gas pipeline
network extends over
7,718 km



Signed a long-term LNG purchase and sales agreement with Glencore



Datong Natural Gas, in collaboration with Shenzhen Energy Gas Investment, successfully completed the first ship unloading operation at the Pipe China's Diefu terminal.

Building a New-form Integrated Energy System

With the ongoing advancement of the "carbon peaking and carbon neutrality" strategy, the energy landscape is undergoing a significant transformation from being resource-driven to technology-driven. This shift is creating a more diversified energy mix, with electricity consumption at the forefront. Shenzhen Energy is fully aligned with this trend, leveraging its deep industry expertise to accelerate the development of a high-quality, diversified integrated energy system.

1

Leveraging new energy technologies and digital energy solutions, we harness the potential of "macro-energy" and collaborate with both internal and external R&D resources. Starting with buildings, factories, and industrial parks, we provide energy-saving retrofits, performance optimization, and other services to enhance efficiency for enterprises.

2

The Company has been actively developing integrated energy solutions for industrial parks, large communities, and other scenarios. By leveraging energy-efficient retrofits and Energy Performance Contracting (EMC) models, we provide clients with low-carbon and zero-carbon smart energy solutions.

3

Through a "leading R&D + ecosystem collaboration" model, Shenzhen Energy drives technological innovation and strategically expands into key areas such as energy storage, hydrogen energy, and smart power plants. We've developed energy management systems (EMS) and system integration products for energy storage, while also investing in and building multi-scenario applications that support the growth of green, low-carbon business models and industries.

4

The Company has established comprehensive energy storage product, R&D, and EPC implementation systems to strengthen operational qualifications. Our goal is to develop mature business models and revenue streams, with a focus on smart energy, advanced energy storage, and smart power plants, driving large-scale breakthroughs in these areas.

Ensuring Project Quality

Shenzhen Energy upholds the philosophy of "high-standard design, high-quality construction, and high-level operation", consistently striving for excellence in project delivery. The Company has introduced equipment and subcontractor management guidelines to standardize operations. Through initiatives such as quality review meetings, 13 key achievements have been identified, and targeted training has been conducted. To ensure top-tier design quality, the Company rigorously reviews preliminary designs for directly managed projects and implements general layout drawing reviews for major projects, while closely managing design changes. The supervision center conducts quality inspections and compliance certifications, carrying out 38 specialized inspections across 18 projects and ensuring necessary rectifications. A notification and interview mechanism holds responsible parties accountable for quality issues, such as pile foundation defects, and enforces corrective actions. The Company has also refined its supplier performance evaluation system, and incorporated detailed evaluation criteria for equipment contractors.

2024

As a result, the Company's engineering quality control system has been proven highly effective, with all projects achieving a **100%** qualification rates.

Medium-to-large projects have successfully achieved the target of **"zero incomplete work, zero defects, and zero trace of infrastructure"** upon completion and commissioning.

Case

Engineering Quality Training

As part of the 2024 National Quality Month campaign, themed "Strengthening Quality Support, Building a Quality Nation Together," the Company organized a specialized training session within the Shenzhen Energy Group's Quality Month activities. The session featured experienced experts who provided lectures on safety and quality management in power engineering construction projects, as well as practical strategies for resolving project settlement disputes. The program aimed to enhance construction management professionals' theoretical knowledge, practical skills, and strategic thinking, while reinforcing their understanding of compliance in power construction projects.





Green Transformation

Advancing Sustainable, Low-carbon Development

Shenzhen Energy adheres to its mission of 'Create a Better New Life with Green Energy', advancing a holistic green transformation through institutional innovation, technological breakthroughs, and industrial upgrading—a multi-pronged approach to drive sustainability across all dimensions. The Company has established and strengthened an environmental compliance management system to regulate pollution emissions in line with legal requirements. It has implemented energy-saving upgrades, improved water resource utilization, vigorously developed a circular economy, and optimized resource management. The Company has consistently enhanced its competitive edge in the ecological and environmental protection sectors, actively advancing the fight against pollution. In response to climate change, the Company has built a diversified low-carbon energy matrix, steadily increasing the share of clean energy in its installed capacity. Through technological innovation, it has driven the low-carbon transformation of traditional energy sources, contributing the "Shenzhen Energy Model" to the industry's low-carbon transition. This reflects the Company's commitment to ecological responsibility as a modern energy enterprise.

Shenzhen Energy
and the SDGs:



Advancing Green Management

Refining Management Mechanisms ▾

•Environmental Management System

The Company fully complies with regulations such as the *Environmental Protection Law of the People's Republic of China*. Led by the Chairman, environmental protection efforts are overseen with clear responsibilities assigned to departments and dedicated positions for monitoring and planning. The Company has established the *Environmental Protection Management Standard*, creating a comprehensive framework for managing environmental initiatives. This includes environmental information reporting, emergency response plans for pollution incidents, and energy conservation management. The system covers all stages of environmental protection from planning and implementation to assessment and improvement. It sets annual targets for energy conservation and environmental protection, outlines the structure of environmental protection team and establishes procedures for handling unexpected environmental incidents. Additionally, it includes specific evaluation criteria to assess environmental performance.

•Environmental Management Goals

Leaders of all affiliated companies are required to sign environmental protection responsibility agreements. Each year, key energy consumption targets are set based on their production plans. These include metrics such as standard coal consumption for power supply, direct plant power consumption rate, overall water use efficiency, and critical environmental emissions like sulfur dioxide, nitrogen oxides, and particulate matter. This approach motivates affiliated companies to optimize processes, conserve energy, reduce waste, and minimize pollutant emissions.

•Environmental Risk Management

All power generation subsidiaries have developed environmental incident emergency response plans in accordance with the Ministry of Ecology and Environment's regulations. These plans have been reviewed by expert panels, updated as needed, and filed with the appropriate environmental authorities.

In 2024, each subsidiary conducted environmental hazard assessments tailored to their specific operations. They appointed responsible individuals for identified hazards, set clear deadlines for corrective actions, and organized prompt responses. A closed-loop management system was implemented to ensure the continuous and reliable operation of environmental protection facilities.

•Environmental Impact Management

The Company adopts a development philosophy that balances high-quality project construction with ecological and environmental protection. In full compliance with national and industry laws and regulations, it conducts environmental impact assessments for its projects, implements the recommendations from these assessments, and strives to develop energy projects that are clean, efficient, safe, and environmentally friendly.

Approval Phase

All construction projects adhere to national industrial policies, with site selections aligned with local development plans. Ecological and environmental feasibility studies are conducted to avoid environmentally sensitive areas and conservation zones, with protective measures put in place. Environmental impact assessments are carried out, and all necessary approvals or filings are obtained from the relevant authorities.

Construction Phase

To strengthen environmental management for projects, the Company assigns both full-time and part-time personnel to oversee environmental compliance. It signs environmental responsibility agreements with construction and supervision units to ensure key environmental duties are met. The Company also ensures that environmental protection funds are properly allocated and strictly prohibits their misappropriation or cancellation. Additionally, the Company enhances engineering quality supervision to ensure environmental protection facilities pass required acceptance inspections.

The Company conducts specialized research and feasibility studies on environmental protection technologies, dedicating resources to the development and application of new technologies focused on the "Four Savings and One Environmental Protection" approach (energy, land, water, material conservation, and environmental protection). This ensures that the proposed pollution prevention measures are technically mature and reliable.

Design Phase

The Company strictly adheres to the pollutant discharge permit management system and the online monitoring system, ensuring the seamless operation of environmental protection facilities and production equipment. This guarantees the stable and compliant discharge of various pollutants. In compliance with the law, the Company discloses environmental information, conducts inspections and management of potential environmental hazards, and develops emergency response plans for environmental incidents. These plans are filed with authorities, and emergency rescue drills are carried out to minimize the impact of unforeseen environmental events.

Production and Operation Phase

•Environmental Management Assessment

The Company has reinforced its environmental performance assessments of affiliates by establishing dedicated environmental departments and specialized roles for monitoring and planning. It has integrated environmental responsibility into the KPI management system and implemented a strict "one-vote veto" policy for environmental incidents. These measures ensure ongoing improvements in environmental oversight and management across all subsidiaries.

•Environmental Management System Certification and Credit Evaluation

By the end of 2024, Shenzhen Energy Environment and its affiliates, including Bao'an, Nanbu, Yantian, Dongbu, Wuhan, Longyan, Chaozhou, Guilin, Xiangqiao, and Renqiu, a total of 11 entities, had obtained ISO 14001 Environmental Management System certification. Additionally, 11 other entities, including Bao'an, Nanshan, Yantian, Dongbu, Wuhan, Longyan, Shanxian, Guilin, Yutai, Dingtao, and Yangshuo, received the "Green Card" or "A" grade credit rating for their environmental responsibility.

•Environmental Management Achievements

In 2024, the Company successfully completed several ecological civilization initiatives in Shenzhen and was recognized as an Outstanding Unit in Shenzhen's Ecological Civilization Assessment for the fifth consecutive year. Environmental protection facilities across its affiliated enterprises operated smoothly, with pollutant emissions consistently meeting regulatory standards. There were no environmental liability incidents, and the Company did not face any significant administrative penalties or criminal liabilities.

The Company has been awarded the title of Outstanding Unit in Shenzhen's Ecological Civilization Assessment for five consecutive years

Emission Management in Compliance with the Law ▼

•Wastewater Management

All power generation facilities affiliated with the Company are equipped with wastewater treatment and recycling systems. The treated wastewater is reused for irrigation, landscaping, and cleaning plant grounds. In coal-fired power plants, it's also used for dust suppression in coal yards, cooling coal piles, and cleaning conveyor belts. Both Heyuan Electric Power Plant and Baoding Electric Power Plant have achieved zero wastewater discharge. Notably, the Heyuan Electric Power Plant is the first coal-fired power plant in China to reach zero wastewater discharge, effectively eliminating wastewater, sludge, and crystalline salt discharge.

•Waste Gas Management

The Company fully complies with national and local air pollution prevention policies, regulations, and standards. It takes a comprehensive approach to managing flue gas emission, closely monitoring sulfur dioxide and nitrogen oxide emissions, and collaborating with regulatory authorities to meet pollution reduction targets. In 2024, the Company's environmental protection systems operated safely and reliably, with excellent emission results and a 100% compliance rate in pollutant monitoring. Desulfurization systems at all coal-fired power plants operated at full capacity, achieving a 100% compliance rate in flue gas emission monitoring. The average annual concentrations of nitrogen oxides, sulfur dioxide, and particulate matter all met the national ultra-low emission standards. Emission indicators at all waste-to-energy plants exceeded national, European, and Shenzhen standards.

•Hazardous Waste Management

The Company's coal-fired power plants fully comply with environmental protection regulations by registering contracts on the government's solid waste platform and maintaining both printed and electronic records for waste transfer manifests. A comprehensive solid waste management system is in place, including emergency ash silos as required. Regular inspections and emergency drills are conducted to manage general solid waste hazards. Qualified third-party contractors are hired to transport and legally process the waste.

For its waste-to-energy incineration projects, the Company handles hazardous wastes such as waste mineral oil, spent lamps, waste batteries, and paint containers. It registers plans and contracts on the government's solid waste platform, tracks inbound and outbound waste, manages transfer manifests, and submits monthly, quarterly, and annual hazardous waste declarations. Qualified third-party contractors handle disposal. The Company has established a dedicated hazardous waste storage facility, along with a comprehensive hazardous waste management system and disposal standards. Specialized staff oversee the smooth operations of waste inventory, transportation, transfer, and disposal.

•Noise Pollution Management

All power generation facilities within the Company have implemented noise reduction measures, including mechanical sound insulation, to minimize noise impact at facility boundaries. Each facility strictly adheres to pollutant discharge permit regulations and conducts regular noise monitoring. In 2024, all facilities' monitoring results met the required noise limits.

Fostering an Eco-conscious Culture ▼

•Practicing Green Office Practices

The Company has established a long-term management system focused on conservation, integrating energy-saving and carbon-reduction principles into its operations and business development. It actively promotes environmental awareness among employees and fosters a new office culture centered around simplicity, moderation, and sustainability.

Energy conservation

To integrate clean energy into its power system, the Company has installed rooftop photovoltaic panels and vertical-axis wind turbines. It promotes a "turn off lights and power down when leaving" policy, complemented by manual inspections to minimize energy waste. Energy-efficient LED lighting is used throughout the office, and sensor-activated lights are installed in low-traffic areas. Office air conditioning is set to 26°C to further reduce energy consumption.

Water conservation

Water-saving fixtures are fully installed in restrooms, with clear conservation labels and reminders placed near taps and appliances to encourage water-saving habits.

Paper conservation

The Company has established a "paperless" meeting system and promotes double-sided printing and the reuse of scrap paper in daily operations to reduce paper consumption.

Green travel

Employees are encouraged to prioritize green commuting options, such as public transportation, walking, and cycling.

Green canteen

A green and economical canteen has been built. Meal quantities are dynamically adjusted with scientific meal planning based on daily demand to eliminate food waste.



•Emphasis on Environmental Education and Publicity

The Company has developed a science education platform tailored to its business, implementing the "Science Education Program" through a dual approach of "bringing the public in" and "taking education to the public." By opening science education centers, such as power plants and energy eco-parks to the public, the Company provides free visits and reservation details via its official WeChat, websites, and mainstream media. Through initiatives like open days, the public is invited to tour key sites and learn about energy conservation, environmental protection, and safe electricity use. These efforts aim to shift the public's traditional "Not In My Backyard" (NIMBY) view toward essential urban facilities like waste treatment plants and build a positive corporate image. Additionally, the Company organizes educational activities in schools and communities to raise scientific literacy, promote green and low-carbon development, address public concerns, and foster stronger community engagement, creating a mutually beneficial relationship.



Science popularization activities organized by Mawan Electrical Power Plant







Science education activities by Shenzhen Energy Environment

Optimizing Resource Utilization

Energy Management System ▾

The Company enhances operational management, streamlines workflows, and prioritizes equipment maintenance and energy-saving technological upgrades. It invests in energy-efficient technologies, actively explores conservation opportunities, and continuously improves overall energy efficiency. In 2024, the Company completed 27 energy-saving and consumption-reducing renovation projects, investing CNY 74.65 million to replace production, lighting, and temperature control equipment that did not meet national energy efficiency standards.

Indicator Name	Specific Value	Year-on-Year Change
Standard coal consumption for thermal power supply	276.6g/kWh	 decreased by 5.44g/kWh
Direct auxiliary power consumption rate of thermal power plants	4.06%	 decreased by 0.19%
Standard coal consumption for gas-fired power supply	236.67 g/kWh	 decreased by 1.93 g/kWh
Standard coal consumption for coal-fired power supply	301.36 g/kWh	 decreased by 1.23g/kWh

Water Resource Utilization ▾

The Company emphasizes robust water resource management, with the Chairman personally signing environmental protection responsibility agreements with heads of all subsidiaries, setting clear water consumption targets. Each production facility has its own management system in place, creating a long-term framework for energy conservation and consumption reduction. The approach follows a structured, hierarchical system where leadership teams and working groups oversee all processes, from water intake and usage to wastewater treatment, recycling, and equipment maintenance.

•Water Resource Risk Assessment

The Company conducts annual specialized performance evaluations to optimize water resource usage and minimize associated risks.

•Reclaimed Water Utilization

The Company continues to expand the use of reclaimed water across its operations. At eligible production sites, reclaimed water is used for flushing, ground cleaning, and dust suppression at construction sites. It also explores using reclaimed water for equipment water supply. For example, the Guangming Gas Turbine Power Plant uses reclaimed water as makeup water for its circulating cooling systems. Shenzhen Energy Environment projects operated by plants such as those in Wuchang, Aohan Banner, Ningcheng, and Bayan, also use reclaimed water for boiler makeup water. This approach maximizes the environmental and resource-saving benefits of reclaimed water.

Case Reclaimed Water Utilization Project at Guangming Gas Turbine Power Plant

The Guangming Gas Turbine Power Plant relies on reclaimed water from the Gongming Water Reclamation Plant as its primary water source. The water undergoes specialized treatment before being used in the plant's circulating cooling system, with the discharged water then directed to the municipal sewage pipeline. This initiative is expected to save 5 million tons of tap water annually, helping to address water scarcity in the Guangming District. By maximizing the environmental and resource benefits of reclaimed water, the project not only reduces water costs but also ensures a stable water supply for the plant. In August 2024, the reclaimed water pump station at the Gongming Water Reclamation Plant officially began supplying water, marking Shenzhen's largest reclaimed water utilization project and setting a benchmark for water resource recycling.



Developing a Circular Economy ▾

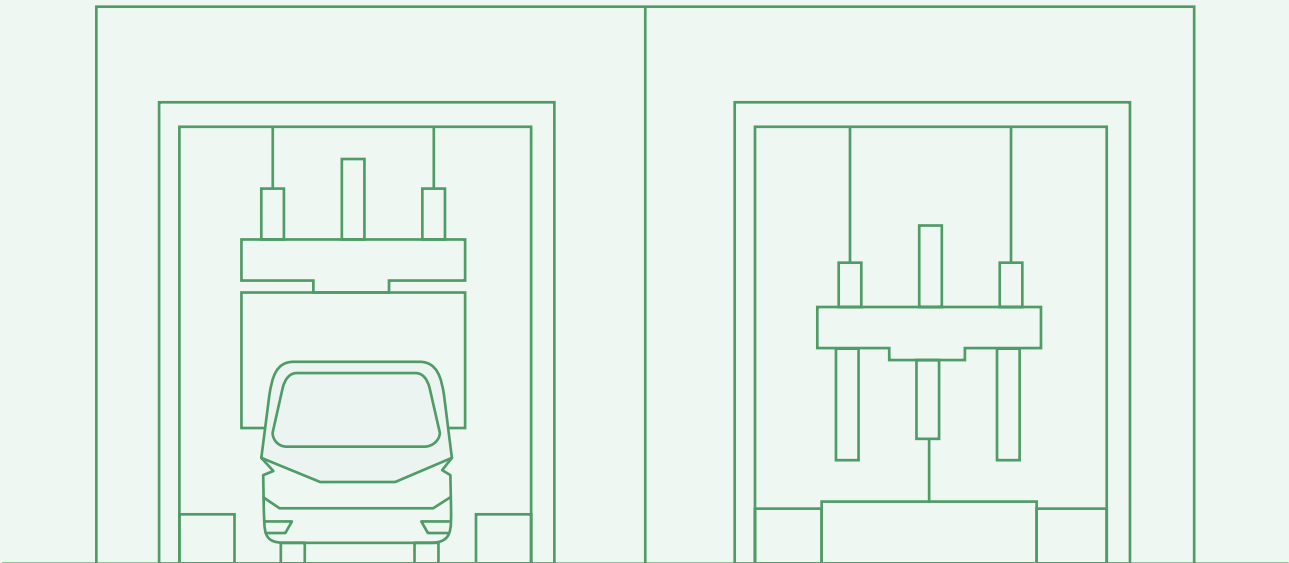
The Company actively supports the circular economy by leveraging its strengths in waste management, aiming to foster resource efficiency and environmental sustainability. It operates waste recycling and disposal services, while promoting innovative projects such as green sorting centers, renewable resource equipment, and industrial research on resource regeneration. The Company is also preparing projects for the classified disposal of low-value recyclables in Shenzhen, collaborating with government authorities to create effective guidance and policies for recyclable materials.

In January 2024, the Company successfully launched the pilot green sorting center project in Ebu Town, Shenzhen-Shanwei Special Cooperation Zone. Over its first year, the center processed 106 tons of recyclables, effectively sorting and packaging them. This initiative not only achieved significant progress in recycling but also established a scalable model for recyclable resource management, combining vehicles and storage facilities for a more efficient system. The center is now recognized as a benchmark for resource recycling, serving as a replicable model for other regions.



Case Independent Development of Intelligent Equipment Dedicated to Renewable Resources

The Company has developed two proprietary intelligent devices to enhance the processing of renewable resources: advanced disposal systems and compact waste sorting units. This R&D initiative integrates advanced technologies such as AI, robotics, centralized sorting, miniaturization, and new energy solutions. These innovations aim to boost efficiency, improve adaptability across various scenarios, and reduce labor requirements.



Protecting the Ecological Environment

Environmental Governance Initiatives ▼

The Company continues to strengthen its ecological and environmental protection capabilities by expanding both vertically and horizontally within the industry. It broadens its scope in waste recycling (sanitation), treatment, and leachate management while also exploring specialized areas like hazardous waste treatment and industrial wastewater management. Additionally, the Company is venturing into new fields such as food waste disposal and landfill soil remediation, all contributing to improved urban environmental governance.

In 2024, the focus remained on being "technology-driven" and "efficiency-first," optimizing operations with a keen emphasis on equipment management, hazard mitigation, and process improvement. To enhance production efficiency, daily "5 Whys" analyses were conducted on areas including energy consumption, water use, environmental materials, and compressed air consumption, fostering continuous operational improvement.

As of the end of 2024

Furthermore, **12** of the Company's production units have successfully received qualifications for industrial solid waste treatment, and **10** production units have also achieved co-incineration treatment of municipal sludge.



Case New Progress in Landfill Soil Remediation Business

The Company made significant progress in June 2024 by securing the general contracting project for the environmental remediation of Shenzhen Yulong Landfill. This project, which integrates environmental remediation with construction, is the first of its kind in a central urban area. It will reclaim 160,000 square meters of land for Shenzhen and represents a major milestone in the Company's efforts to lead the development of green and smart environmental remediation solutions in China.



Implementing Ecological Protection ▼

The Company places a strong emphasis on ecological and environmental protection, focusing on reducing the environmental impact during construction. It prioritizes balanced excavation and backfilling to minimize damage, with a commitment to preserving local wildlife habitats and biodiversity. Through large-scale turf planting and greenbelt development, the Company enhances the aesthetics and sustainability of project areas and public spaces. Its approach is aligned with regional ecological governance, reinforcing its commitment to responsible, sustainable growth.



Case "PV+" Ecological Base Construction

In Shule County, Kashgar Prefecture, Xinjiang, the Shule PV + Energy Storage Power Station has made impressive strides with its "PV + Ecological Base" initiative. Alongside strong operational and maintenance management, the station has paved the way for a balanced approach where energy production and ecology thrive together. Once fully operational, the solar panels will not only generate power but also serve as a barrier against wind, dust, and dune movement. By absorbing sunlight, the panels lower ground temperatures, reduce soil moisture evaporation, and improve water retention. Moreover, crops like rapeseed have been planted between the panels and on unused land within the site, enhancing land use efficiency while helping to stabilize the sand. This innovative approach is a key example of integrating renewable energy with environmental conservation.

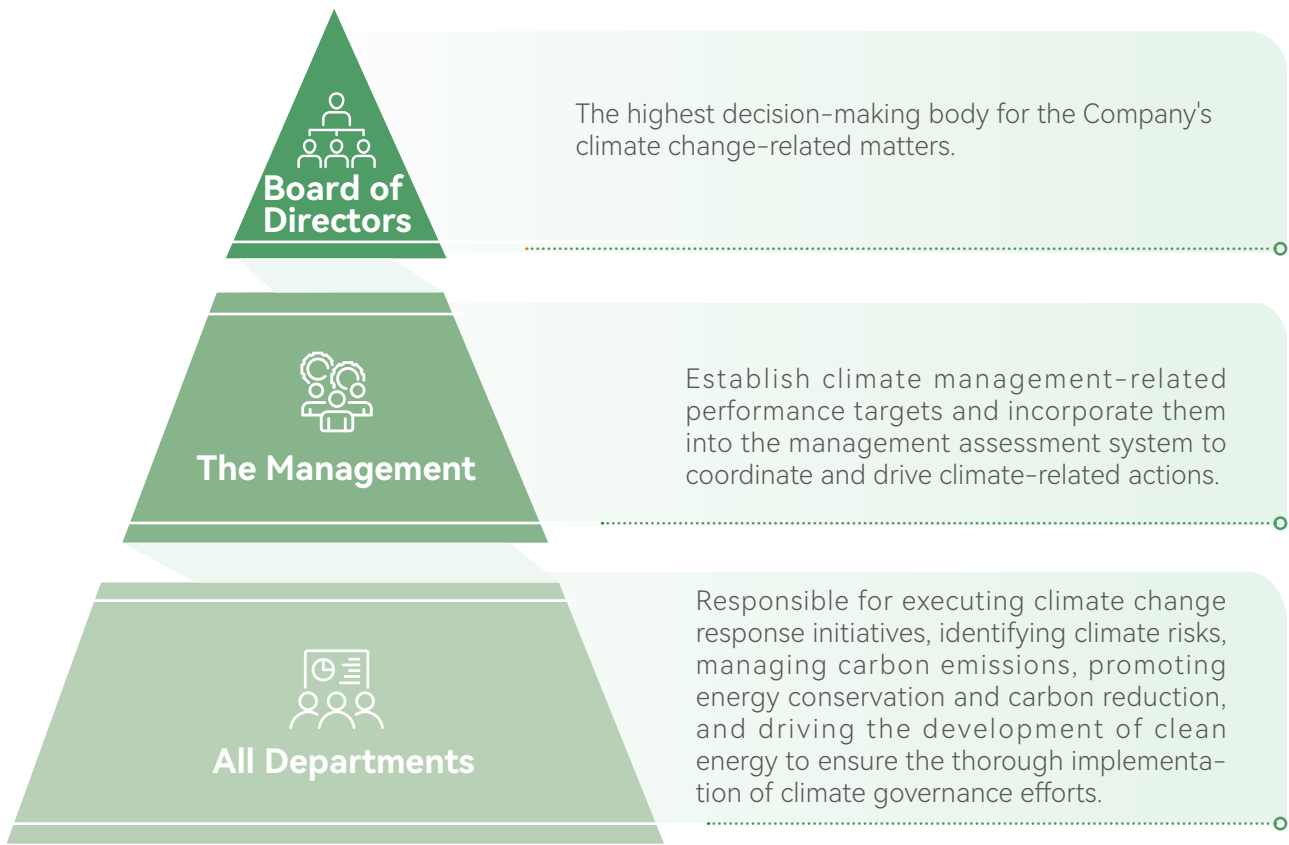


Responding to Climate Change

Shenzhen Energy recognizes the importance of addressing climate change and has taken steps to align with the Task Force on Climate-Related Financial Disclosures (TCFD) framework. This year, the Company has made significant progress in preparing for the full adoption of TCFD guidelines. These efforts include the development of a climate change risk management system and the exploration of scenario analysis methods to evaluate potential climate-related financial impacts.

Enhancing the Climate Governance System ▼

Shenzhen Energy actively aligns with the 1.5°C temperature rise target set by the *Paris Agreement* and the *State Council's Action Plan for Carbon Dioxide Peaking Before 2030*. In accordance with the *International Financial Reporting Standards Sustainability Disclosure Standard No. 2—Climate-related Disclosures*, the *Shenzhen Stock Exchange Self-Regulatory Guidelines for Listed Companies No. 17—Sustainability Report (Trial)*, and the *Reference Indicator System for ESG Special Reports of Central State-Owned Enterprise-Controlled Listed Companies*, the Company integrates climate change governance into its broader ESG governance framework and internal policies.



Identification of Climate Risks and Opportunities ▼

Shenzhen Energy categorizes climate-related risks and opportunities based on the *Recommendations from the Task Force on Climate-related Financial Disclosures (TCFD)*. Taking into account the unique characteristics of its industry—such as cash flow, investments, business cycles, applicable regulations, the nature of risks and opportunities, and asset lifespans—the Company defines the timeframes in which these risks and opportunities are likely to have a significant impact. "Short-term" refers to within one year (inclusive) after the end of the company's current reporting period; "Medium-term" refers to one to five years (inclusive) after the end of the company's current reporting period; "Long-term" refers to more than five years after the end of the company's current reporting period.

The Company has assessed the potential impact of various climate-related risks and opportunities on its business model, operations, development strategy, financial health, operating results, cash flow, financing methods, and costs. It has also analyzed the likelihood, scale, and potential pathways for each risk and opportunity, prioritizing them accordingly. Additionally, Shenzhen Energy has evaluated how well its strategy and business model can adapt to climate change, outlining transformation plans and actions to address both risks and opportunities. These processes are embedded within the Company's internal management framework to ensure effective management of climate impacts, risks, and opportunities.

Types of Climate-Related Risks			Risk Description	Potential Financial Impact	Countermeasures	Reporting Period	Substantiality
Transformation risks	Policy and Legal Risk	ESG Reporting Obligations	China's corporate sustainability disclosure standards are becoming more refined, placing higher ESG reporting requirements on businesses. Failing to disclose relevant information in a timely manner could expose companies to compliance risks.	Cost and Non-operating Expenses Increase	The Company regularly discloses environmental information in compliance with laws and regulations, and formulates and publishes independent sustainability reports.	Interim	High

Types of Climate-Related Risks			Risk Description	Potential Financial Impact	Countermeasures	Reporting Period	Substantiality
Transformation risks	Policy and Legal Risk	Carbon Emission Reduction Requirements and Regulation	Under the "dual carbon" goals, the company may be subject to stricter carbon reduction requirements and regulation, potentially leading to legal liabilities, regulatory measures, and property losses in the event of failure to comply with relevant regulations.	Cost Increase and Non-operating Expenses Increase	The Company is dedicated to becoming a resource-efficient and environmentally responsible organization, focused on maximizing energy efficiency and promoting recycling. It actively encourages its subsidiaries to implement energy-saving and efficiency-enhancing upgrades through strategic mechanisms, performance evaluations, and capital investments. At the same time, the Company strengthens its carbon emission reduction efforts and self-regulation capabilities to ensure compliance with policy requirements.	Interim	High
		Environmental Protection Supervision	As a major emitter of pollutants, the Company must invest additional capital and technology to comply with stricter environmental regulations, leading to higher operational costs.	Cost Increase	The Company actively adapts to the latest environmental protection policies by strengthening the management of desulfurization and denitrification system operations and equipment maintenance. It focuses on upgrading environmental technologies, improving equipment efficiency, and ensuring that all pollutant emissions meet national and local environmental standards.	Interim	High
	Technological Risk	Low-Carbon Technological Transformation	In line with dual carbon goals, companies are required to undergo a low-carbon transformation, which demands significant investments in R&D and the implementation of energy-saving and environmental technologies, resulting in additional costs.	Cost Increase	The Company is actively promoting the transition to low-carbon power, increasing the share of clean energy, and advancing the development and use of low-carbon energy technologies, including energy storage and hydrogen.	Long-term	High
		Price fluctuations of energy and electricity	International carbon emission regulations and policies could affect the cost of fossil fuels, potentially leading to higher expenses for the Company.	Cost Increase	To mitigate these risks, the Company has optimized its energy mix, diversified fuel procurement channels, implemented energy consumption management, and established a robust environmental management system.	Long-term	High
	Market Risk	Price fluctuations of energy and electricity	Currently, the national green electricity market, along with green certificates and the electricity spot market, is progressing steadily amidst ongoing power sector reforms. In this complex and volatile market environment, there are potential risks associated with fluctuating feed-in tariffs, which could create uncertainties regarding project profitability.	Revenue Decrease	The Company will closely monitor policy changes, strengthen its talent pool, and prepare for developments in green power, green certificates, and electricity market trading. At the same time, we are actively securing high-quality project resources, accelerating the development of new projects while ensuring solid investment returns. We are also implementing measures to mitigate the potential impact of changes in electricity pricing policies.	Long-term	High
		ESG Negative Events	Stakeholders, including customers and investors, are increasingly focused on environmental information disclosure. If the information provided does not meet their expectations, it could negatively impact the Company's corporate image and reputation, leading to reduced recognition in the capital markets.	Revenue Decrease	To mitigate this risk, the Company has established a comprehensive ESG management system, integrating ESG management into our risk control framework to prevent the occurrence of ESG-related issues.	Short-term	High

Types of Climate-Related Risks			Risk Description	Potential Financial Impact	Countermeasures	Reporting Period	Substantiality
Physical Risks	Short-term Risks	Typhoons and Floods	Some of the Company's project sites are at risk of typhoons and flooding. With the increasing frequency of these extreme weather events due to climate change, the Company faces greater exposure to potential damage and losses.	Cost Increase and Revenue Decrease	To address this, the Company is developing and implementing emergency management systems for typhoon and flood prevention. This includes outfitting emergency facilities and supplies, conducting disaster risk assessments, and establishing regular emergency drill protocols.	Short-term	Medium
	Long-term Risks	Average Temperature Rise	The Company's office locations and several project sites are in subtropical or tropical regions, making them susceptible to high temperatures due to long-term climate change.	Cost Increase and Revenue Decrease	The Company has actively implemented a series of effective measures, including providing high-temperature allowances for employees, upgrading cooling systems in factories and office, developing heatstroke emergency plans, and optimizing cooling systems to save energy and reduce consumption.	Long-term	Medium

Types of Climate-Related Risks			Risk Description	Potential Financial Impact	Countermeasures	Reporting Period	Substantiality
Resource Efficiency		Resource Utilization Efficiency Enhanced	By optimizing management practices, implementing low-carbon technologies, and upgrading to energy-efficient equipment, the Company can improve the efficiency of equipment, energy, water, and other resources, while reducing consumption in both production and office operations, ultimately lowering costs.	Cost Decrease	The company prioritizes energy conservation and emission reduction, and promotes the green and low-carbon transformation of its core operations. It also promotes sustainable office practices and water conservation to minimize resource consumption in both production and administrative activities.	Long-term	High
			The Company is refining its energy mix to boost the share of renewable energy, reduce reliance on fossil fuels, enhance climate resilience, and lower carbon emissions.	Cost Decrease	Increase the installed capacity and generation share of renewable energy sources such as wind power, photovoltaic, and hydropower.	Long-term	High
Products and Services		Green Products and Services	As the dual carbon goals accelerate the low-carbon transformation of the Company's industry, the Company can leverage technological innovation to launch products that align with these goals, meet market demand, and drive revenue growth.	Revenue increase	The Company's core business spans a wide range of green services, such as low-carbon power, environmental protection, integrated gas solutions, and digital intelligence service. These offerings cater to customer demand for energy-efficient and sustainable solutions, earning their trust and approval.	Long-term	High
			Our digital products and services help customers save energy and reduce carbon emissions, making them highly in demand as the focus on carbon neutrality and peak carbon emissions grows.	Revenue increase	The Company is advancing its digital intelligence service strategy, with a focus on integrated energy services, smart power plant operations, carbon asset management, energy storage products, and EPC. It is driving digital transformation, accelerating AI applications, enhancing data management, and fostering deeper integration of energy technologies with digital and intelligent solutions to create a new business model.	Interim	Medium
Green Finance		Carbon Trading and Carbon Finance	The Company is now part of the carbon market, enabling it to leverage carbon trading and carbon finance to grow its business. It can also take advantage of green financial policies and financing support from governments and financial institutions.	Revenue Increase and Cost Reduction	The Company strengthens its carbon emission data management, ensures compliance with emission obligations, and actively participates in trading, hedging, and increasing the value of carbon allowances. At the same time, it leverages financial instruments like green loans and green bonds to secure financial funding for its green initiatives.	Long-term	High
			The dual-carbon transition is driving the expansion of the new energy market, fueling rapid growth in the Company's core business.	Revenue increase	The Company is actively expanding its presence in the new energy sector, using its brand strength, product advantages, and technological expertise to grow its market share and drive sustained revenue growth.	Long-term	High

Carbon Emission Accounting and Management ▼

The Company calculates its greenhouse gas emissions based on operational control, following the *Ministry of Ecology and Environment's Guidelines for Greenhouse Gas Emission Accounting and Reporting for Enterprises – Power Generation Facilities* and the *Technical Guidelines for Greenhouse Gas Emission Verification for Enterprises – Power Generation Facilities*. Emission factors are sourced from the "National Greenhouse Gas Emission Factor Database," jointly established by the Ministry of Ecology and Environment and the National Bureau of Statistics. In 2022, the national average CO₂ emission factor for electricity was 0.5366 tons CO₂/MWh.

2024 marks the third compliance cycle (2023 carbon allowance clearance and fulfillment) for China's national carbon market. As required by the Ministry of Ecology and Environment, all key emission units must meet their compliance obligations by December 31, 2024. The Company has 11 key emission units participating in the national carbon market, all of which completed their 2023 carbon quota settlements ahead of schedule. In 2024, the Company actively participated in carbon market trading, purchasing a total of 0.7918 million tons of China Certified Emission Reductions (CCERs) with a transaction value exceeding CNY 80.15 million.

Shenzhen Energy's Scope 1 GHG emissions for 2024 amounted to 25.57 million tons of CO₂ equivalent.



Developing Low-carbon Energy ▾

The Company is closely monitoring low-carbon and green development trends in the energy sector, accelerating its strategic positioning in the "dual carbon" goals. It is fast-tracking the transformation of its industrial and energy structures while rapidly expanding its presence in new energy industries such as wind power, hydropower, and photovoltaics. In 2024, the Company successfully launched high-efficiency clean gas-fired units and renewable energy power generation projects. Throughout the year, it added a total installed capacity of 4,596.4 megawatts, primarily composed of: 3,837.4 megawatts from natural gas power generation; 130 megawatts from wind power generation; 837 megawatts from photovoltaic power generation; 87 megawatts from waste-to-energy power generation.

• Wind Power

Leveraging its brand strengths, the Company has advanced its industrial and regional strategic initiatives. The Tianzhen Wind Power Project was successfully commissioned, and the Shanwei Offshore Wind Project received approval. By the end of 2024, the total installed wind power capacity reached 3,829.5 megawatts.

• Hydropower

The Company made steady progress in the development of small and medium-sized hydropower projects, increasing its total installed hydropower capacity to 1,013 megawatts by the end of 2024.

• Coal-fired Power

Exploring efficient and clean coal power applications, actively upgrading and retrofitting existing power plants. Baoding company has begun construction of a 660 MW ultra-supercritical next-generation single-reheat unit. The project to replace the coal-fired units at Mawan Power Plant has been approved, with plans to decommission the existing coal-fired units and build two 660 MW next-generation ultra-supercritical double-reheat coal-fired power generation units. These new coal-fired units will incorporate high-efficiency regulation technologies, such as deep peak shaving and rapid ramping. Once operational, the power supply's standard coal consumption is expected to decrease by at least 50 g/kWh, resulting in an annual reduction of 144,000 tons of standard coal and 290,400 tons of carbon emissions. The company is also exploring the use of zero-carbon or low-carbon fuel co-firing, carbon capture, utilization, and storage (CCUS), and other low-carbon coal power technologies to significantly cut carbon emissions from coal-fired power generation. As of the end of 2024, the installed capacity of coal-fired power generation units stood at 6,019 megawatts.



Wind Power



Hydropower



Photovoltaic Power



Gas-fired Power



Coal-fired Power

As of the end of 2024

The proportion of clean energy installed capacity reached **74.63** %

The proportion of renewable energy installed capacity reached **36.49** %

• Photovoltaic Power

The Company actively seized the development opportunities presented by large-scale new energy base projects to expand its industrial scale. It also took advantage of the growing adoption of distributed photovoltaic applications to further expand and strengthen its photovoltaic industry. As of the end of 2024, the total installed capacity of photovoltaic power generation stood at 2,653.1 megawatts.

• Gas-fired Power

Additionally, it optimized its thermal power structure and actively expanded its natural gas power generation projects. The Phase II expansions of the Eastern Power Plant, Guangming Power Base, and Hongwan Phase II projects, featuring advanced F-class and H-class gas turbines, were successfully commissioned, ensuring a reliable power supply for the region. Steadily advanced the upgrade and transformation of Mawan's Phase I gas-fired power project for early commissioning. By the end of 2024, the Company's installed capacity of natural gas power generation units reached 9,051.4 megawatts.



Sense of Responsibility

Fostering an Inclusive, Diverse, and Harmonious Community

Shenzhen Energy adheres to the strategic policy of "Trustworthy Energy, Compatible Energy" and works with all stakeholders to foster a harmonious and inclusive culture. The Company is committed to supporting employee growth, protecting their rights, and creating a fair, open, and inclusive work environment. It promotes responsible procurement by collaborating with suppliers, partners, and industry peers to drive sustainability across the sector. In line with national strategic goals, the Company contributes to regional economic and social development. It also actively participates in rural revitalization and social welfare initiatives, giving back to society and fulfilling its corporate responsibility.

Shenzhen Energy and the SDGs:

1 NO POVERTY 	3 GOOD HEALTH AND WELL-BEING 	8 DECENT WORK AND ECONOMIC GROWTH 	10 REDUCED INEQUALITIES 	17 PARTNERSHIPS FOR THE GOALS
2 ZERO HUNGER 	5 GENDER EQUALITY 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	11 SUSTAINABLE CITIES AND COMMUNITIES 	

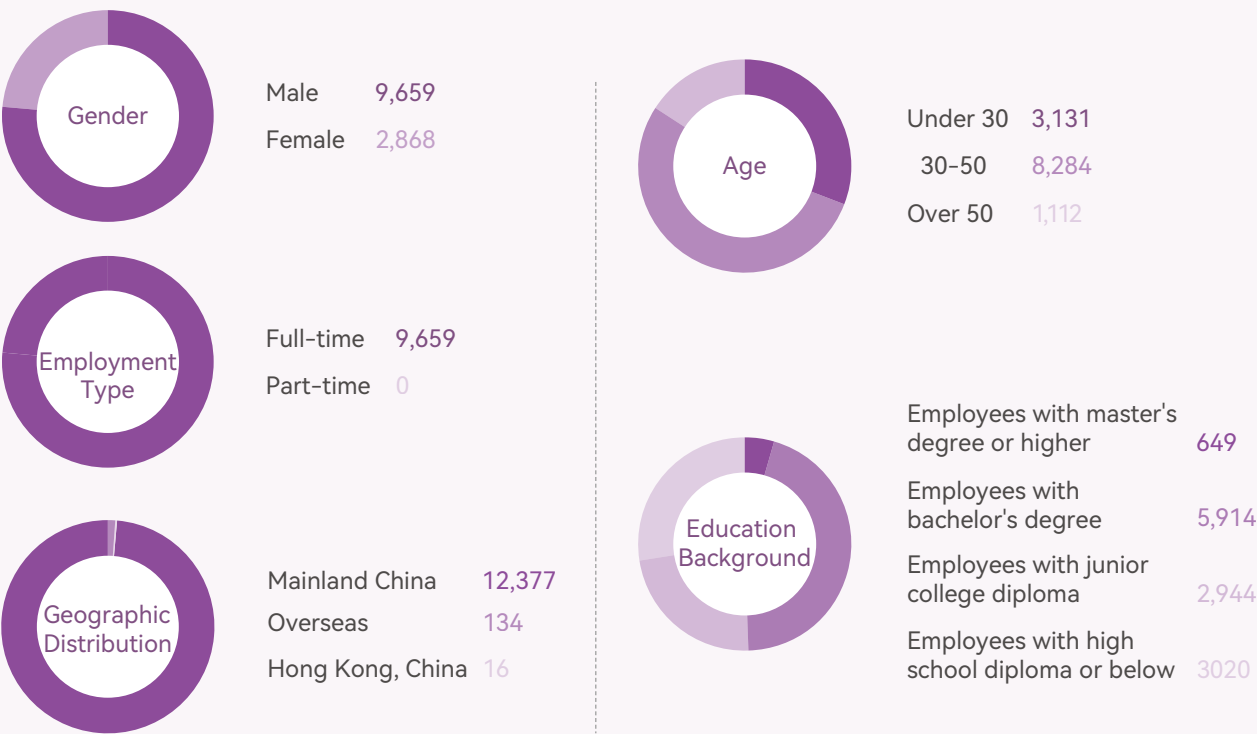
Supporting Employee Growth

Safeguarding Employee Rights ▾

·Lawful Employment

The Company strictly complies with laws and regulations including the *Labor Law of the People's Republic of China* and the *Labor Contract Law of the People's Republic of China*. It has formulated standards such as the *Human Resources Planning Management Standard* and *Employee Recruitment Management Standard*. All labor contracts are entered into in accordance with the law, and the Company upholds equal employment opportunities. It prohibits discrimination based on ethnicity, race, gender, age, marital status, pregnancy, or any other personal factors in areas such as recruitment, compensation, benefits, job transfers, rewards, and penalties. The Company firmly opposes all forms of employment discrimination, forced labor, harassment, abuse, and child labor.

The Company follows standardized and fair recruitment practices and implements a localization policy. Universities are categorized into three tiers—corporate-wide, regional, and project-specific—with a priority given to hiring local employees.



·Compensation and Benefits

The Company is dedicated to developing a comprehensive and competitive compensation and incentive system. It fully complies with all laws, regulations, and contractual agreements, having established policies such as the Compensation Management Standard, Performance Management Standard, Enterprise Annuity Management Standard, and Special Rewards Management Standard. The Company ensures the timely and complete payment of wages, along with lawful contributions to social insurance and housing funds, protecting employees' fundamental rights and interests. Beyond this, the Company continually improves its employee benefits, offering perks like enterprise annuities and housing subsidies under its "Talent Development Plan" to motivate employees and encourage mutual growth between staff and the Company.

·Talent Retention

The Company closely monitors policy developments and actively pursues government incentives and subsidies for both businesses growth and talent development. By securing these valuable rewards and honors, the Company not only creates an attractive career environment for its employees but also provides strong support for their long-term stability and growth. This reflects the Company's commitment to valuing and respecting talent, fostering a win-win situation where both corporate sustainability and employees' personal success can thrive.

·Democratic Management

The Company continually enhances its democratic management system, ensuring employees have a voice in decision-making, management, and oversight. It actively seeks employee feedback and maintains open communication channels to protect their legitimate rights and interests. The Company also fully respects employees' right to be informed and to supervise, publicly announcing personnel appointments, promotions, and recognitions, while providing avenues for feedback. By actively listening to employee opinions and encouraging their oversight, the Company strives to foster a fair and harmonious work environment for all.



Shenzhen Energy Holds the 2024 Annual Work Conference & The 11th Session of the Third Employee Representatives Conference

Safeguarding Employee Development ▾

·Open Career Pathways

The Company follows a dual-channel talent development strategy, focusing on both technical and management tracks, with an emphasis on skills and performance. Through dynamic hiring processes, it helps employees choose the best career paths and unlock their full potential. The Company also established guidelines such as the *Excellence Performance Standard System* and *Performance Management Standard* to guide performance appraisals and promotion, ensuring clear career progression. In 2024, the Company continued its internal recruitment efforts, posting a total of 44 job openings and offering 160 positions throughout the year. This initiative fostered stronger interaction between employees and the Company, improving job matching efficiency and ensuring alignment with the needs of both parties.

·Sound Training System

The Company is committed to the professional development of all employees, having established the *Training Management Standard* to continuously improve the "training-assessment-certification-onboarding" process and enhance its talent development system. Aligned with the goals of the 14th Five-Year Plan, annual work conference directives, and employee career goals, the Company has developed its 2024 talent education and training plan, offering a range of specialized programs. The Company also places a strong focus on technological innovation, achievement transformation, and the recruitment of professional talent. By fostering collaboration between industry, academia, and research institutions, it creates a robust framework for deep integration to leverage the combined strengths of businesses, universities, and research organizations, driving technological progress.

2024

The Company organized **3,358** training programs across various categories, including mid-to-senior management, frontline management, production technicians, and professionals, benefiting a total of **76,700** participants.

- The Company has set benchmarks based on world-class enterprises and launched advanced management seminars in partnership with Huawei to enhance the capabilities of mid-to-senior leadership.
- In collaboration with Sun Yat-sen University and other esteemed institutions, the Company offers joint training programs for employees to foster professional development.
- To support its global expansion, the Company has organized training programs for members of its overseas talent pool, providing essential talent support for international business growth.
- A comprehensive onboarding training program has been implemented for new employees to enhance their professional skills. The Company also introduced the "Cultivating Young Talent" initiative to focus on the development of future leaders and offer targeted training for exceptional young cadres to expand their knowledge base.

Case 2024 Outstanding Individuals Training Program

In 2024, the Company organized the Outstanding Individuals Training Program at Yunnan University, where 51 high-performing employees from the Company and its affiliates participated in a week-long "empowerment" session. This initiative played a key role in strengthening the talent pipeline and enhancing the theoretical knowledge, operational skills, and overall capabilities of top performers.



Case Specialized Training Program for Outstanding Young Cadres' Capability Enhancement

In 2024, the Company organized a specialized training program for outstanding young executives to further develop their skills. Sun Yat-sen University was invited to design the curriculum, and 64 exceptional young executives from the Company and its subsidiaries took part in the week-long comprehensive training program.



Employee Health Protection ▼

The Company places a high priority on the occupational health of employees across its affiliates. It has established the *Occupational Health Management Standard*, guided by the principle of "prevention first, control second" to strengthen occupational health management and improve the system for preventing occupational diseases. Through initiatives such as health screenings, monitoring and evaluation of occupational hazards, participation in external training, and internal awareness campaigns, the Company has significantly raised employees' awareness of occupational health and improved their protective capabilities. In 2024, the Company reported zero incidents of occupational diseases or accidents.

Management Process	Management Measures	Responsible Departments
Basic Requirements Implementation	In full compliance with laws, regulations, and national occupational health standards, the Company has taken preventive measures against occupational diseases to control and eliminate hazards at the source.	Company and all subsidiaries, and their respective heads
Early Prevention of Occupational Hazards	Establish a responsibility system for occupational disease prevention, conduct pre-evaluation of occupational hazards, and perform control effectiveness evaluations prior to project completion.	Company and all subsidiaries, and their respective heads
Protection and Management	Formulate occupational disease prevention plans, conduct occupational hazard factor monitoring, evaluate monitoring results, identify occupational hazard types, and develop prevention measures.	Subsidiary companies
Publicity, Education, and Training	Organize occupational health training for employees, both pre-job and during employment, to ensure awareness of occupational hazards and protective measures.	Company and all subsidiaries, and their respective heads
Health Monitoring	Maintain occupational health surveillance records, including employees' health examination results, for continuous monitoring of health status.	Subsidiary companies
Information Reporting and Handling	Report occupational diseases and suspected cases, manage acute occupational hazard incidents, and ensure timely and accurate information reporting.	Subsidiary companies
Supervision and Inspection	Conduct regular inspections of occupational disease prevention efforts to ensure effective implementation of measures.	Company and all subsidiaries

Building a Happy Workplace ▼

·Caring for Employees

The Company places a strong emphasis on the well-being of its employees and has established policies like the *Headquarters Labor Union Care Initiative Management Standard* to guide its employee care efforts. In 2024, the Company continued to support its employees through initiatives such as the Warmth Fund and supplementary medical insurance, providing condolences payments totaling CNY 975,000 to 157 employees. It also facilitated insurance claims for over 2,500 employees and their families who were hospitalized due to illness, with claims exceeding CNY 9 million, helping them manage major risks. To promote both physical and mental well-being, the Company's labor union organized the "Shenzhen Energy Care" health lecture series, inviting senior experts and instructors to lead sessions aimed at reducing stress from family and work pressures. Offered both on-site and online, the lectures focused on raising awareness of mental and physical health and encouraging a positive, balanced lifestyle among employees.



Shenzhen Energy Fuel and Material's Summer Relief Campaign



Shenzhen Energy North Holding's "Mid-Autumn Festival: A Global Family" Event

· Diverse Activities

The Company is dedicated to enriching employees' spiritual and cultural lives by organizing a wide range of engaging and innovative recreational and sports activities. These include lantern riddles, youth networking events, basketball tournaments, and tennis matches. Such initiatives not only promote a healthy work-life balance but also foster a vibrant, harmonious corporate culture within the Shenzhen Energy community.



"Shenzhen Energy Finance Cup" Basketball League



"Shenzhen Energy Gas Investment Cup" Tennis Friendly Match



Shenneng Financial Leasing Fun Sports Day



Sunon (Hong Kong) International Badminton Friendly Match

Employee satisfaction

The Company conducts an annual employee satisfaction survey covering all active employees, achieving a **98%** participation rate. 2024 employee satisfaction score **94.5%**.

Collaborating with Partners for Mutual Success

Implementing Responsible Procurement ▼

· Supplier Management System

The Company continues to refine its supplier management system, incorporating control, evaluation, and incentive mechanisms. Suppliers are categorized and managed based on the specific needs of different procurement departments. The Company has established the *Supplier Management Standard* that covers the entire supplier lifecycle from development, registration, and qualification to strategic management, evaluation, exit strategies, corrective actions, and blacklist management.

The Company conducts dynamic performance evaluations for suppliers, with procurement entities regularly assessing the quality, schedule, and service performance of suppliers' products and services. These evaluations are recorded on the supplier management platform according to predefined criteria, which include supplier participation in procurement activities, bid success rates, contract performance, misconduct, and routine evaluation results.

The Company centrally manages the supplier "blacklist," sharing information across the organization and updating it in real-time. Supplier violations are categorized based on the severity of their impact on safety, project construction, production, service quality, and corporate reputation, with penalties ranging from public notifications and rating downgrades to rectification requirements, quotation restrictions, and bidding bans.

Coal Procurement

The Company centralizes coal procurement through both domestic and international sourcing departments. Third-party inspection agencies are engaged to verify the quality and quantity of coal, while power plant departments conduct audits. Coal suppliers are evaluated and rated according to the Supplier Management Standard and procurement contracts. The evaluation results are regularly made public, and depending on the severity of any misconduct, appropriate restrictions, penalties, or exit measures are enforced.

Gas Procurement

The Company mandates that suppliers sign confidentiality agreements and undergo comprehensive KYC (Know Your Customer) due diligence. This process includes assessing their financial stability, industry experience, and reputation before approval. Only internationally recognized suppliers with reliable supply capabilities and solid credit profiles are accepted. Spot LNG procurement is conducted through invitation-only tenders, limited to approved suppliers, with continuous maintenance and management of the supplier pool.

Material Procurement

By implementing standardized policies, documentation, processes, and data management frameworks, the Company strengthens its operations and establishes a "data-driven, standardized procurement and supply chain." Through its procurement management system, the Company enables end-to-end online management of material procurement processes. A two-way communication channel is maintained for supplier information, with evaluations covering routine performance, contract fulfillment, annual reviews, and case-specific assessments. Penalties are applied based on the severity of supplier misconduct, creating a closed-loop management system for negative supplier information.

2024



Non-compliant suppliers requiring rectification **11**

Blacklisted suppliers **87**

• Transparent Procurement Practices

The Company adheres to transparent procurement principles and uses the "Shenzhen Energy Group E-Bidding Platform" to detect bid-rigging behaviors. In compliance with the Shenzhen Municipal State-owned Assets Supervision and Administration Commission's requirements, we publicly disclose bidding activities for oversight. To prevent corruption, bidders are required to submit *Integrity Pledge Letters* and awarded enterprises must sign *Integrity Contracts*. Additionally, we monitor the frequency of expert evaluations to reduce integrity risks.

• Supplier ESG Management

The Company integrates ESG (Environmental, Social, and Governance) factors into its supplier onboarding, evaluation, and management processes, focusing on product quality, safety, environmental protection, and social responsibility. During the bidding process, we prioritize sourcing raw materials, products, and services that are environmentally friendly. Our goal is to create a collaborative, green, low-carbon, and mutually beneficial supply chain ecosystem with our partners.

• Empowering Supplier Development

We value strong partnerships and foster collaboration with both upstream and downstream clients across the energy value chain. By establishing strategic cooperation and shared platforms, we aim to achieve mutual growth and development.

• Fair Treatment of SMEs

The Company is committed to fairness, particularly in its relationships with SMEs. We prioritize timely payments to ensure smaller enterprises are not burdened by overdue accounts and can maintain financial stability. As of the end of 2024, the Company's accounts payable (including bills payable) balance was under CNY 30 billion, making up less than 50% of total assets.

Driving Industry Advancement

The Company continuously expands its partner network, embracing an open and inclusive approach to foster a cooperative and win-win development environment. By leveraging its industrial and technological resources, the Company strengthens resource integration, grows its cooperation ecosystem, and establishes a multi-tiered, diversified, and sustainable network.

To drive success across the industry, the Company actively hosts and participates in various events. In 2024, it took part in 18 key activities, including the 2024 Energy Green Development Conference and the 2024 Carbon Peak and Carbon Neutrality Forum & Shenzhen International Low-Carbon City Forum. These events brought together industry experts and scholars for in-depth discussions on current trends, sharing innovative ideas and contributing to industry progress.

With its strong technical expertise, the Company actively contributes to the development of national and industry standards, using its specialized knowledge to promote standardized industry growth. In 2024, the Company participated in the China Electricity Council's symposium on hydrogen-electricity coordination standards, where it shared insights on seawater hydrogen production, renewable energy-based hydrogen production, and offered valuable perspectives for advancing industry standardization.

Case

On September 7, 2024, the Company successfully hosted the 2024 Energy Green Development Conference. Guided by the Central Committee of the Revolutionary Committee of the Chinese Kuomintang and the Chinese Academy of Sciences, and organized by the China Energy Research Society, China Energy Conservation Association, China Electricity Council, and the Economic Committee of the Revolutionary Committee of the Chinese Kuomintang, the conference focused on "International Cooperation in Energy Green Development." It brought together academicians from the Chinese Academy of Sciences and the Chinese Academy of Engineering, providing a valuable platform for academic exchanges and industry insights among energy sector professionals.



Case

The 2024 Carbon Peak and Carbon Neutrality Forum & Shenzhen International Low Carbon City Forum—Green Hydrogen-Based Energy Forum was successfully held on October 28 at the Shenzhen Longgang International Low Carbon City Center. Hosted by Shenzhen Energy and guided by the Shenzhen Development and Reform Commission, the event was organized by the Shenzhen International Center for Energy and Environmental Technology Promotion.

The forum, themed "Exploring Hydrogen-Based Energy Applications for Green and Low-Carbon Development," brought together experts, scholars, and industry leaders from government, enterprises, research institutions, and other sectors. They discussed the current state, future trends, and challenges of the hydrogen energy industry, sharing valuable insights to drive its high-quality development.



Case

On August 8, 2024, the Fifth "Liupukang Energy Forum" and the China State-Owned Enterprises' Achievement Release Conference on Implementing the New Energy Security Strategy was held in Beijing. Guided by the Central SOEs Think Tank Alliance and organized by the CHN Energy Group Technical and Economic Research Institute, the forum introduced the *Case Collection on China's State-Owned Enterprises Implementing the New Energy Security Strategy of 'Four Revolutions and One Cooperation'*. The collection featured 163 high-quality cases from both central and local state-owned enterprises, showcasing their achievements and experiences in advancing the new energy security strategy over the past decade. Shenzhen Energy's projects, *Research and Development of Virtual Power Plant Functions for Demand-Side Response* and *Sino-Canadian Energy Cooperation: Illuminating Ghana's Power Future through Transnational Collaboration*, were selected and highlighted at the forum, underscoring Shenzhen Energy's commitment to innovation and energy security.



Serving Regional Development

Shenzhen Energy actively expands strategic partnerships with governments at all levels, aligning with local development resources and needs. Leveraging its strengths in low-carbon power, environmental protection, integrated gas, and digital intelligence services, the Company deepens and broadens its cooperation to ensure successful project implementation and deliver "Shenzhen Energy solutions" for collaborative growth. In 2024, the Company and its affiliates reached strategic cooperation agreements with the governments of Shenzhen, Zhaoqing, and Hainan.

Supporting the Development of the "Dual Zone"

The Company actively aligning with the "Dual Zone" development and practices green development principles. In 2024, it made significant progress on projects such as the Shenzhen Longhua and Guangming Energy Eco-Parks and the Yantian District Resource Recycling Environmental Park, all of which support urban sustainability. The Company also fast-tracked preparations for the Shenshan Ecological Environment Science and Technology Industrial Park's environmental protection power plant project to ensure smooth implementation. The Company also secured integrated environmental services projects in Fengkai County, Zhaoqing, and Guangming District, Shenzhen, contributing to cleaner cities.

Case

Offshore Wind Power Project Expansion

The Shanwei Honghaiwan VI Offshore Wind Power Project has received approval and successfully completed its feasibility study review. Supporting documents for the preliminary development of the Guangdong East offshore wind power project in Shantou's state-controlled waters have also been secured. Additionally, a cooperation framework agreement for offshore wind power was signed with Hainan Development, marking significant progress in the expansion of offshore wind power.



Coordinating Development in the Beijing-Tianjin-Hebei Region ▼

The Company is expanding its presence in the Beijing-Tianjin-Hebei regional market, actively advancing projects in thermal power, heating supply, new energy power generation, and the construction and operation of heating pipeline networks. It continues to strengthen regional collaboration in Hebei, leveraging its industrial, technological, and talent advantages to accelerate the development of new sectors and promote coordinated regional growth. By maintaining strong governments at all levels, the Company is well-positioned to seize opportunities and expand its project portfolio.

Case Beijing-Tianjin-Hebei Regional Synergy Project

Shenzhen Energy Baoding Power fully ensured the safe and stable operation of the Baoding Northwest Suburb Power Plant Phase I Project, successfully completing its annual energy supply tasks with high quality while accelerating the construction of Phase II.

In 2024, the Company secured the construction quota for the 650 megawatts wind power project in Zhuolu County, Hebei, and completed the project filing within the year.



Baoding Electrical Power Plant

Supporting the Development of the Yangtze River Delta ▼

The Company is actively aligning with the national strategy for the Yangtze River Economic Belt, driving the construction of a new energy system focused on multi-energy complementarity and deep integration. This supports the economic and social development of the Yangtze River Basin while meeting the growing demands for a better life. In 2024, construction began on the Zheneng Zhoushan Liuheng LNG Terminal Project, the Company's first independently developed LNG terminal in the Yangtze River Delta region. Two key milestones were achieved: the intelligent pneumatic rising of four LNG storage tanks on October 10 and the launch of supporting jetty construction on October 18. Phase I of the project includes a dedicated 150,000-ton LNG vessel jetty, four 220,000-cubic-meter storage tanks, and related process facilities. This project has been recognized as a key construction initiative in Zhejiang Province, a major project to enhance the province's maritime status, a "Ten Thousand Billion-Yuan" initiative to expand effective investment, and a green energy project under Zhejiang's 14th Five-Year Plan. It is also part of the national oil and gas "14th Five-Year" development plan.



Zheneng Liuheng LNG Terminal Project Storage Tank Pneumatic Rising Fully Completed

In 2024, Shenzhen Energy completed and launched its first construction waste recycling project in Yiwu. The facility recycles 1.3 million tons of construction and renovation waste annually to produce eco-friendly bricks. It also features a distributed rooftop photovoltaic power station and an energy storage station. This project is China's first advanced green and low-carbon technology demonstration project integrating a construction waste recycling industrial park with a green energy base. It significantly contributes to creating a more sustainable urban-rural living environment in Yiwu.

Building the "Belt and Road" Together ▼

Leveraging the high-quality development of the "Belt and Road" Initiative, the Company is focused on expanding global market opportunities, taking into account the market conditions and resource endowments in overseas countries. Building on successful projects like the Ghana Gas Power Plant and Vietnam Wind Power, the Company is deepening investment and collaboration with countries across Oceania, Africa, and Latin America. It is actively pursuing projects in biomass power generation, gas, environmental protection, agri-photovoltaic, photovoltaic storage, new energy vehicles, and charging infrastructure. By partnering with key Shenzhen-based enterprises to "go global," the Company enhances the presence of "Shenzhen elements" in international trade, exports "Shenzhen standards," and offers "Shenzhen solutions" for global renewable resource utilization and climate change mitigation.

[Awards & Honors]

On May 10, 2024, at the 7th Ghana-West Africa Business Excellence Awards ceremony held in Accra, Ghana, Ghana Company was honored with the "Power Generation Company of the Year - West Africa Business Excellence Award". In the 2024 GIPC Ghana Top 100 Club selection, Ghana Company ranked first in the "Ghana Business Top 100 - Energy and Utilities" category and tenth overall.



Ghana Company

Dedicated to Public Welfare and Charity

Supporting Rural Revitalization ▼

• Targeted Assistance

The Company takes its role in poverty alleviation seriously, actively contributing to rural revitalization with a strong sense of responsibility and purpose. It consistently completes 33 key tasks assigned by the Shenzhen Command Post for Aid to Shantou each year, including developing rural revitalization plans and coordinating clear support measures from partner units to ensure effective execution.



Case Yanhong Township Targeted Poverty Alleviation Project

Since starting its township assistance program, the Company has funded several projects in Yanhong Township based on local needs. These include the Yanhong Talent Station, a constructed wetland demonstration park, a youth entrepreneurship incubator, and ongoing environmental improvements at Xiapaiyang Ditch. These initiatives are driving rural revitalization by supporting low-income communities, promoting industrial development, enhancing livelihoods, and improving the local environment, all while highlighting Shenzhen's contributions and the energy sector's unique role in community development.

- As part of a Party-led initiative, the Company's Party committee partnered three of its branches with three villages in Yanhong Township. They donated CNY 200,000 to fund agricultural skills training, public welfare campaigns, and other support activities. Through the "I Do Practical Things for the People" initiative, the Company has made notable contributions to improving village environments and promoting household gas safety.
- Flagship Projects: The Company has invested CNY 3.35 million to enhance environmental sanitation in Yanhong's urban area, clear 3 kilometers of riverway, and upgrade local infrastructure. The Hongyicun Eco Park stands out as a model for rural governance, environmental improvement, ecological resource development, and the "Hundreds, Thousands, and Tens of Thousands Project." By transforming waste into resources, it exemplifies the Company's commitment to improving rural living conditions and was selected as a representative case in the annual "Shenzhen Power Boosts Rural Revitalization" initiative.



• Industrial Assistance

The Company adopts innovative and practical approaches to drive the success of the "Hundreds, Thousands, and Tens of Thousands Project," promoting collaboration and mutual benefits for high-quality implementation.

Advancing Industrial Assistance

Leveraging its expertise in renewable energy, particularly solar power generation, the Company has pioneered several innovative models, including the "Fixed Income Return" program, as part of its "Six Major Models." These initiatives have been successfully implemented in various provinces and regions, such as Xinjiang, Inner Mongolia, Gansu, Shanxi, Jilin, Guangxi, and Jiangsu, driving industrial support and sustainable growth. In 2024, the Company invested a total of CNY 11.9444 million in industrial assistance.

Promoting Green and Sustainable Urban-Rural Development

The Company has also made significant strides in supporting livelihoods in Haifeng County, Shanwei, including the construction of environmental sanitation facilities in Meilong Town. Additionally, three key projects were completed in the Shenzhen-Shanwei Special Cooperation Zone, with comprehensive energy and sanitation planning implemented across the county. The Company contributed CNY 300,000 to afforestation and greening efforts in Shanwei, further promoting the city's economic growth and social development. This commitment earned the Company the "Outstanding Contribution Award for Advancing High-Quality Development" from the Shanwei Municipal Government.

• Consumption Assistance

The Company actively leads its affiliates in advancing consumption-based poverty alleviation tailored to local project needs, and showcasing the role of Shenzhen's state-owned enterprises. In 2024, the Company coordinated 26 affiliated enterprises to purchase poverty alleviation products, with total procurement reaching CNY 8.085 million. This effort successfully met the consumption assistance procurement targets and continued to support rural revitalization. Additionally, leveraging the "Shenzhen Energy Family" sales platform, the Company promoted the "Yanhong Agricultural Product Gift Package" free of charge, encouraging employees to make voluntary purchases. The initiative helped sell 7 types of Yanhong agricultural products and some specialty products from Shantou, boosting sales for local farmers.

Engaging in Social Welfare ▼

The Company remains deeply committed to social welfare, establishing a robust volunteer service system and cultivating the "Shenzhen Energy Cares" volunteer brand. It organizes a wide range of public welfare activities, including community service, science education in schools, and energy-themed study tours, all aimed at fostering social harmony through positive action.

To further enrich the "Shenzhen Energy Cares" initiative, the Company organizes special "Shenzhen Volunteer Ambassador" lectures and co-sponsors the Mangrove science education column, expanding the brand's reach and impact. In 2024, the Company mobilized 21 affiliated units to participate in the "Roll Up Your Sleeves, Relay for Life" blood donation campaign. A total of 332 employees donated 100,550 milliliters of blood, embodying the spirit of Lei Feng through their actions. Other volunteer programs included initiatives such as "Caring for Sanitation Workers," the decade-long "Caring for Children with Brain Injuries" program, and Mid-Autumn Festival activities, which provided warmth and support to the disabled, disadvantaged students, veterans, and elderly living alone.



Case



In celebration of the 10th anniversary of the "Caring for Angel Babies" initiative, the Shenzhen Energy Volunteer Team hosted a special event at Shenzhen Book City. Over 40 children, lovingly referred to "angel babies," along with their families, came together to enjoy a joyful birthday celebration.



The Company also launched the "You Are on the Path of Kindness" initiative during the Mid-Autumn Festival. Volunteers visited 98 households, including elderly individuals living alone, people with disabilities, students from low-income families, retired veterans, and military honor recipients. Additionally, five autism centers received support as part of this initiative.



Shenzhen Energy Volunteers also mobilized 105 volunteers to provide services at key event venues, including Dutch Flower Town, Zhongshan Park, and Nantou Ancient Town Flower Market.

2024

Volunteer Engagement **2,616** participants

Service hours **12,547.2**

The Company's philanthropic donations totaled CNY **1.9363** million, supporting a range of initiatives, including educational aid for sanitation workers' children, the establishment of student mental health centers, and disaster relief for affected communities.

Prospect

As China transitions from its 14th to 15th Five-Year Plan and celebrates the 45th anniversary of the Shenzhen Special Economic Zone in 2025, Shenzhen Energy is at a crucial juncture. We are focused on advancing our "1246" strategy and building a modern energy industry system based on the "Four Cores and Two Drivers."

Our priorities include improving board operations, enhancing information disclosure, and strengthening investor relations and market value management. We will continue refining corporate governance with Chinese characteristics and accelerating state-owned enterprise reforms. Additionally, we are committed to developing strategic and emerging industries, boosting regional industrial collaboration, and improving efficiency and growth. Above all, safety will remain a top focus, with continued efforts to strengthen safety production capabilities.

To optimize our energy mix, we will accelerate the development and construction of renewable energy projects, including wind, solar, and hydropower. Through the "Three Transformations Initiative", we will drive the low-carbon upgrade of thermal power units and promote innovation in green hydrogen, green ammonia, and coal blending technologies. We will continue to strengthen our carbon asset management system and expand green electricity and certificate sales to capture emerging opportunities in the carbon market. Additionally, we will

broaden our efforts in ecological and environmental protection and integrated gas services, extending our business and value chains to become a leading provider of urban environmental governance solutions.

We are dedicated to building a "Responsible Energy" brand that responds to local needs and strives to become the most trusted provider of integrated urban lifeline solutions. As a caring employer and socially responsible enterprise, we aim to create a supportive, family-like environment for our employees. We will actively engage in initiatives like targeted poverty alleviation, rural revitalization, and the "Hundreds, Thousands, Tens of Thousands Project", while also highlighting the inspiring stories of "Shenzhen Energy Volunteers," infusing the Shenzhen Energy Family with a vibrant "volunteer red" spirit.

United in purpose and driven by innovation, Shenzhen Energy is fully committed to technological progress and green development. With a focus on strengthening our capabilities, we are leading the way in green energy development. Together, we will continue to contribute the enduring "Shenzhen Energy Power" to building a new energy system and supporting China's modernization efforts.



Appendices

Key Performance

Governance Performance ▼

Indicator	Unit	2022	2023	2024
Financial indicators				
Total assets	Billion	141.26	153.45	161.37
Operating revenue	Billion	37.52	40.5	41.21
Total profit	Billion	2.93	3.28	3.69
Net profit attributable to the shareholders of the parent company	Billion	2.19	2.04	2.00
Net assets attributable to shareholders of the parent company	Billion	46.19	46.71	48.41
Operation of the Three Boards				
Number of Board of Directors members	Persons	9	9	9
Proportion of independent directors	%	33.3	33.3	33.3
Proportion of female directors	%	0	0	11.11
Number of Board of Directors meetings	Times	12	11	13
Board directors' attendance rate	%	100	100	100
Number of Supervisory Board meetings	Times	6	4	4
Supervisor attendance rate	%	100	100	100
Number of shareholders' meetings	Times	4	3	5
Number of participants in the shareholders' meeting	Number of people	152	88	1477
Proportion of independent directors on the Audit and Risk Management Committee	%	60	60	60
Proportion of independent directors on the Nominating Committee	%	60	60	60
Proportion of independent directors on the Remuneration and Appraisal Committee	%	60	60	60
Investor Relations and Information Disclosure				
Number of offline performance briefings	Times	1	2	1
Number of investor questions answered on exchange platforms	Times	124	124	111
Number of public announcements issued	Number of copies	112	120	149
Annual dividend paid	Billion	0.83	0.66	0.66
Integrity Development				
Number of Anti-commercial bribery and anti-corruption training sessions	Number of sessions	9	3	5
Anti-commercial bribery and anti-corruption training participants	Person-times	2,131	1,760	1,700
Number of corruption litigation cases filed or concluded	Number	0	0	0
During the reporting period, the amount involved in litigation or significant administrative penalties due to the Company's unfair competition practices	CNY 10,000	0	0	0

Environmental Performance ▼

Indicator	Unit	2022	2023	2024
Energy Consumption				
Total energy consumption	10,000 tce	907.81	1,104.57	970.56
Energy consumption intensity	tce/CNY 10,000	2.42	2.73	2.35
Electricity consumption	million kWh	308.43	303.40	302.31
Natural gas consumption	10,000 m³	138,884	195,375	221,510
Diesel consumption	Tons	3,440.61	3,596.85	3,529.70
Coal	Tons	13,122,253	13,058,598	10,657,554
Gasoline	Liter	444,463	482,490	485,633
Liquefied petroleum gas	Cubic meter	17,703	20,797	15,208
Clean energy consumption	MWh	2,150.00	3,305.89	5,944.62
Low-Carbon Power				
Installed power capacity under control	Megawatts	17,461.7	19,132.6	23,729.0
Coal-fired power installed capacity	Megawatts	6,634.0	6,314.0	6,019.0
Gas-fired power installed capacity	Megawatts	4,240.0	5,214.0	9,051.4
Wind power installed capacity	Megawatts	3,199.5	3,699.5	3,829.5
Photovoltaic power installed capacity	Megawatts	1,356.2	1,816.1	2,653.1
Hydropower installed capacity	Megawatts	1,011.5	1,013.0	1,013.0
Waste-to-energy power generation installed capacity	Megawatts	1,020.5	1,076.0	1,163.0
Coal-fired power delivered to grid	GWh	28,955	27,904	22,870
Gas-fired power delivered to grid	GWh	10,191	13,059	14,223
Wind power delivered to grid	GWh	7,885	7,987	8,340
Photovoltaic power delivered to grid	GWh	1,899	1,882	2,190
Hydropower power delivered to grid	GWh	3,424	2,795	3,125
Ecological and Environmental Protection				
Waste-to-energy incineration capacity	tons/day	39,115	44,275	50,515
Annual waste disposal volume	10,000 tons	1,160.32	1,297.22	1398.23
Integrated Gas				
Annual natural gas sales	100 million cubic meters	13.75	22.02	33.45
Pipeline network length	kilometer	5,135	5,535	7,718
Water Usage				
Fresh water consumption	10,000 tons	5,453.00	5,502.40	5,368.30
Recycled water volume	10,000 tons	880.50	1,179.35	1,253.58
Proportion of recycled water usage	%	16.15	21.43	23.35
Water resources consumption intensity	ton/CNY 10,000	14.53	13.58	13.03

Indicator	Unit	2022	2023	2024
Response to Climate Change				
CO ₂ emissions (Scope 1)	10,000 metric tons of CO ₂ equivalent	2,847	2,894	2,557
Revenue generated from carbon quota trading	CNY 10,000	3,898	960	0
Investment in energy-saving technological upgrades	CNY 10,000	4,839.50	2,630.10	7,465.35
Air Pollutant Emissions				
Nitrogen oxide emission	Tons	3,750.45	7,834.21	9,025.95
Sulfur dioxide emissions	Tons	1,736.91	2,128.09	1,941.26
Particulate matter emissions	Tons	366.37	406.21	387.79
Wastewater Discharge				
Wastewater discharge volume	10,000 tons	26.82	36.28	50.93
Total industrial wastewater volume	10,000 m³	26.82	36.28	50.93

Environmental Performance ▼

Indicator	Unit	2022	2023	2024
Employee				
Labor contract signing rate	%	100	100	100
Social insurance coverage rate	%	100	100	100
Total number of employees	Persons	13,392	12,200	12,527
Number of male employees	Persons	9,933	9,351	9,659
Number of female employees	Persons	3,459	2,849	2,868
Number of full-time employees	Persons	13,392	12,200	12,527
Number of part-time employees	Persons	0	0	0
Number of employees under 30 years old	Persons	3,940	3,773	3,131
Number of employees aged 30-50	Persons	7,015	6,508	8,284
Number of employees aged 50 and above	Persons	2,437	1,919	1,112
Number of employees in overseas	Persons	131	141	134
Number of employees in Hong Kong	Persons	14	14	16
Number of employees in mainland China	Persons	13,247	12,045	12,377
Number of employees with bachelor's degrees	Persons	5,127	5,499	5,914
Number of employees with associate degrees	Persons	3,035	2,804	2,944
Number of employees with high school education or below	Persons	4,704	3,338	3,020
Number of employees with master's degree or above	Persons	526	559	649
Employee turnover rate	%	1.94	2.47	2.23
New jobs created	Persons	846	578	737
New cases of occupational diseases	Case	0	0	0
Paid annual leave days per capita	Day	10.15	9.05	9.6
Average training hours per employee	Hour	30	50.02	97.02
Average training hours per male employee	Hour	30	50.02	97.02
Average training hours per female employee	Hour	30	50.02	97.02
Average training hours per senior manager	Hour	150	195	134.72
Average training hours per mid-level manager	Hour	120	156	121.47
Average training hours per frontline employee	Hour	29	37	88.05
Training coverage for employees	%	100	100	100
Male employee training coverage rate	%	100	100	100
Female employee training coverage rate	%	100	100	100
Senior management training coverage rate	%	100	100	100
Mid-level management training coverage rate	%	100	100	100
Training coverage rate for frontline employees	%	100	100	100
Employee satisfaction	%	92.9	93.3	94.5

Indicator	Unit	2022	2023	2024
Work Safety				
Number of safety training participants	Person-times	17,569	20,256	17,547
Safety training coverage	%	100	100	100
Consecutive safe operation days	Day	365	365	365
Number of work-related injuries	Persons	-	-	16
Employee fatality rate per thousand	‰	0	0	0
Number of major safety incidents	Number of sessions	0	0	0
Public Welfare and Charity				
Number of employee volunteers	Persons	3,387	3,300	4,054
Total volunteering hours	Hour	16,715	9,120	12,547.2
Number of volunteer participants	Person-times	3,484	1,904	2,616
Supplier				
Number of suppliers	Suppliers	13,422	23,274	38,937
Suppliers signing integrity clauses	%	100	100	100
R&D Innovation				
R&D Expenditure	CNY 10,000	35,002	30,578	32,145
R&D investment as a percentage of core business revenue	%	0.75	0.93	0.78
Number of R&D personnel	Persons	325	406	828
Proportion of R&D personnel	%	3.56	4.37	6.61
Number of invention patents applied in core business operations	Item	41	55	87
Registered copyrights obtained during the reporting period	Item	16	24	59
Number of licensed invention patents during the reporting period	Item	10	14	32
Total number of licensed patents	Item	602	723	971

Indicator Index

Shenzhen Stock Exchange Self-Regulatory Guidelines
for Listed Companies No. 17 – Sustainability Report (Trial) ▼

Dimen-sion	No.	Issues	Corresponding Provision	Corresponding Chapter
Environ-men-related	1	Response to climate change	Articles 21 to 28	Pursue Clean and Low-carbon Development Through Green Transformation (4) Response to climate change
	2	Pollutant Emissions	Article 30	Pursue Clean and Low-carbon Development Through Green Transformation (1) Management in Compliance with Laws and Regulations
	3	Waste Disposal	Article 31	Pursue Clean and Low-carbon Development Through Green Transformation (1) Management in Compliance with Laws and Regulations
	4	Ecosystem and Biodiversity Conservation	Article 32	Pursue Clean and Low-carbon Development Through Green Transformation (3) Protecting the Ecological Environment
	5	Environmental Compliance Management	Article 33	Pursue Clean and Low-carbon Development Through Green Transformation (1) Management in Compliance with Laws and Regulations
	6	Energy Utilization	Article 35	Pursue Clean and Low-carbon Development Through Green T ransformation (2) Optimizing Resource Management
	7	Water Resource Utilization	Article 36	Pursue Clean and Low-carbon Development Through Green Transformation (2) Optimizing Resource Management
	8	Circular Economy	Article 37	Pursue Clean and Low-carbon Development Through Green Transformation (2) Optimizing Resource Management
Society-related	9	Rural Revitalization	Article 39	Create a Diverse and Harmonious Environment with a Strong Sense of Responsibility (IV) Dedicated to Public Welfare and Charity
	10	Social Contribution	Article 40	Create a Diverse and Harmonious Environment with a Strong Sense of Responsibility (IV) Dedicated to Public Welfare and Charity
	11	Innovation-driven	Article 42	Ensure Stable Supply an build Smart and Secure Energy Systems (2) Innovative Smart Energy
	12	Technology ethics	Article 43	Not applicable
	13	Supply Chain Security	Article 45	Ensure Stable Supply an build Smart and Secure Energy Systems (3) Ensuring Stable Energy Supply
				Create a Diverse and Harmonious Environment with a Strong Sense of Responsibility (II) Collaborating with Partners for Mutual Success
				Create a Diverse and Harmonious Environment with a Strong Sense of Responsibility (II) Collaborating with Partners for Mutual Success
	14	Fair treatment of SMEs	Article 46	Create a Diverse and Harmonious Environment with a Strong Sense of Responsibility (II) Collaborating with Partners for Mutual Success
	15	Product and Service Safety and Quality	Article 47	Ensure Stable Supply an build Smart and Secure Energy Systems (3) Ensuring Stable Energy Supply
Sustain-ability-related Governance	16	Data Security and Customer Privacy Protection	Article 48	Exercising Rules of Virtue and Law to Strengthen Governance and Compliance Systems(3) Enhancing Compliance Operations
	17	Employee	Article 50	Create a Diverse and Harmonious Environment with a Strong Sense of Responsibility (I) Supporting employee growth
	18	Due diligence investigation	Article 52	Sustainable Development (ESG) Management (IV) Identification of Material Topics
	19	Stakeholder communication	Article 53	Sustainable Development (ESG) Management (3) Stakeholder Engagement
	20	Anti-commercial bribery and anti-corruption	Article 55	Exercising Rules of Virtue and Law to Strengthen Governance and Compliance Systems (IV) Strengthening Integrity Development
	21	Anti-unfair competition	Article 56	Exercising Rules of Virtue and Law to Strengthen Governance and Compliance Systems (3) Enhancing Compliance Operations
				Exercising Rules of Virtue and Law to Strengthen Governance and Compliance Systems (3) Enhancing Compliance Operations

Feedback

Dear Reader:

Thank you for taking the time to read the Shenzhen Energy's 2024 Sustainability Report! To continuously improve our sustainability reporting and management practices, we sincerely value your feedback and suggestions. We kindly request that you assist us by completing the relevant questions in the feedback form and returning it to us.

Address: 30/F, North Tower, Energy Building,
No. 2026 Jintian Road, Futian District, Shenzhen
Tel: +86-755-83684138

Fax: +86-755-83684128

Postal code: 518031

Your Information

Name:

Contact:

Employer:

Fax:

Job:

E-mail address:

Feedback Form

I. SELECTIVE QUESTIONS (please tick the appropriate box)

Please evaluate the extent to which this report reflects Shenzhen Energy's significant impacts on the economy, society, and environment:

☐Excellent ☐Good ☐Fair ☐Poor ☐Very Poor

Please evaluate the responses and disclosures in this report regarding issues of concern to stakeholders:

☐Excellent ☐Good ☐Fair ☐Poor ☐Very Poor

Please evaluate the clarity, accuracy, and completeness of the information, indicators, and data disclosed in this report:

☐Excellent ☐Good ☐Fair ☐Poor ☐Very Poor

Please rate the readability of this report:

☐Excellent ☐Good ☐Fair ☐Poor ☐Very Poor

Please provide a comprehensive evaluation of Shenzhen Energy's 2024 Sustainability Report:

☐Excellent ☐Good ☐Fair ☐Poor ☐Very Poor

Open-ended questions:

What suggestions do you have for Shenzhen Energy's ESG efforts?

What valuable ESG information do you believe this report provides you?

What additional ESG information do you believe should be included in this report?