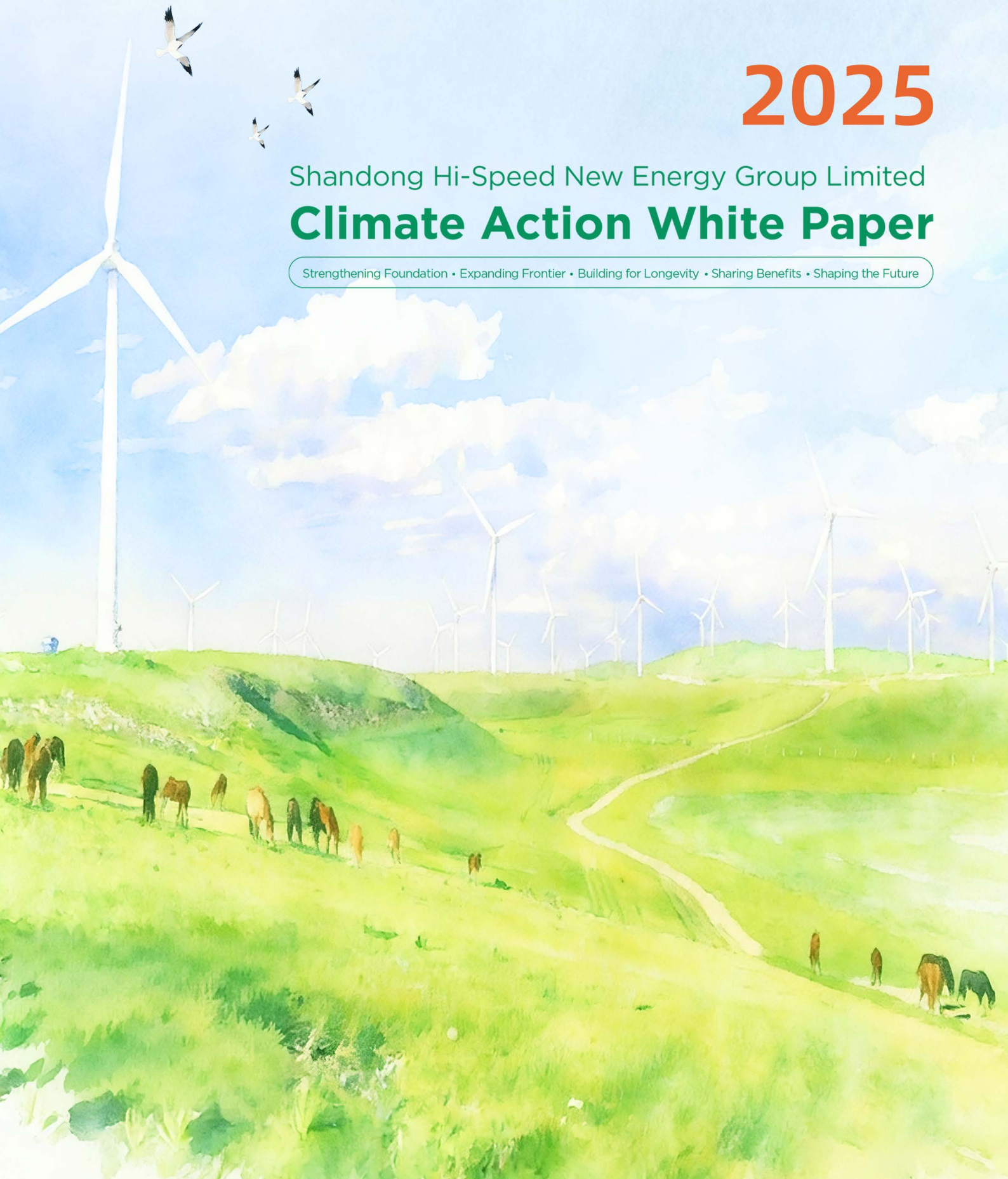
山高新能源集團有限公司
SHANDONG HI-SPEED NEW ENERGY GROUP LIMITED

(A LIMITED COMPANY REGISTERED IN THE CAYMAN ISLANDS)

STOCK CODE: 01250.HK



2025

Shandong Hi-Speed New Energy Group Limited

Climate Action White Paper

Strengthening Foundation • Expanding Frontier • Building for Longevity • Sharing Benefits • Shaping the Future

CONTENTS

About this Report

Reporting Period

The data presented in this report covers the period from 1 January 2025 to 31 December 2025.

Scope of Report

Shandong Hi-Speed New Energy Group Limited regularly reviews the reporting scope to ensure it covers relevant matters with significant impact across the overall business.

The Report outlines the strategies, governance, actions, targets, and performance of the Group's environmental, social and governance ("ESG") aspects related to the investment, development, construction, operation, and management of the photovoltaic power businesses, wind power businesses and clean heat supply businesses in the People's Republic of China ("China" or "PRC")[1]. Unless otherwise stated, the scope of business for policies, systems, statements, key performance indicators, and other content in the Report is consistent with the scope disclosed in the financial report.

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Definition

For ease of expression and readability, Shandong Hi-Speed New Energy Group Limited is referred to as "SHNE", "the Company", "we", or "the Group" in the Report.

Basis for Preparation

This is Shandong Hi-Speed New Energy Group Limited's inaugural climate information disclosure report. It has been prepared with reference to the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) published in 2017 and the requirements of IFRS S2 Climate-related Disclosures issued by the International Sustainability Standards Board (ISSB) in 2023.

Data Sources

All information and data in the Report are derived from the Company's official documents, statistics, financial reports, as well as environmental, social and governance information that has been collected, consolidated, and audited by the Company. The Report is published in both simplified Chinese and English; in case of any discrepancies, the simplified Chinese version shall prevail. Unless otherwise specified, the unit of currency shall be RMB.

1 The project operated by Shangao City Services (Ewenki Autonomous Banner) Co., Ltd. falls under the thermal energy custody model and does not involve ownership of assets; therefore, it is not included in the quantitative data statistics.

About Us

Shandong Hi-Speed New Energy Group Limited (01250.HK) is a state-owned enterprise listed on the Main Board of SEHK, jointly established by Shandong Hi-Speed Holdings Group Limited ("SDHG") under the Shandong Provincial State-owned Assets Supervision and Administration Commission and Beijing Enterprises Water Group Limited ("BEWG") under the State-owned Assets Supervision and Administration Commission of People's Government of Beijing Municipality.

SHNE actively integrates into the national strategic layout, leveraging the resource advantages and management expertise of its two substantial shareholders, SDHG (00412.HK) and BEWG (00371.HK). The Company specializes in the development of clean energy, building a comprehensive business system centered on photovoltaic and wind power, covering full-service offerings including investment, development, construction, operation, and management. Meanwhile, the Company is actively expanding into the sector of urban clean heating services, striving to become a leading integrated clean energy service provider. Currently, the Company has wind power plant and photovoltaic power plant projects across 28 provinces, autonomous regions, and municipalities in China, and is actively expanding into international markets.

Upholding the core commitment to technological innovation, environmental protection, and human welfare, SHNE specializes in the design, development, operation, and management of exemplary clean energy projects. As of December 31, 2025, the Company owns 54 centralized photovoltaic power plants both domestically and overseas, with a total installed capacity of 2,603 MW; 308 distributed photovoltaic power plants, with a total installed capacity of 1,088 MW; and 20 wind power plants, with a total installed capacity of 1,270 MW, providing clean heat supply covering approximately 35.3 million square meters to serve around 210,000 households, and strives to be a green business engine and flagship new energy enterprise under Shandong Hi-Speed Group Co., Ltd. (Shandong Hi-Speed Group).

SHNE is actively expanding its business in environmental protection and green energy while continuously deepening its core operations. Shandong High Speed Renewable Energy Group Limited (000803. SZ), an associate of the Company, specializes in investment and operation of harmless treatment and high-value resource utilization of organic waste, leveraging technological innovation, capital support, and meticulous management. It has established a platform for processing and exporting regenerated oil, with a daily processing capacity of approximately 5,610 tons of food waste and kitchen waste.

Looking ahead, the Company will uphold the corporate spirit of "Be willing to take responsibility and lead the way with courage" and shoulder the mission of "Share Green Energy and Empower the World". We will seize the strategic opportunities presented by national energy transformation and green, low-carbon development, bring together insightful individuals to jointly promote energy restructuring toward green, low-carbon, and sustainable development, contributing to the "Beautiful China" initiative as well as the global energy transformation.

Corporate Culture

Corporate Mission

Share Green Energy and Empower the World

Corporate Vision

To be a leading integrated service provider of clean energy

Corporate Values

Pursue Greatness and Foster Harmony

Corporate Spirit

Be willing to take responsibility and lead the way with courage

Management philosophy

Long-Term Focus, Goal-Oriented, Uphold Integrity and Innovate, Collaborate and Share

Ethos

Foster Unity and Embrace Diversity

Chairman of the Sustainability Committee Statement

Climate change is a profound shared challenge facing human society and represents the most historically significant structural turning point of our era. The deep transformation of energy systems is redefining the competitive boundaries and long-term value of enterprises. As a clean energy company, SHNE has always regarded climate responsibility as the foundational value of the Company's existence, rather than a passive response to external compliance requirements.

Responsibility: Our Point of Departure

Leveraging its three core businesses of photovoltaic, wind power, and clean heating, SHNE continuously provides society with clean electricity and low-carbon thermal energy, contributing to the implementation of the national "Dual Carbon" strategy through its actual business operations. We have chosen to take proactive action, progressively integrating climate response into strategic management, and working to build a climate management system covering governance, strategy, risk management, and metrics and targets — committed to advancing climate governance with transparency and rigour.

Resilience: Our Strategic Orientation

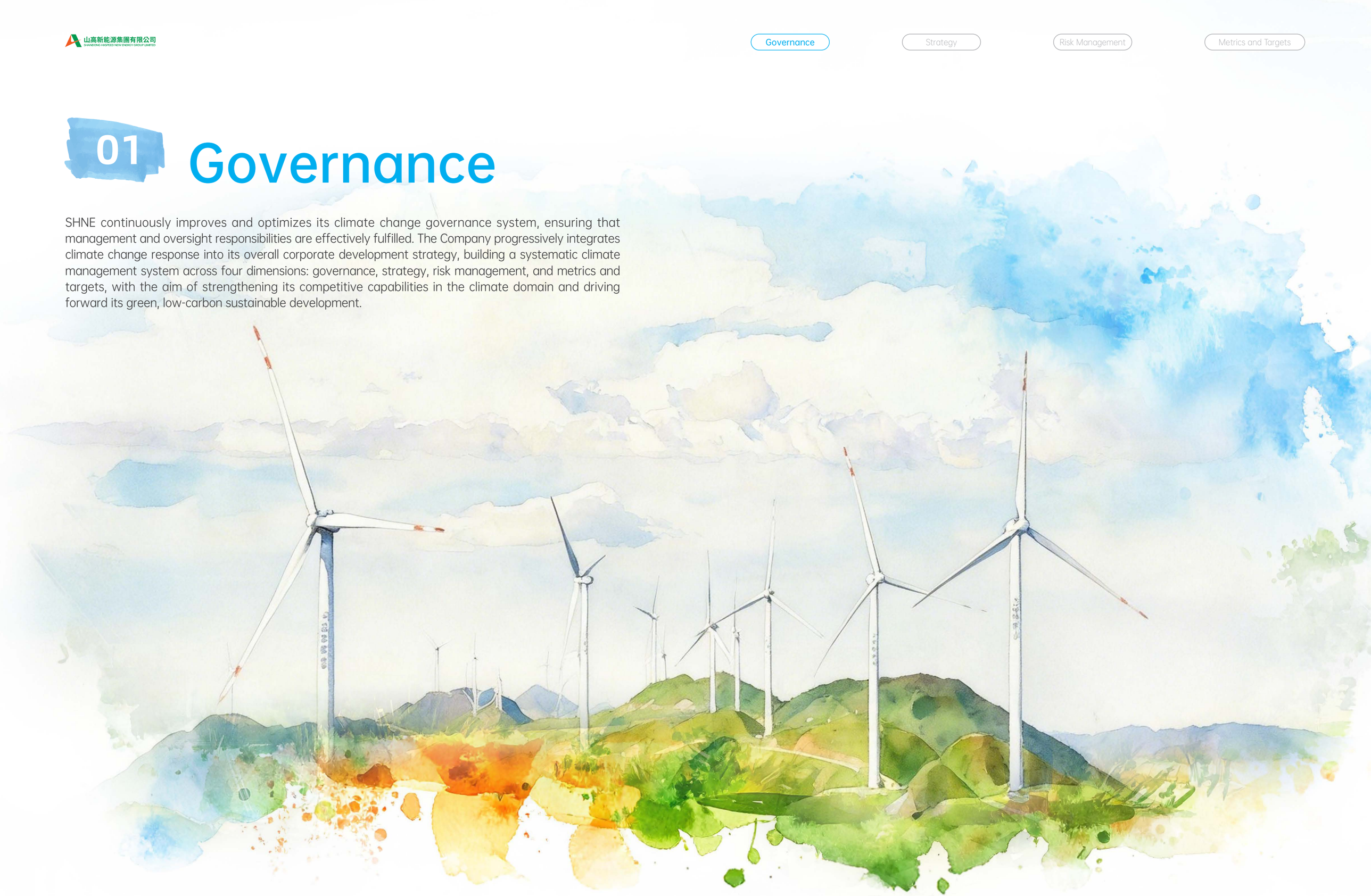
Climate change brings both risks and opportunities. Physical risks test the safety boundaries of assets, transition risks reshape the competitive landscape of the industry, and market opportunities arising from the low-carbon transition provide new growth momentum for clean energy companies. Through systematic scenario analysis and financial impact assessment, SHNE incorporates climate variables into its decision-making framework, proactively positioning for opportunities while managing risks, and continuously enhancing the Company's operational resilience and strategic steadiness in the face of climate uncertainty.

Long-term Focus: Our Value Conviction

We believe that the sustainable development of a company requires balancing the present with the long term. SHNE will take "Share Green Energy and Empower the World" as its mission coordinates, plan and position itself with a long-term focus vision, and promote steady, high-quality development. This Report is a solemn commitment from SHNE to the capital markets and to society at large — we aspire to be builders of clean energy, and to jointly explore viable pathways toward sustainable development together with all stakeholders.

01 Governance

SHNE continuously improves and optimizes its climate change governance system, ensuring that management and oversight responsibilities are effectively fulfilled. The Company progressively integrates climate change response into its overall corporate development strategy, building a systematic climate management system across four dimensions: governance, strategy, risk management, and metrics and targets, with the aim of strengthening its competitive capabilities in the climate domain and driving forward its green, low-carbon sustainable development.



1.1 Climate Change Governance Structure

SHNE continuously optimizes its climate change governance system, establishing the Board of Directors as the core leadership body responsible for the top-level design and strategic guidance of climate governance, and providing overall coordination, guidance, and supervision of the planning and implementation of related management activities.

◎ Climate Change Governance Structure

The Board

- Deliberate on and approve the Company's climate strategy, targets and major decisions.
- Regularly listen to special reports from the management on the assessment of climate-related risks andopportunities as well as corresponding response measures.
- Integrate climate-related considerations into the deliberation of major operational decisions, riskmanagement systems and strategic planning.
- Continuously oversee the rationality of formulation, implementation progress and achievement status of climate targets.

Sustainability Committee

- Formulate the Company's climate response strategy, implementation pathways and managementand control measures.
- Regularly supervise the identification and assessment of climate-related risks and opportunities, andprovide guidance to the management.
- Report to the Board of Directors on the progress of the climate strategy, outcomes of risk andopportunity assessments, target achievement status and key matters.
- Review and approve important climate-related work results and plans.

ESG Management Office

- Organize regular identification and assessment of climate-related risks and opportunities.
- Decompose tasks around climate targets, clarify responsible persons, implementationpathways and timelines.
- Track and supervise the implementation progress and quality of various tasks.
- Report to the Sustainability Committee on the results of risk and opportunity assessments,progress toward target achievement, and recommendations for optimizing implementationstrategies.

ESG Working Group

- Formulate specific implementation plans and work plans at the business level.
- Regularly complete the statistics of various indicators, data collection and theadvancement of carbon emission reduction projects.
- Cooperate in the assessment of climate-related risks and opportunities, and developand implement risk control and emission reduction measures.
- Regularly report work progress, implementation effectiveness and issues encounteredduring execution to the ESG Management Office.
- Conduct timely communication and coordination to ensure the effective implementationof all tasks.

1.2 Operating Mechanism

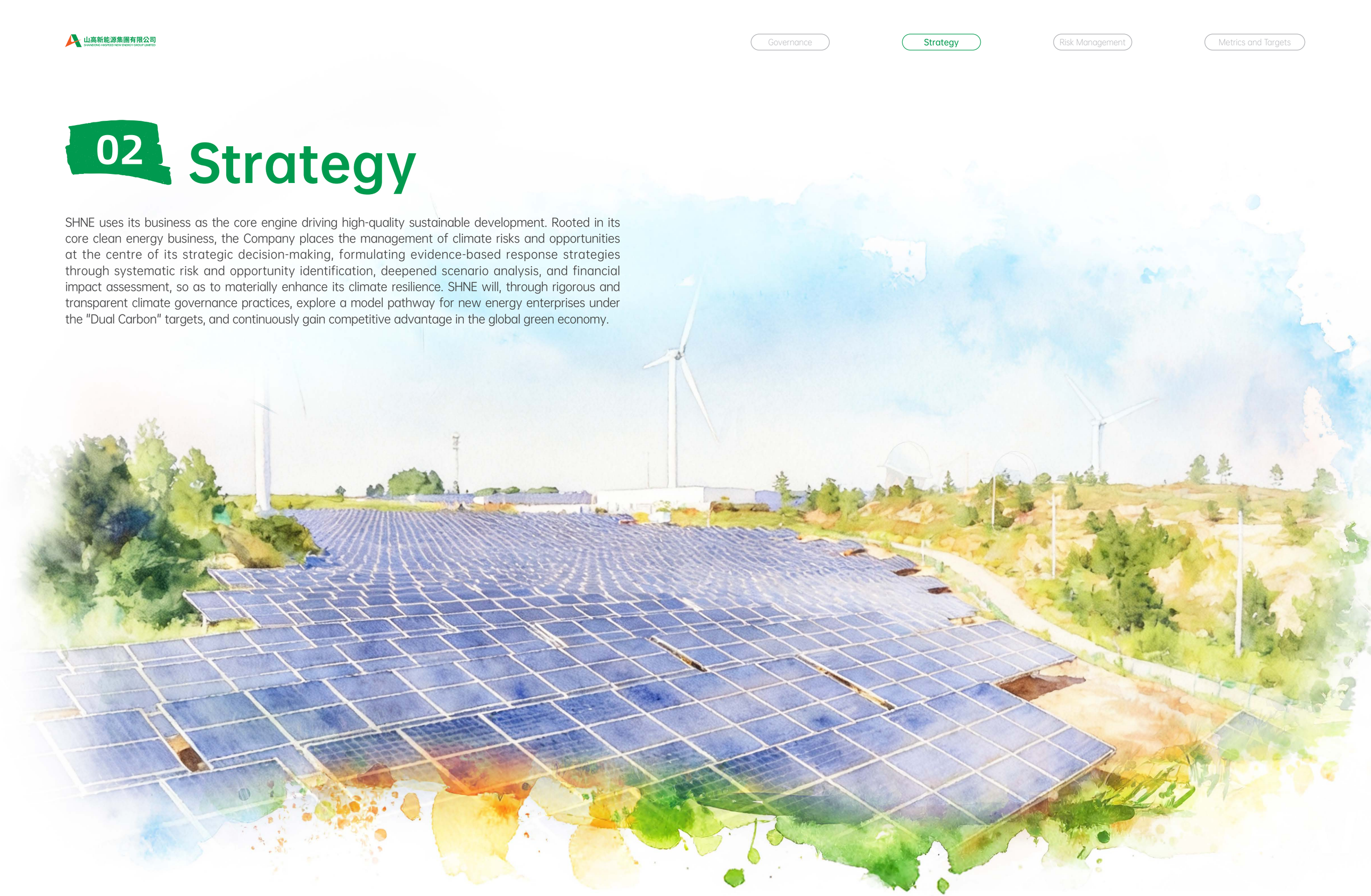
The Sustainability Committee reports to the Board of Directors at least once a year on a dedicated basis, covering the outcomes of climate risk and opportunity identification, target progress, and material matters. The ESG Management Office coordinates the annual sustainability work plan and reports progress upward through the Operating Committee, Management Committee, Sustainability Committee and the Board of Directors in sequence, forming a closed-loop, bottom-up information reporting mechanism.

1.3 Performance Linkage Mechanism

The Group has established an overall monitoring mechanism for ESG work, which already incorporates climate risk-related content, and will progressively consider including climate-related indicators in its performance assessment framework. At this stage, the Group is focusing on foundational capacity-building work and conducting timely reviews and communications on relevant matters. In addition, the Group has formulated the Sustainable Development Work and Incentive Program of SHNE to positively incentivize the adoption and promotion of ESG principles, and will in the future appropriately commend teams and individuals that demonstrate outstanding performance in areas such as climate response, energy conservation, and emissions reduction.

02 Strategy

SHNE uses its business as the core engine driving high-quality sustainable development. Rooted in its core clean energy business, the Company places the management of climate risks and opportunities at the centre of its strategic decision-making, formulating evidence-based response strategies through systematic risk and opportunity identification, deepened scenario analysis, and financial impact assessment, so as to materially enhance its climate resilience. SHNE will, through rigorous and transparent climate governance practices, explore a model pathway for new energy enterprises under the "Dual Carbon" targets, and continuously gain competitive advantage in the global green economy.



As of the end of 2025

the Company operated approximately **4,961** MW of clean energy power generation projects, including photovoltaic and wind power plants

2025

the total grid-integrated power generation from the photovoltaic and wind power plants held and/or managed by the Company reached approximately **6.82** million MWh

saving about **2.18** million tons of standard coal

reducing over **5.37** million tons of carbon dioxide emissions

2.1 Overall Climate Change Strategy

At the critical juncture of concluding the 14th Five-Year Plan and laying out the 15th Five-Year Plan, the Company established an overarching high-quality development principle of "quality and efficiency first", driving a shift in its growth model from single-track market development to a dual-core driven approach centred on both development and grid connection. Leveraging the industrial ecosystem and credit financing advantages of its controlling shareholder, the Group maintains clear strategic resolve and has independently completed its 15th Five-Year Reform and Development Plan (2026–2030). This plan sets out a technology roadmap of "expanding wind, stabilising solar, deploying storage, and developing hydro", aiming to build a new multi-energy complementary industrial structure encompassing wind power, solar photovoltaic, energy storage, hydropower, and integrated energy services — driving a transformation from scale-driven growth to value creation-oriented, intensive growth. The Company secured 2,204 MW of new development quotas, with the proportion of wind power increasing significantly, and achieved landmark breakthroughs in long-duration energy storage and digital-energy integration in projects such as the integrated source-grid-load-storage project in Ulanqab, Inner Mongolia. As at the end of 2025, projects under construction or with approved construction permits had a combined installed capacity of over 5.8 GW, providing a solid project pipeline for medium- and long-term low-carbon transition and sustainable development.

As of the end of the reporting period, the Company operated approximately 4,961 MW of clean energy power generation projects, including photovoltaic and wind power plants. It owns 54 centralized photovoltaic power plants with a total installed capacity of 2,603 MW, 308 distributed photovoltaic power plants with a total installed capacity of 1,088 MW, and 20 wind power plants with a total installed capacity of 1,270 MW, both domestically and overseas. In 2025, the total grid-integrated power generation from the photovoltaic and wind power plants held and/or managed by the Company reached approximately 6.82 million MWh, saving about 2.18 million tons of standard coal and reducing over 5.37 million tons of carbon dioxide emissions.

Strategic Pathway for Carbon Peak

SHNE has deeply integrated climate change response into its overall corporate development strategy, aligning with the national "Dual Carbon" target. Centered on the "One Core, Four Engines, Seven Pillars of Support" framework as the key implementation pathway, the Company systematically advances full-process low-carbon transformation and climate risk management. By establishing a scientific and comprehensive system for pathways to reduce GHG emissions, it continuously enhances its sustainability competitiveness and fulfills the climate governance responsibilities of a new energy enterprise.

One Core

Taking carbon peak as the core objective, clarifying the timeline for achieving carbon peak, and laying the foundation for the subsequent realization of carbon neutrality.

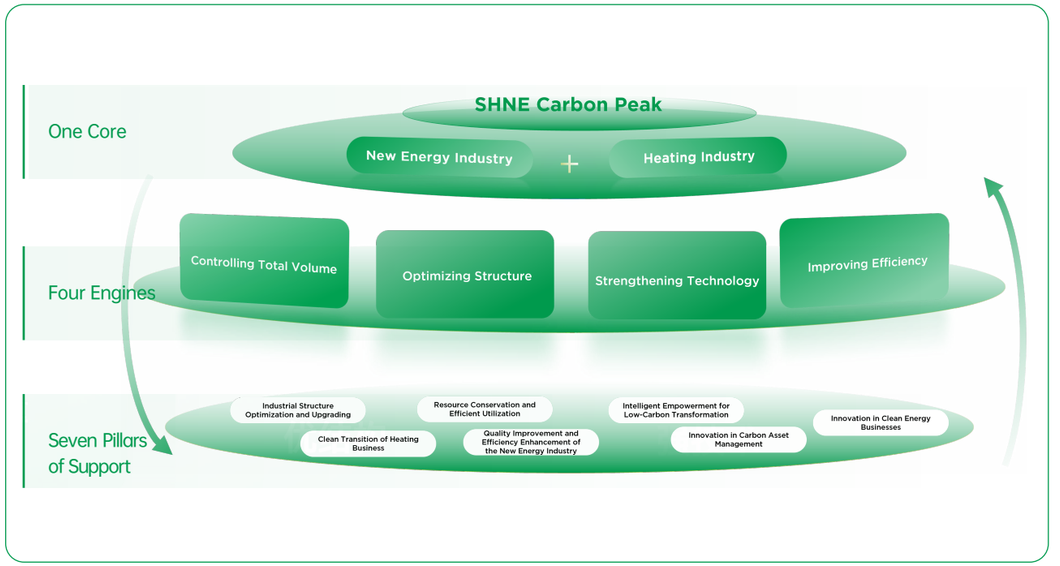
Four Engines

Focusing on controlling total volume, optimizing structure, strengthening technology, and improving efficiency — the four key emission reduction engines — comprehensively advancing carbon emission reductions across the entire business system from multiple dimensions.

Seven Pillars of Support

Focused on seven key areas — industrial structure optimization and upgrading, clean transition of heating business, resource conservation and efficient utilization, quality improvement and efficiency enhancement of the new energy industry, intelligent empowerment for low-carbon transformation, innovation in carbon asset management, and innovation in clean energy businesses — specific implementation measures have been carried out to provide comprehensive, end-to-end support for low-carbon transformation.

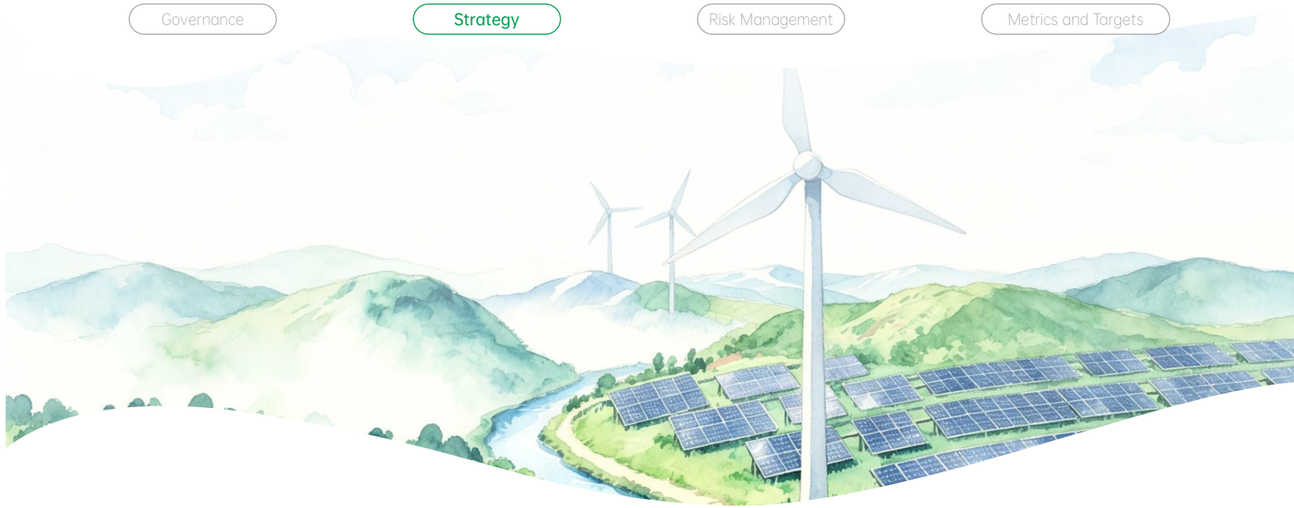
◎ "One Core, Four Engines, Seven Pillars of Support" Strategy



2.2 Identification of Risks and Opportunities

Following the climate risk classification framework set out in the TCFD guidelines, and in combination with the characteristics of the new energy industry, the Company systematically identified climate-related risks and opportunities with potential impacts on its business segments from the dimensions of physical risks, transition risks, and climate opportunities through a combination of scenario analysis, stakeholder questionnaire surveys, and management workshops, compiling these into a register.

We identified 4 physical risks, 8 transition risks, and 8 climate opportunities. Through interviews, survey questionnaires, historical climate risk retrospectives, and an assessment of the likelihood and magnitude of change for each risk and opportunity, 16 material climate and financial risks and opportunities were ultimately selected for scenario analysis. Corresponding response measures were proposed for each, with the aim of continuously enhancing SHNE's resilience to climate risks. Looking ahead, SHNE will closely monitor other potential climate-related risk and opportunity triggers, make timely adjustments to its strategic direction, and proactively capture opportunities while effectively mitigating risks.



Risk Category	Affecting Factor	Specific Risk Variable	Risk Description	Value Chain Impact	Time Dimension[2]	Financial Impact Method	Resilience-Building Initiatives
Physical Risk							
Chronic Risk	Temperature Rise	Annual Average Temperature	1.Long-term temperature rise may shorten equipment lifespan, increase long-term operation, maintenance, and upgrade requirements.	Own operation	Long-term	May affect the Company's revenue and capital expenditures.	Consider climate change scenarios during the project design phase, upgrade cooling systems, and optimize asset lifecycle management.
	Heatwaves	Maximum Temperature Number of Days above 30° C Number of Days above 35° C	1. An increase in the number of high-temperature days and the frequency of extreme heat events may reduce the power generation efficiency of photovoltaic modules, accelerate equipment aging, and increase operational and maintenance safety risks. 2. Prolonged high temperatures may adversely affect the operational stability of energy storage systems and power electronic devices. 3. Impacts on employee health and safety, along with additional costs for temperature regulation and facility maintenance at the project site.	Upstream Own operation	Short- to medium-term	May increase the Company's operating and maintenance costs, accelerate equipment depreciation, and reduce profits (due to decreased power generation efficiency).	1. Adjust operation and maintenance schedules during high-temperature periods, and strengthen high-temperature warnings and on-site health and safety management. 2. Strengthen temperature control and monitoring of critical equipment, and regularly conduct equipment health and safety assessments. 3. Provide employees with facilities and equipment for heatstroke prevention and cooling, distribute high-temperature allowances and heatstroke prevention supplies; formulate fire emergency response plans, and regularly conduct training and emergency drills.
Acute Risk	Cold waves	Number of Frost Days Number of Snow and Ice Days Minimum Temperature	1. Extreme low-temperature weather adversely affects equipment startup performance, material reliability, and operation & maintenance working conditions.	Own operation	Short- to medium-term	May increase operational and maintenance costs	1. Maintain and optimize existing cold and ice/snow prevention and management measures, and continuously monitor changes in risks. 2. Improve emergency response plans for extreme low temperatures to ensure effective measures can be taken to prevent, control, and mitigate to the greatest extent possible the impacts of freezing conditions and blizzards on the safety of personnel, materials, and property at the site. Proactively conduct temperature monitoring and analysis, align resources accordingly, promptly track and provide feedback on supply and demand changes, and ensure stable power supply.

2 Short-term refers to an impact duration of one year or less, medium-term refers to an impact duration of more than one year but up to five years, and long-term refers to an impact duration of more than five years.

Risk Category	Affecting Factor	Specific Risk Variable	Risk Description	Value Chain Impact	Time Dimension	Financial Impact Method	Resilience-Building Initiatives
Physical Risk							
Acute Risk	Typhoon and Flooding	Number of Extreme Rainfall Days Maximum Daily Rainfall	1. Extreme precipitation and typhoon and flooding risks may lead to physical asset damage, electrical system failures, and project schedule delays, directly threatening the health and safety of the power plant and its economic benefits.	Own operation	Short- to medium-term	Infrastructure repair costs, operational disruption losses	1. Improve flood prevention and drainage design standards, and strengthen the construction of the site's drainage system. 2. Develop emergency response plans for extreme rainfall, regularly conduct emergency drills for extreme weather, enhance emergency response capabilities, promptly activate emergency plans when extreme weather occurs, and conduct post-event reviews. 3. Reasonably schedule construction plans, improve project management flexibility, and strengthen weather monitoring. 4. Fully consider the impact of extreme weather on company operations during the project design phase, and proactively avoid construction projects in relevant areas.

Risk Category	Affecting Factor	Specific Risk Variable	Risk Description	Value Chain Impact	Time Dimension	Financial Impact Method	Resilience-Building Initiatives
Transition Risk							
Policy	Carbon Pricing	Price increase	• Stricter carbon market regulation (e.g., data verification, allowance control) requires companies to establish carbon asset management systems, thereby increasing compliance costs. • If sectors such as the heating industry are included in the carbon market, related companies may face rising carbon costs, along with pressure to purchase allowances or invest in low-carbon transformations.	Own operation	Medium- and long-term	May affect the Company's profits and revenue	• Establish a statistical mechanism for GHG indicators to comprehensively assess GHG emissions and identify pathways to reduce GHG emissions.
	Electricity Pricing Policy Trends	Price decrease	• With the full-scale rollout of the electricity spot market, combined with declining thermal coal prices and high penetration of renewable energy, electricity prices during certain periods—such as midday—face significant downward pressure. The capture price of renewable energy may fall below the market average, leading to declines in spot market average prices in some provinces.	Own operation	Short-term	May affect the Company's revenue	• Deploy energy storage systems to achieve peak load shifting and valley filling; • Optimise the Company's power marketing organisational structure, establishing a three-tier collaboration model at headquarters, regional, and power station levels; • Develop phased marketing plans for the Company and for each province; • Establish a data analysis tool for electricity volume and price transactions to support the optimisation of trading strategies.
Market	Energy Price Fluctuations	Price fluctuations	• Fluctuations in the prices of coal, natural gas, and others directly affect the costs of traditional energy sources such as thermal power and gas power.	Own operation	Medium and short term	May affect the Company's costs	• Optimize fuel procurement, increase the proportion of clean, diversified, and low-carbon heat sources; utilize digital tools to forecast heating demand and improve energy efficiency.
	Changes in Energy Structure	The global energy structure will undergo a significant transformation, with a substantial increase in the proportion of renewable energy.	• During the rapid transformation of the energy structure, grid integration capacity, energy storage support, and electricity market mechanisms are still not fully developed, which may affect the profitability of new energy projects. Meanwhile, the transition of traditional energy enterprises could intensify industry competition.	Downstream	Medium- and long-term	May affect the Company's revenue and costs	• The Company optimizes its product combination, adjusts it in line with changes in market demand, and increases the proportion of high-efficiency products.

Risk Category	Affecting Factor	Specific Risk Variable	Risk Description	Value Chain Impact	Time Dimension	Financial Impact Method	Resilience-Building Initiatives
Transition Risk							
Reputation	External Sustainability Awareness	External stakeholders maintain a high level of attention to sustainable development.	• External stakeholders' focus on the Company's ESG performance keeps increasing. Failure to disclose climate-related information in a timely manner may expose the Company to the risk of brand value impairment.	Downstream	Long-term	May affect the Company's financing costs	• Improve the quality and transparency of ESG information disclosure.
Technology	Changes in Energy Efficiency Investment	The investment in improving energy efficiency in the market is expected to increase significantly in the future.	• Improvements in external terminal energy efficiency and the iteration of old and new assets may lead to the risk of depreciation of existing projects, while rapid external technological advancements may render older projects less competitive in bidding processes.	Own operation	Medium- and long-term	May affect the Company's costs and asset impairment	• Closely track high-efficiency smart photovoltaic modules technology; explore and utilize high-quality existing assets for mergers and acquisitions.

Risk Category	Affecting Factor	Specific Risk Variable	Risk Description	Value Chain Impact	Time Dimension	Financial Impact Method	Resilience-Building Initiatives
Opportunity							
Policy	Carbon Pricing	Price increase	• As the national carbon market expands to cover more energy-intensive industries, carbon prices are expected to rise steadily. Following the restart of China Certified Emission Reductions (CCER), additional emission reduction benefits can be generated for wind and solar projects.	Own operation	Medium- and long-term	May affect the Company's profits and revenue	• Establish a CCER project management mechanism, conduct comprehensive verification of asset emission reductions, and participate in domestic and international carbon credit trading.
	Electricity Pricing Policy Trends	Price increase	• Green Electricity Certificate (GEC) issuance achieved full coverage, establishing environmental value rights for unsubsidized projects; power market reforms promote full grid market access for renewable energy. Policies mandating renewable energy consumption quotas stimulate demand for green certificates. Green certificate prices rebound from low levels.	Own operation	Short-term	May affect the Company's revenue	• Optimize the marketing system management by locking in environmental premiums through a "green certificate + green power" bundled sales model.
Market	Energy Price Fluctuations	Price fluctuations	• Price fluctuations in traditional energy sources such as coal and natural gas have driven end-users to shift to stable, low-cost clean energy supplies.	Own operation	Short- to medium-term	May affect the Company's revenue	• Optimize the energy cost structure and enhance competitive advantages to expand the market.
	Changes in Energy Structure	The global energy mix will undergo a significant transformation, with the share of renewable energy increasing substantially	• The increasing share of renewable energy has driven the development of new energy projects.	Downstream	Medium- to long-term	May affect the Company's revenue and costs	• Closely track the trend of energy structure transformation and seize the opportunities brought by the expansion of the new energy market.
Technology	Changes in Energy Efficiency Investment	Investment in energy efficiency is expected to increase significantly in the future market.	• Internal digital operations and maintenance improve energy efficiency, and digital tools can reduce operational and maintenance costs.	Own operation	Medium- to long-term	May affect the Company's costs	• Enhance the efficiency of existing power plants through technological upgrades; develop integrated "new energy + energy storage" solutions.
Reputation	External Sustainability Awareness	External stakeholders continue to maintain a high level of attention on sustainability	• The pressure to decarbonize supply chains is driving export-oriented enterprises and multinational giants, such as RE100 (Renewable Energy 100) companies, to procure zero-carbon electricity on a large scale. Enhanced brand recognition helps lower financing costs. RE100 unconditionally recognizes Chinese green certificates, expanding market demand in the high-end segment.	Downstream	Medium- to long-term	May affect the Company's financing costs	• Enhance transparency in ESG information disclosure; align with green loans and green bonds; establish a green brand with differentiated competitive advantages.

2.3 Scenario Analysis

Scenario analysis is a systematic method for assessing the potential impacts of climate change on enterprises under conditions of uncertainty. It helps enterprises look beyond short-term operational perspectives to proactively identify and address climate-related risks and opportunities. In the context of climate change, scenario analysis provides a scientific basis for strategic decision-making across different development pathways, and is an important tool for building climate resilience and achieving sustainable development.

As an integrated clean energy service provider deeply engaged in China's energy transition, SHNE's core businesses are closely intertwined with climate change. Accordingly, based on the characteristics of its core business and with reference to the TCFD recommendations framework and domestic and international climate risk analysis practices, the Company divides its climate scenario analysis into two main categories: physical scenarios and transition scenarios. Physical scenarios focus on the direct physical impacts of climate change on operational assets, including the potential effects of heatwaves, typhoons and floods, cold waves, and long-term temperature changes on power generation efficiency, asset longevity, and heating demand. Transition scenarios focus on the potential impacts on the Company of policy and market forces arising from the global and Chinese low-carbon transition — including carbon price trajectories, electricity market reforms, and energy mix adjustments — as well as the structural opportunities deriving from these, such as the expansion of the green certificate market and growing demand for green electricity.

Climate Scenario Framework

SHNE conducted a physical risk assessment based on its core business operations and the characteristics of the new energy industry, referring to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and international and domestic practices for climate risk analysis. The Company conducted physical risk assessment using the IPCC SSP1-2.6 low-emission scenario and the IPCC SSP5-8.5 high-emission scenario, and carried out transition risk assessment using the NGFS "Net Zero 2050" Orderly Scenario and the NGFS "Delayed Transition" Disorderly Scenario of the Network of Central Banks and Supervisors for Greening the Financial System (NGFS). Through the above analysis, the Company aims to evaluate the potential impacts of different climate scenarios on its operations and value chain at two critical time points — 2030 and 2050.

Risk and Opportunity Categories	Scenario Selected	Scenario Description
Physical Risk	SSP1-2.6	Limiting warming to below 2.0 degrees relative to 1850–1900 (median) implies achieving net-zero carbon dioxide emissions in the second half of this century.
	SSP5-8.5	A high-emission scenario without additional climate policies. By 2050, carbon dioxide emissions are projected to roughly double compared to current levels, and global temperature rise is expected to reach 4.4 degrees by 2100.
Transition Risk, Climate Opportunity	"Net Zero 2050" Orderly Scenario	Limiting global warming to below 1.5 degrees Celsius through stringent climate policies and innovation, achieving net-zero global carbon dioxide emissions around 2050.
	"Delayed Transition" Disorderly Scenario	Assuming no additional climate policies are implemented before 2030, strong policies will be enacted after 2030 to limit warming to below 2° C.

3 NGFS (Network of Central Banks and Supervisors for Greening the Financial System) is a network composed of central banks and regulatory authorities worldwide, aiming to promote the financial system's climate change response and support the transition to a green economy.

Physical Risk Scenario Analysis

The physical risk analysis covers 29 provinces and countries where SHNE's operational projects are located. Twenty-nine representative cities or nearby major cities within these provinces and countries are selected as representative analysis areas. A physical risk assessment tool for climate change is used to evaluate chronic and acute risks faced by these cities. Based on the asset distribution of SHNE, four key physical risk factors critical to the Company are selected for comprehensive analysis. These include climate warming (Annual Average Temperature), cold waves (Number of Frost Days, Number of Snow and Ice Days, Minimum Temperature), heatwaves (Maximum Temperature, Number of Days above 30° C, Number of Days above 35° C), and typhoon and flooding (Number of Extreme Rainfall Days, Maximum Daily Rainfall). A climate risk heatmap for SHNE is developed accordingly. In the heatmap, darker colors indicate a higher likelihood and magnitude of future changes in the climate risk factor for a given city, while lighter colors indicate a lower likelihood and magnitude of change.

In the physical risk assessment, we employed a dual-axis (horizontal and vertical) analytical approach, supplemented by considerations of the Company's asset distribution and business scale, to conduct further risk analysis on key provinces where the new energy and heating segments are located.

01 Horizontal Analysis
Compares the four physical risks to assess their level of exposure in the key provinces of the New Energy and Heating Segments, identifying the primary physical risks.

02 Vertical Analysis
Focuses on each specific risk factor, systematically analyzing the differentiated impacts of each factor on major provinces within the two segments.

Horizontal Analysis Results

New Energy Sector

- Under the SSP1-2.6 and SSP5-8.5 scenarios, the overall risk level of heatwaves and typhoon and flooding is the highest. According to heatmap data, asset values and revenue exposed to "high risk" from these climate hazards are substantial, particularly in provinces with large installed capacities such as Guangdong, Jiangsu, Henan, and Shaanxi. Meanwhile, due to typhoon impacts, Guangdong faces a significant increase in flood hazard by 2050. The Company should implement targeted adaptation measures in the future, enhance extreme weather monitoring, conduct inspections and reinforcement of fixed assets such as photovoltaic mounting structures and inverters, and avoid long-term construction projects in areas highly prone to typhoon and flooding, or alternatively develop comprehensive flood prevention designs.
- Climate warming and cold waves are expected to exhibit relatively evident fluctuations in future scenarios. The Company should proactively address such physical risks by considering the loss of system efficiency caused by environmental warming and the negative impact of extreme temperature variations on material fatigue in their future planning and layout, while also improving emergency response procedures. In response to heatwaves and warming trends, the Company should proactively optimize power consumption plans for component cooling and operation & maintenance scheduling, so as to control potential risks to employee outdoor work health and safety and business continuity in the future

Heating Sector

- Under the SSP1-2.6 and SSP5-8.5 scenarios, climate warming and cold waves present the highest overall risk level. The heatmap shows a general upward trend in the fluctuation rage of annual average temperature across core heating regions in Ningxia, Shandong, Shaanxi, and Henan. A significant portion of heat sales revenue falls within this "high-risk" category, and long-term temperature increase may lead to a decline in heating degree days. The Company can implement targeted medium- to long-term trend monitoring and regularly conduct network efficiency surveys to mitigate asset stranding risks caused by demand contraction.
- Cold waves risks will manifest in the future as increased deviation of extreme values. The Company should pay attention to the impact of such acute risks on peak load and improve the emergency response procedures in future heating season plans.

Physical Risk Heatmap of SHNE under IPCC SSP1-2.6 Scenario

◎ Physical Risk Heatmap of SHNE in 2030 under IPCC SSP1-2.6 Scenario

Province-City	Acute Risk								Chronic Risk
	Cold Waves		Heatwaves				Typhoon and Flooding		Climate Warming
	Number of Frost Days	Number of Snow and Ice Days	Minimum Temperature	Maximum Temperature	Number of Days above 30° C	Number of Days above 35° C	Number of Extreme Rainfall Days	Maximum Daily Rainfall	Annual Average Temperature
Shanghai-Shanghai									
Yunnan - Dali									
Inner Mongolia - Baotou									
Beijing - Beijing									
Jilin - Changchun									
Sichuan - Chengdu									
Tianjin - Tianjin									
Ningxia - Yinchuan									
Anhui - Hefei									
Shandong - Qingdao									
Shanxi - Changzhi									
Guangdong - Guangzhou									
Guangxi - Nanning									
Xinjiang - Urumqi									
Jiangsu-Wuxi									
Jiangxi-Nanchang									
Hebei-Shijiazhuang									
Henan-Zhengzhou									
Zhejiang - Ningbo									
Hubei - Tianmen									
Hunan - Changsha									
Fujian - Xiamen									
Xizang - Lhasa									
Guizhou - Zunyi									
Liaoning-Shenyang									
Chongqing - Chongqing									
Shaanxi - Xi'an									
Heilongjiang - Harbin									
Australia - Australia									

Projected fluctuation range of the risk factor in the city Low High

◎ Physical Risk Heatmap of SHNE in 2050 under IPCC SSP1-2.6 Scenario

Province-City	Acute Risk								Chronic Risk
	Cold Waves		Heatwaves				Typhoon and Flooding		Climate Warming
	Number of Frost Days	Number of Snow and Ice Days	Minimum Temperature	Maximum Temperature	Number of Days above 30° C	Number of Days above 35° C	Number of Extreme Rainfall Days	Maximum Daily Rainfall	Annual Average Temperature
Shanghai-Shanghai									
Yunnan - Dali									
Inner Mongolia - Baotou									
Beijing - Beijing									
Jilin - Changchun									
Sichuan - Chengdu									
Tianjin - Tianjin									
Ningxia - Yinchuan									
Anhui - Hefei									
Shandong - Qingdao									
Shanxi - Changzhi									
Guangdong - Guangzhou									
Guangxi - Nanning									
Xinjiang - Urumqi									
Jiangsu-Wuxi									
Jiangxi-Nanchang									
Hebei-Shijiazhuang									
Henan-Zhengzhou									
Zhejiang - Ningbo									
Hubei - Tianmen									
Hunan - Changsha									
Fujian - Xiamen									
Xizang - Lhasa									
Guizhou - Zunyi									
Liaoning-Shenyang									
Chongqing - Chongqing									
Shaanxi - Xi'an									
Heilongjiang - Harbin									
Australia - Australia									

Projected fluctuation range of the risk factor in the city Low High

Physical Risk Heatmap of SHNE under IPCC SSP5-8.5 Scenario

◎ Physical Risk Heatmap of SHNE in 2030 under the IPCC SSP5-8.5 Scenario

Province-City	Acute Risk								Chronic Risk
	Cold Waves			Heatwaves			Typhoon and Flooding		Climate Warming
	Number of Frost Days	Number of Snow and Ice Days	Minimum Temperature	Maximum Temperature	Number of Days above 30° C	Number of Days above 35° C	Number of Extreme Rainfall Days	Maximum Daily Rainfall	Annual Average Temperature
Shanghai-Shanghai									
Yunnan - Dali									
Inner Mongolia - Baotou									
Beijing - Beijing									
Jilin - Changchun									
Sichuan - Chengdu									
Tianjin - Tianjin									
Ningxia - Yinchuan									
Anhui - Hefei									
Shandong - Qingdao									
Shanxi - Changzhi									
Guangdong -Guangzhou									
Guangxi - Nanning									
Xinjiang - Urumqi									
Jiangsu-Wuxi									
Jiangxi-Nanchang									
Hebei-Shijiazhuang									
Henan-Zhengzhou									
Zhejiang - Ningbo									
Hubei - Tianmen									
Hunan - Changsha									
Fujian - Xiamen									
Xizang - Lhasa									
Guizhou - Zunyi									
Liaoning-Shenyang									
Chongqing - Chongqing									
Shaanxi - Xi'an									
Heilongjiang - Harbin									
Australia - Australia									

Projected fluctuation range of the risk factor in the city — Low — High

◎ Physical Risk Heatmap of SHNE in 2050 under the IPCC SSP5-8.5 Scenario

Province-City	Acute Risk								Chronic Risk
	Cold Waves			Heatwaves			Typhoon and Flooding		Climate Warming
	Number of Frost Days	Number of Snow and Ice Days	Minimum Temperature	Maximum Temperature	Number of Days above 30° C	Number of Days above 35° C	Number of Extreme Rainfall Days	Maximum Daily Rainfall	Annual Average Temperature
Shanghai-Shanghai									
Yunnan - Dali									
Inner Mongolia - Baotou									
Beijing - Beijing									
Jilin - Changchun									
Sichuan - Chengdu									
Tianjin - Tianjin									
Ningxia - Yinchuan									
Anhui - Hefei									
Shandong - Qingdao									
Shanxi - Changzhi									
Guangdong - Guangzhou									
Guangxi - Nanning									
Xinjiang - Urumqi									
Jiangsu-Wuxi									
Jiangxi-Nanchang									
Hebei-Shijiazhuang									
Henan-Zhengzhou									
Zhejiang - Ningbo									
Hubei - Tianmen									
Hunan - Changsha									
Fujian - Xiamen									
Xizang - Lhasa									
Guizhou - Zunyi									
Liaoning-Shenyang									
Chongqing - Chongqing									
Shaanxi - Xi'an									
Heilongjiang - Harbin									
Australia - Australia									

Projected fluctuation range of the risk factor in the city — Low — High

Vertical Analysis-Breakdown of Specific Risk Factors

Cold Waves

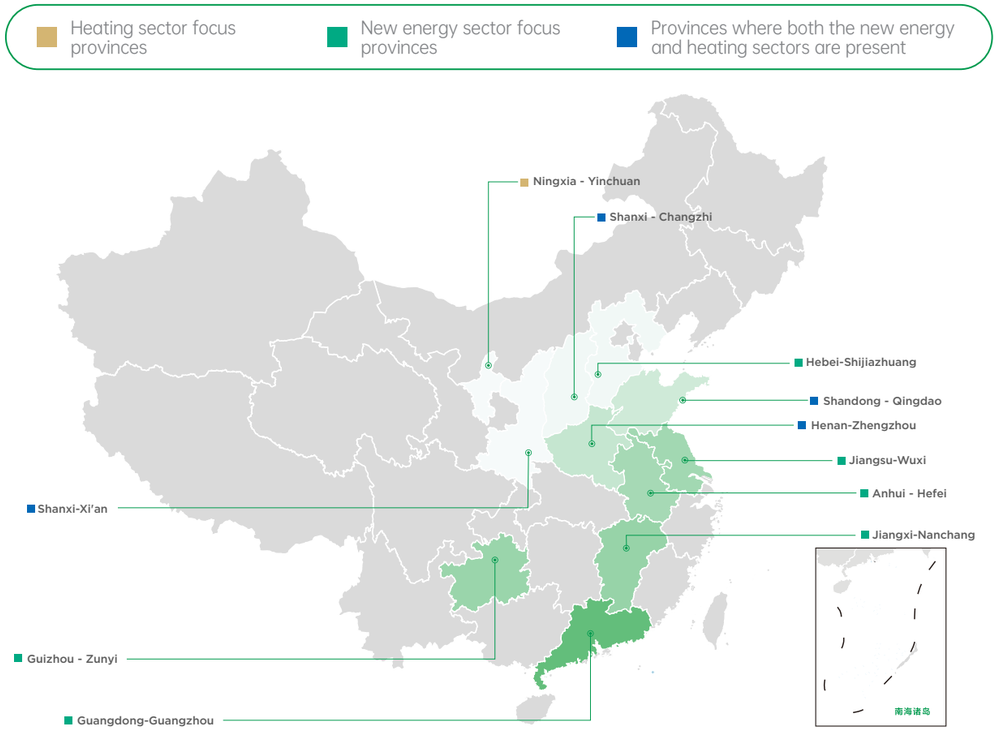
New Energy Sector

In southern provinces (Jiangxi, Guangdong, Guizhou), fluctuations in the number of snow/ice days and frost days are relatively high, exposing links such as PV surface coverage and energy storage temperature control to significant uncertainty. Contingency plans and flexibility margins should be prepared for rare fluctuations. Central provinces such as Anhui and Jiangsu face dual pressures from rising fluctuations in snow/ice days and frost days, and should reserve flexible design margins. In the remaining provinces, fluctuations in snow/ice days and frost days are medium to low, with limited impact.

Heating Sector

In Ningxia, the minimum temperature during cold waves is subject to considerable variation, posing challenges to the operational stability of heating pipeline networks, fuel dispatch flexibility, and peak load regulation. In Shandong and Henan, fluctuations in the number of snow/ice days are at medium-to-high levels, requiring attention to pipeline pressure fluctuations and fuel transport reliability. In Shanxi and Shaanxi, all indicators show low variation, with limited impact.

◎ SSP1-2.6 in 2030 Number of Snow and Ice Days



◎ SSP1-2.6 in 2030

Province-City	Number of Snow and Ice Days	Number of Frost Days	Minimum Temperature
GuangdongGuangzhou			
Jiangxi-Nanchang			
Guizhou - Zunyi			
Jiangsu-Wuxi			
Anhui - Hefei			
Henan-Zhengzhou			
Shandong - Qingdao			
Hebei-Shijiazhuang			
Shanxi - Changzhi			
Shanxi-Xi'an			
Ningxia - Yinchuan			

◎ SSP1-2.6 in 2050

Province-City	Number of Snow and Ice Days	Number of Frost Days	Minimum Temperature
GuangdongGuangzhou			
Jiangxi-Nanchang			
Guizhou - Zunyi			
Anhui - Hefei			
Jiangsu-Wuxi			
Shandong - Qingdao			
Henan-Zhengzhou			
Hebei-Shijiazhuang			
Shanxi - Changzhi			
Shanxi - Xi'an			
Ningxia - Yinchuan			

◎ SSP5-8.5 in 2030

Province-City	Number of Snow and Ice Days	Number of Frost Days	Minimum Temperature
GuangdongGuangzhou			
Jiangxi-Nanchang			
Guizhou - Zunyi			
Anhui - Hefei			
Henan-Zhengzhou			
Shandong - Qingdao			
Jiangsu-Wuxi			
Hebei-Shijiazhuang			
Shanxi - Changzhi			
Shanxi - Xi'an			
Ningxia - Yinchuan			

◎ SSP5-8.5 in 2050

Province-City	Number of Snow and Ice Days	Number of Frost Days	Minimum Temperature
Jiangxi-Nanchang			
Jiangsu-Wuxi			
Anhui-Hefei			
Guizhou - Zunyi			
Henan-Zhengzhou			
Shandong - Qingdao			
Guangdong-Guangzhou			
Hebei-Shijiazhuang			
Ningxia - Yinchuan			
Shanxi - Changzhi			
Shaanxi - Xi'an			

Heatwaves

New Energy Sector

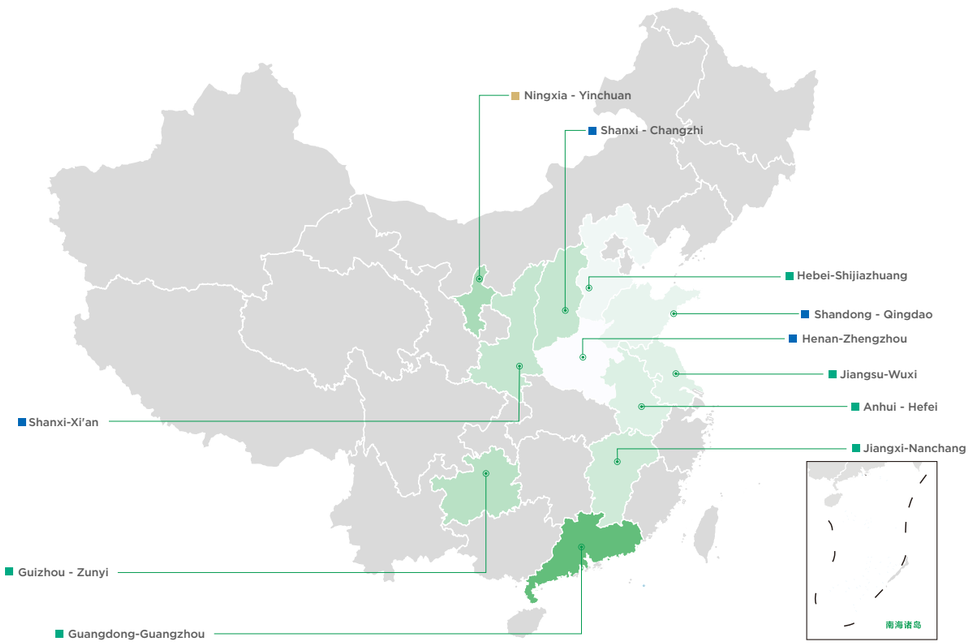
In Guangdong and Guizhou, the potential fluctuation in the number of days with temperatures above 35°C is relatively high in the future, exposing the stability of PV module efficiency and the heat dissipation reliability of energy storage systems to significant uncertainty. Enhanced heat-resistant design flexibility and dynamic load regulation capabilities are required. In Shanxi, Shaanxi, Jiangxi, Anhui, and Jiangsu, the fluctuation in high-temperature days is moderately high, also facing dual pressures, necessitating the reservation of heat dissipation redundancy. In Hebei, Shandong, and Henan, the fluctuation is low, and the high-temperature adaptability of equipment should be moderately improved.

Heating Sector

In Ningxia, the fluctuation in the number of days with temperatures above 35 ° C is notably high, introducing greater uncertainty regarding thermal expansion stress and material aging rate of heating pipeline networks during the non-heating season. Enhanced pipeline monitoring and flexible connections are required. In Shanxi and Shaanxi, the fluctuation in high-temperature days is moderately high, and the operational stability of heating facilities during seasonal transitions is subject to additional disturbances. In Shandong and Henan, the degree of change is low, and fluctuations in equipment maintenance cycles remain manageable, though still requiring attention. Overall, the intensifying fluctuation of heatwave indicators will increase the coupling uncertainty of peak load between the power and heating systems. It is recommended to establish cross-seasonal energy dispatch flexibility corridors and a coordinated emergency response mechanism.

◎ SSP1-2.6 in 2030 Number of Days above 35°C

Heating sector focus provinces | New energy sector focus provinces | Provinces where both the new energy and heating sectors are present



Projected fluctuation range of the risk factor in the city — Low — High

◎ SSP1-2.6 in 2030

Province-City	Number of Days above 35° C	Number of Days above 30° C	Maximum Temperature
Guangdong-Guangzhou			
Ningxia-Yinchuan			
Guizhou - Zunyi			
Shanxi - Changzhi			
Shanxi-Xi'an			
Jiangxi-Nanchang			
Anhui - Hefei			
Jiangsu-Wuxi			
Shandong - Qingdao			
Hebei-Shijiazhuang			
Henan-Zhengzhou			

◎ SSP1-2.6 in 2050

Province-City	Number of Days above 35° C	Number of Days above 30° C	Maximum Temperature
Guangdong-Guangzhou			
Guizhou - Zunyi			
Ningxia - Yinchuan			
Shanxi - Changzhi			
Shanxi - Xi'an			
Jiangxi-Nanchang			
Shandong - Qingdao			
Anhui - Hefei			
Jiangsu-Wuxi			
Hebei-Shijiazhuang			
Henan-Zhengzhou			

◎ SSP5-8.5 in 2030

Province-City	Number of Days above 35° C	Number of Days above 30° C	Maximum Temperature
Guangdong - Guangzhou			
Guizhou - Zunyi			
Ningxia - Yinchuan			
Jiangxi-Nanchang			
Anhui - Hefei			
Shanxi - Changzhi			
Shanxi - Xi'an			
Jiangsu-Wuxi			
Shandong - Qingdao			
Hebei-Shijiazhuang			
Henan-Zhengzhou			

◎ SSP5-8.5 in 2050

Province-City	Number of Days above 35° C	Number of Days above 30° C	Maximum Temperature
Guangdong-Guangzhou			
Guizhou - Zunyi			
Ningxia - Yinchuan			
Jiangxi-Nanchang			
Shanxi - Changzhi			
Shanxi - Xi'an			
Jiangsu-Wuxi			
Anhui - Hefei			
Shandong - Qingdao			
Hebei-Shijiazhuang			
Henan-Zhengzhou			

Typhoon and Flooding

New Energy Sector

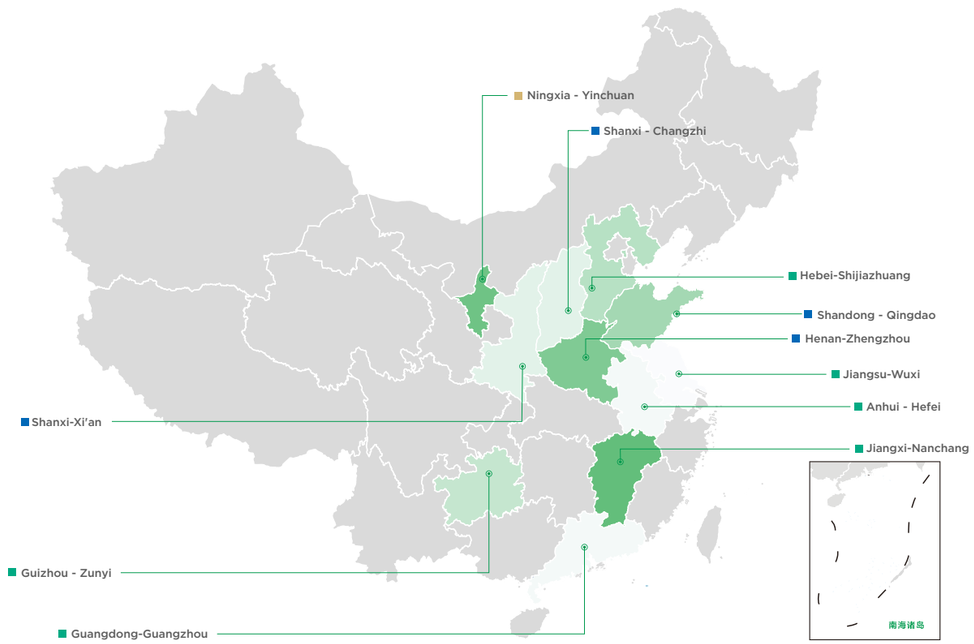
By 2030, the inland province of Jiangxi shows the highest fluctuation in maximum daily rainfall, followed by Henan and Shandong. By 2050, the fluctuation in maximum daily rainfall in the coastal province of Guangdong rises significantly, and due to the impact of typhoons, the hazard of flooding in Guangdong increases markedly. The fluctuation in extreme rainfall in Hebei increases notably by 2050, requiring attention to short-duration heavy rainfall. In Guizhou, the fluctuation in maximum daily rainfall gradually decreases by 2050, while in the remaining provinces, the variation in maximum rainfall is relatively low, and the number of extreme rainfall days is moderate, though localized sudden heavy rainfall should be guarded against.

Heating Sector

In Ningxia, the variation in the number of extreme rainfall days is prominent under all scenarios, requiring vigilance against the risk of waterlogging impacts on underground and semi-underground facilities such as heating pipelines and heating stations caused by localised short-duration heavy rainfall. In Henan, both the variation in maximum daily rainfall and the change in the number of extreme rainfall days are at relatively high levels for the heating sector, and the risk of rainstorms and flooding should be given focused attention.

SSP1-2.6 in 2030 Maximum Daily Rainfall

Heating sector focus provinces | New energy sector focus provinces | Provinces where both the new energy and heating sectors are present



Projected fluctuation range of the risk factor in the city — Low — High

SSP1-2.6 in 2030

Province-City	Maximum Daily Rainfall	Number of Extreme Rainfall Days
Jiangxi-Nanchang		
Ningxia - Yinchuan		
Henan-Zhengzhou		
Shandong - Qingdao		
Hebei-Shijiazhuang		
Guizhou - Zunyi		
Shanxi - Changzhi		
Shanxi-Xi'an		
Anhui - Hefei		
Jiangsu-Wuxi		
Guangdong-Guangzhou		

SSP1-2.6 in 2050

Province-City	Maximum Daily Rainfall	Number of Extreme Rainfall Days
Guangdong - Guangzhou		
Ningxia - Yinchuan		
Henan-Zhengzhou		
Hebei-Shijiazhuang		
Anhui - Hefei		
Jiangxi-Nanchang		
Shandong - Qingdao		
Jiangsu-Wuxi		
Shanxi - Changzhi		
Shanxi-Xi'an		
Guizhou - Zunyi		

SSP5-8.5 in 2030

Province-City	Maximum Daily Rainfall	Number of Extreme Rainfall Days
Ningxia - Yinchuan		
Henan-Zhengzhou		
Shandong - Qingdao		
Guangdong-Guangzhou		
Hebei-Shijiazhuang		
Jiangxi-Nanchang		
Jiangsu-Wuxi		
Shanxi - Changzhi		
Shanxi - Xi'an		
Guizhou - Zunyi		
Anhui - Hefei		

SSP5-8.5 in 2050

Province-City	Maximum Daily Rainfall	Number of Extreme Rainfall Days
Hebei-Shijiazhuang		
Guangdong-Guangzhou		
Henan-Zhengzhou		
Shandong - Qingdao		
Jiangxi-Nanchang		
Anhui - Hefei		
Ningxia - Yinchuan		
Jiangsu-Wuxi		
Shanxi - Changzhi		
Shanxi - Xi'an		
Guizhou - Zunyi		

Climate Warming

New Energy Sector

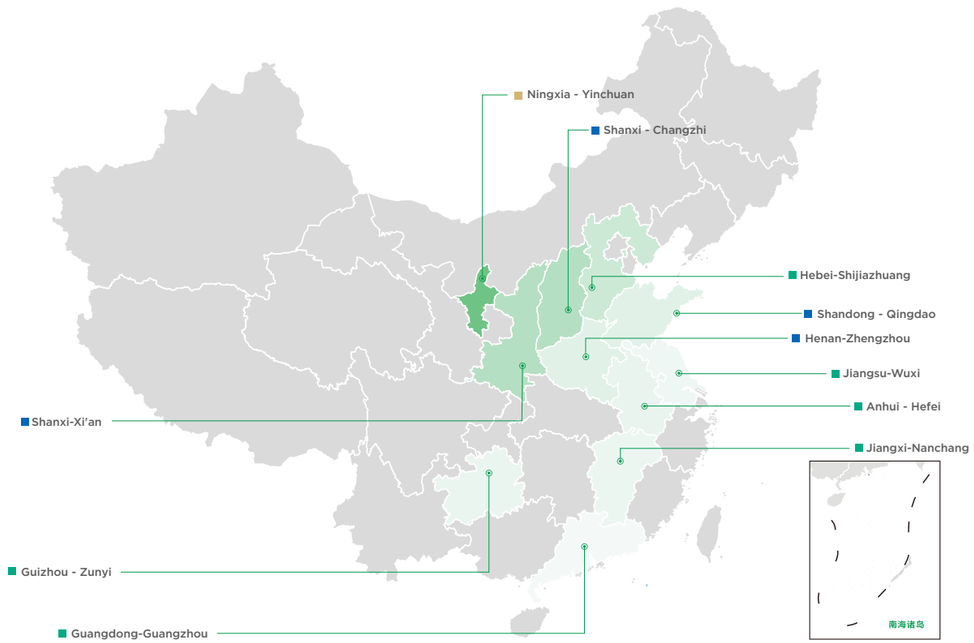
The extent of temperature change in northern provinces is slightly higher than in southern provinces, but the overall fluctuation range is limited. The Company may optimize power consumption plans for component cooling and operation & maintenance scheduling in the future, so as to control the potential risk level to employees' outdoor work health and safety as well as business continuity.

Heating Sector

In provinces such as Shanxi, Shaanxi, Henan and Shandong, the extent of temperature change is relatively high, while in Ningxia, the change in annual average temperature is more pronounced among all provinces. The heating sector should establish a resilient system to cope with abrupt climate changes, regularly conduct network efficiency surveys, and mitigate the risk of asset stranding caused by demand fluctuations.

◎ SSP1-2.6 in 2030 Annual Average Temperature

Heating sector focus provinces | New energy sector focus provinces | Provinces where both the new energy and heating sectors are present



Projected fluctuation range of the risk factor in the city — Low — High

◎ SSP1-2.6 in 2030

Province-City	Annual Average Temperature
Ningxia - Yinchuan	
Shanxi - Changzhi	
Shanxi - Xi'an	
Hebei-Shijiazhuang	
Henan-Zhengzhou	
Shandong - Qingdao	
Anhui - Hefei	
Guizhou - Zunyi	
Jiangsu-Wuxi	
Jiangxi-Nanchang	
Guangdong-Guangzhou	

◎ SSP1-2.6 in 2050

Province-City	Annual Average Temperature
Ningxia - Yinchuan	
Shanxi - Changzhi	
Shanxi-Xi'an	
Hebei-Shijiazhuang	
Shandong - Qingdao	
Henan-Zhengzhou	
Anhui - Hefei	
Guizhou - Zunyi	
Jiangsu-Wuxi	
Jiangxi-Nanchang	
Guangdong-Guangzhou	

◎ SSP5-8.5 in 2030

Province-City	Annual Average Temperature
Ningxia-Yinchuan	
Shanxi - Changzhi	
Shanxi - Xi'an	
Hebei-Shijiazhuang	
Shandong - Qingdao	
Henan-Zhengzhou	
Anhui - Hefei	
Jiangsu-Wuxi	
Guizhou - Zunyi	
Jiangxi-Nanchang	
Guangdong-Guangzhou	

◎ SSP5-8.5 in 2050

Province-City	Annual Average Temperature
Ningxia-Yinchuan	
Shanxi - Changzhi	
Shanxi-Xi'an	
Hebei-Shijiazhuang	
Shandong - Qingdao	
Henan-Zhengzhou	
Anhui - Hefei	
Guizhou - Zunyi	
Jiangsu-Wuxi	
Jiangxi-Nanchang	
Guangdong-Guangzhou	

Transition Risk Scenario Analysis

Based on the NGFS "Net Zero 2050" Orderly Scenario and the NGFS "Delayed Transition" Disorderly Scenario, a transition risks assessment is conducted across six influencing factors: Carbon Pricing, Electricity Pricing Policy Trends, Energy Price Fluctuations, Changes in Energy Structure, External Sustainability Awareness, and Energy Efficiency Investment. The transition risks assessment is divided into two dimensions: objective and subjective. The objective score is derived from the magnitude of changes in scenario forecast values, while the subjective score comes from stakeholder communication (via surveys across key departments of the Company). By integrating both objective and subjective scores, the impact of these factors on the Company's business is evaluated, resulting in a transition risks heatmap.

Overall Risk Analysis Results

Changes in electricity pricing policies pose significant challenges by 2030 under the orderly transition scenario, as market-oriented reforms driven by policy may lead to revenue fluctuations for new projects; shifts in energy structure are more pronounced under the disorderly transition scenario; carbon price evolution represents a long-term core risk, exhibiting upward trends by 2050 in both scenarios, with increasing marginal abatement costs directly impacting compliance costs. The Company will prioritize managing these transition risks in the future and proactively develop response strategies.

Additionally, the risk associated with energy price fluctuations, while introducing market uncertainty, presents a competitive advantage for green power suppliers and is therefore assessed as medium risk; external sustainability awareness reflects investor pressure regarding ESG expectations and should be regarded as a secondary risk requiring attention for brand management; changes in energy efficiency investment have minimal impact on financial and operational performance and currently do not constitute a strategic priority.

Segmented Analysis

Based on the overall risk analysis conclusions and with reference to the interpretations of the potential impacts of transition risk factors provided by the Company's major departments, we have conducted a segment specific analysis of the impact of transition risks.

New Energy Sector

Changes in electricity pricing policy represent the most prominent risk in the short term (high risk). In particular, under the orderly transition scenario, market-oriented reforms driven by policy by 2030 may lead to revenue fluctuations for new projects. Energy storage deployment and long-term green power purchase agreements (PPAs) are key response measures. The risk of curtailment and intensified competition arising from changes in energy structure represent medium-term structural pressures, which are more pronounced under the disorderly transition scenario. Although energy price fluctuations introduce market uncertainty, green power suppliers enjoy a competitive advantage, placing this risk at a medium level.

Heating Sector

Among the transition risks for the heating sector, carbon price increases and energy price fluctuations are the most direct risks, and the two reinforce each other. Under both scenarios by 2050, carbon prices show an upward trend, and the increase in marginal abatement costs may impact compliance costs to some extent, while energy price fluctuations further exacerbate market uncertainty. Changes in energy structure drive the transition towards "electricity replacing gas", representing structural pressure over the medium to long term, which is particularly significant under the disorderly transition scenario and requires proactive strategic preparation. The direct impact of changes in electricity pricing policy on the heating sector is relatively limited.

Heatmap of SHNE's Transition Risks under the NGFS "Net Zero 2050" Orderly Scenario

◎ Transition Risks Heatmap of SHNE in 2030 under the NGFS "Net Zero 2050" Orderly Scenario

Risk Category	Transition Risk Factor	2030
Policy	Carbon Pricing	
	Electricity Pricing Policy Trends	
Market	Energy Price Fluctuations	
	Changes in Energy Structure	
Reputation	External Sustainability Awareness	
Technology	Energy Efficiency Investment	

◎ Transition Risks Heatmap of SHNE in 2050 under the NGFS "Net Zero 2050" Orderly Scenario

Risk Category	Transition Risk Factor	2050
Policy	Carbon Pricing	
	Electricity Pricing Policy Trends	
Market	Energy Price Fluctuations	
	Changes in Energy Structure	
Reputation	External Sustainability Awareness	
Technology	Energy Efficiency Investment	

Transition risks heatmap of SHNE under the NGFS "Delayed Transition" Disorderly Scenario

◎ Transition Risks Heatmap of SHNE in 2030 under the NGFS "Delayed Transition" Disorderly Scenario

Risk Category	Transition Risk Factor	2030
Policy	Carbon Pricing	
	Electricity Pricing Policy Trends	
Market	Energy Price Fluctuations	
	Changes in Energy Structure	
Reputation	External Sustainability Awareness	
Technology	Energy Efficiency Investment	

◎ Transition Risks Heatmap of SHNE in 2050 under the NGFS "Delayed Transition" Disorderly Scenario

Risk Category	Transition Risk Factor	2050
Policy	Carbon Pricing	
	Electricity Pricing Policy Trends	
Market	Energy Price Fluctuations	
	Changes in Energy Structure	
Reputation	External Sustainability Awareness	
Technology	Energy Efficiency Investment	

Transition Opportunity Analysis

To identify and assess transformation opportunities, we conducted a survey covering the Company's major functional departments. Using a subjective scoring method, we quantified and analyzed the potential impact of each opportunity factor on the business. Meanwhile, qualitative analysis opinions on each opportunity factor were collected from various departments, and based on this, a comprehensive analysis was conducted on the potential business impact of these opportunities.

New Energy Sector

Rising carbon prices and the restart of CCER generate additional emission reduction benefits for wind and solar projects. Full coverage of GEC issuance and electricity market reforms drive "GEC + green power" bundled sales, helping to stabilize environmental premiums. RE100 recognition of Chinese green certificates opens up high-end demand and can lower financing costs. Increased energy efficiency investment supports technical upgrades at existing power stations and the development of "new energy + energy storage" solutions.

Heating Sector

Energy price volatility and energy structure changes are driving the replacement of conventional heat sources with clean alternatives, while growing external sustainability awareness supports the development of a "zero-carbon heating" brand.

2.4 Financial Impact Analysis

Building on the climate scenario analysis and taking into account both the materiality of each risk category and data availability, SHNE selected key climate factors amenable to quantification for financial impact modelling. In this iteration, typhoons and floods were selected from among the physical risks as the subject of analysis.

The financial quantification methodology draws on the Carbon Delta climate financial modelling framework, adapted to fit SHNE's specific business characteristics. The detailed calculation approach is as follows:

- Using the projected outputs of physical risk scenario models to estimate potential risk cost values on an annual basis;
- Applying discounting methods to convert the above amounts into present values;
- Using the ratio of the present value of risk costs to base-year revenue as the key metric — the higher this ratio, the more significant the potential financial impact of the relevant climate factor on the Company.

Risk Ratio = Present Value of Future-Year Risk Cost / Baseline Year Revenue of the Company

Physical Risk Financial Impact

The financial impact of physical risks is transmitted primarily through two channels: first, production interruptions caused by extreme weather events, measured by the revenue loss during the period of downtime; and second, repair expenditure following damage to facilities and equipment, measured by the actual repair costs incurred[4].

In terms of the calculation methodology, SHNE uses the future projected changes of each climate factor under the IPCC scenarios as a reference baseline, and conducts a comparative analysis drawing on historical extreme weather loss records from each operating location. If no relevant historical loss records exist for a given operating location, it is determined that the risk factor does not currently constitute a quantifiable financial loss.

Based on the comprehensive modelling results, the estimated future physical risk costs for SHNE are projected to represent between[5] **0.12% and 0.24%** of base-year revenues.

Financial Impact of Transition Risks and Climate Opportunities

Within the climate scenario analysis framework, the financial impact pathways of transition risks and climate opportunities are considerably more diverse, involving the pass-through of carbon price changes to compliance costs, the impact of electricity price policy adjustments on project revenues, the contribution of green certificate market price fluctuations to incremental revenues, and the long-term effects of ESG performance on financing costs, among others. These factors are interconnected, and their transmission pathways and timing vary significantly across different scenarios. Quantitative analysis requires systematic modelling using multiple data sources — including scenario projection data, electricity market transaction data, and historical and projected carbon market prices — integrated with the revenue structure and cost models of the Group's various business segments. The Company is actively advancing related quantification work, having completed the qualitative assessment and prioritisation of transition risk factors, and having established a preliminary internal carbon pricing mechanism, laying the data and methodological foundations for subsequent financial quantification.

As a company with clean energy as its core business, the scale of opportunities presented by the low-carbon transition materially exceeds the Company's overall risk exposure. As the green certificate market expands, the CCER mechanism is reinstated, and demand for green electricity continues to grow, the Company's clean energy assets will continue to release value in the wave of low-carbon transition. Going forward, SHNE will continue to deepen its capacity for climate-related financial quantification, ensuring that analyses are rigorous and comparable, and providing investors and stakeholders with a more complete picture of the Company's climate financial impacts.

4 The Company purchases insurance in advance to cover property losses caused by extreme weather events; in practice, such property losses will be borne by the insurance company.

5 The Company has set the baseline year as 2025.

2.5 Response Strategies and Measures

Against the backdrop of global climate change and low-carbon transition, SHNE draws on the conclusions of its scenario analysis and financial impact assessment to build a climate response system across two dimensions — strengthening management and advancing business — deploying targeted measures to mitigate climate risks and proactively capture low-carbon transition opportunities.

Strengthen management to consolidate the foundation for climate governance

Improving the Climate Governance Structure and Optimising Operating Mechanisms

SHNE continuously refines its sustainability governance structure, clarifying the climate management responsibilities of the Board of Directors, the Sustainability Committee, the ESG Working Group, and each business segment, establishing a horizontally integrated, collaborative internal climate management mechanism with rational division of responsibilities, coordinated progress, and a collective response to climate challenges.

Integrating Climate Risks into the Enterprise-wide Risk Management Framework

Following the TCFD guidelines, climate-related risks are mapped to existing risk categories and types, thereby integrating climate risks into the Company's enterprise-wide risk management framework. Regular hazard identification exercises are conducted to identify and document potential risk points in a timely manner, and response strategies are developed in advance to ensure all types of climate risks remain within manageable bounds.

Building a Disaster Emergency Response System and Enhancing Extreme Weather Preparedness

An emergency response plan system has been established. In addition to a general emergency response plan, specific plans have been developed for high-risk extreme weather events, clearly defining departmental responsibilities, emergency response procedures, and material deployment arrangements. Regular emergency drills are conducted to simulate disaster scenarios and continuously improve employees' ability to respond to extreme weather events.

Deepening Carbon Asset Management and Unlocking Low-Carbon Value

Invested RMB270 million to establish a carbon measurement center, providing and conducting carbon emission accounting, low-carbon certification, and research services for new energy and new materials projects.

Enhancing Information Disclosure and Building a Green Brand

The Company continuously improves the quality of climate information disclosures under the TCFD and IFRS S2 frameworks, strengthens communication with international ESG rating agencies, actively completes questionnaires for mainstream rating platforms such as CDP, enhances the Group's ESG ratings, and expands its responsible investor base.

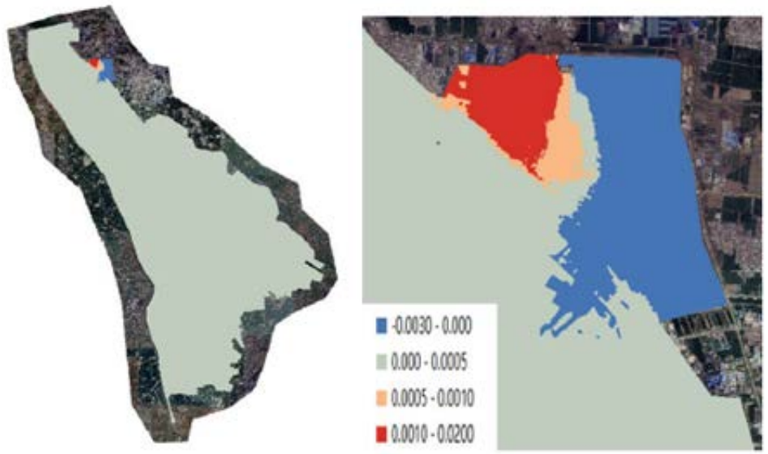
ESG Rating

Name	Result
S&P Global Corporate Sustainability Assessment (CSA) and ESG Rating	CSA Score: 44 ESG Score: 46 Listed in the S&P Global Sustainability Yearbook (China Edition) 2026
Sustainable Fitch ESG Rating	78
Wind ESG Rating	A
SynTao Green Finance ESG Rating	A-
Sino-Securities ESG Rating	AA
China Energy Research Society	Sustainability (ESG) score: 51.34

Building Climate Resilience and Driving Low-Carbon Development

Climate-Sensitive Site Selection: Mitigating Risks at the Source

New project site selection comprehensively considers climate risks and resource endowments, with priority given to areas with a lower probability of natural disasters and stable grid absorption conditions, thereby ensuring the engineering resilience of assets against extreme weather from the outset.



Flood assessment uses models to simulate the water level difference before and after project construction

Proactive Risk Mitigation

Invested RMB18.1622 million[6] to purchase climate-related insurance to cover asset losses and operational disruptions caused by physical risks (such as typhoons, floods, and extreme temperatures), thereby enhancing the Company's financial resilience under various climate scenarios.

6 Data is based on statistics from business departments.

Energy Conservation and Consumption Reduction: Continuously Lowering Carbon Emission Intensity

The Company systematically advances energy-saving measures, reducing self-consumption through equipment upgrades and intelligent controls, and continuously increasing the proportion of renewable energy in its own electricity consumption to reduce carbon emission intensity per unit of electricity generated.

Case Xi'an Project Implements Waste Heat Recovery Retrofit for Gas-Fired Boilers

To further reduce energy consumption during equipment operation, the Xi'an project has actively carried out retrofitting for waste heat recovery from gas-fired boilers, lowering the flue gas temperature from approximately 50° C to around 30° C. This has improved boiler efficiency by about 4%, effectively enhancing overall energy utilization efficiency.

Retrofit of Waste Heat Recovery for Gas-Fired Boilers

Case Multiple Plants Actively Advancing Energy Transition

To reduce plant self-consumption and improve power generation efficiency and capacity, six plants including Yuyang in Shaanxi and Baoying Guangyanghu in Jiangsu utilized their own components and materials to construct five solar-powered carports and installed solar panels on the rooftop of one administration building. The total module capacity reached 183 kilowatt-peak, generating an annual output of 228,750 kWh, supporting the advancement of energy transition at the plants.

Jiangsu Baoying Guangyang Lake solar carport and rooftop solar

Zhangjiakou Wanquan photovoltaic power station solar carport

Case Actively Carrying Out Special Initiative for Heating Water Loss Control

In 2025, the Company carried out a special initiative on heating water loss management at the Caoxian, Jinzhou, and Wenshui projects. By conducting nighttime inspections and removing unauthorized water discharge devices from households, using acoustic detectors to precisely locate leakage points, deploying water loss inhibitors, and combining sewage well chamber odor monitoring with inspection of heating well chambers and underground pipeline corridors, a comprehensive set of measures was implemented to effectively enhance the operational stability of the heating system and improve water resource utilization efficiency.

Special Initiative for Heating Water Loss Control

Expanding Green Financing and Strengthening Financial Resilience

SHNE regards green finance as a key pillar in promoting sustainable development. Wind and solar power generation, as a critical area of clean power generation business, has been included in the Hong Kong Monetary Authority's Hong Kong Taxonomy for Sustainable Finance, becoming an important economic activity supporting climate action. The Company is actively seizing this opportunity to continuously expand the application of green finance in its clean power generation business. Leveraging the projects' strong environmental benefits and development prospects, the Company has successfully obtained preferential green credit support, providing stable funding for project research and construction.

◎ Milestones of SHNE's Green Finance Development

2022

- Shandong Hi-Speed Group, through SDHG, acquired a 43.45% equity stake in SHNE, marking a strategic entry into the clean energy market and becoming SHNE's largest shareholder. Through capital increase initiative, SDHG has injected HKD4.7 billion in working capital into the Company.

2023

- We established a "three-year HKD1 billion green syndicated loan" abroad with Standard Chartered Bank as the lead bank, with the participation of prominent domestic and international banks.
- We successfully secured a strategic investment of 5 billion from Ping An Asset Management Co., Ltd. (referred to as"PAAMC)", a subsidiary of Ping An Group. The investment was completed on January 3, 2024.

2024

- We were granted additional green financing loan of 4.377 billion, all of which have been used for our new energy projects such as wind power and photovoltaic (PV) new energy projects, including: 5 centralized PV projects, 24 distributed PV projects, and 7 wind power projects.
- Based on its long-term optimism in the new energy green segment and the profitability of SHNE, SDHG acquired an additional 13.52% equity stake in the Company through a share transfer agreement, at total consideration of HKD540 million.

2025

- Using its project companies as borrowing entities, the Company secured approximately 2.487 billion in green loans through refinancing of existing debt and new project financing, effectively supporting its business development.
- A total of 3 green medium-term notes were issued through the National Association of Financial Market Institutional Investors, amounting to 1.5 billion in scale.

Case Successful Issuance of the Second Green Medium-Term Note in 2025

In September 2025, Tianjin Beiqing Electric Power Smart Energy Co., Ltd. (referred to as "Tianjin Beiqing"), a domestic subsidiary of SHNE, successfully issued its second green medium-term note in the interbank market. The bond raised 500 million, with a tenor of 3+2 years and a coupon rate of 2.15%. The issuance rate set a new low for medium-term notes of state-owned enterprises in Shandong Province with the same credit rating, laying a solid foundation for further expanding diversified direct financing instruments.

Case Successfully Issued the First Rural Revitalization Green Medium-Term Note

In October 2025, Tianjin Beiqing successfully issued its third green medium-term note (rural revitalization) of 2025. The issuance scale amounted to 500 million, with a tenor of 3+2 years and a coupon rate of 2.25%. The order book reached 2.9 times oversubscription, attracting strong investor demand in the market and achieving pricing below fair value. This marks a significant innovative breakthrough for the Company in the green bonds sector for rural revitalization.

A portion of the proceeds from this bond issuance will be specifically allocated to the rural revitalization sector, with a focus on supporting principal and interest payments for seven projects in regions including Alxa in Inner Mongolia, Shangqiu in Henan, and Xingtai in Hebei. By advancing the modernization of rural clean energy infrastructure, these projects will effectively stimulate local employment and income growth, improve the ecological environment, support the construction of "beautiful rural villages", and achieve an organic integration of economic and social benefits.

03 Risk Management

SHNE recognizes the multi-dimensional risks and opportunities that climate change presents for its clean energy business, and has integrated climate risk management into the Company's enterprise-wide risk management framework. By progressively deepening the integration of climate risk management with investment decision-making and operational management, the Company continuously enhances its capacity and resilience in responding to climate change impacts, ensuring steady progress throughout the energy green transition.

3.1 Risk and Opportunity Management

SHNE regards climate risk and opportunity management as a core component of its sustainable development strategy. In response to the challenges and opportunities brought by global climate change, the Company has established a comprehensive climate management system covering the entire chain of risk identification, assessment and quantification, strategy formulation, and implementation supervision. This year, the Company has systematically analyzed the short-, medium-, and long-term impacts of climate factors on its new energy asset portfolio using authoritative scenario models from NGFS and IPCC, and deeply integrated the assessment findings into investment decisions, operational management, and strategic planning, promoting controllable risks and achievable opportunities in the Company's low-carbon transition journey.

Risk Management System

Guided by the TCFD framework and taking full account of the interrelationships between climate risks and other risk categories, SHNE maps climate-related risks to its existing risk classifications and types, thereby incorporating preliminary climate-related risks into the enterprise-wide risk management framework, and conducting ongoing climate risk identification and assessment.

◎ Climate Risk Mapping Table

Climate Risk	Risk Category	Influencing Factor	Risk Description / Climate Risk Linkage	Level 1 Risk	Level 2 Risk	Level 3 Risk
Physical Risk	Acute Risk	Typhoon and Flooding	1. Extreme weather events may directly cause casualties or equipment damage at construction sites. 2. Extreme precipitation and typhoon and flooding risks may lead to physical asset damage, electrical system failures, and project schedule delays, directly threatening the safety and economic viability of power stations.	Operational Risk	Construction Management Risk	On-site Safety Management Risk
Physical Risk	Acute Risk	Typhoon and Flooding		Operational Risk	Production & Operations Risk	O&M Safety Management Risk
Physical Risk	Acute Risk	Typhoon and Flooding		Operational Risk	Asset Management Risk	Asset Management Risk
Physical Risk	Acute Risk	Typhoon and Flooding		Operational Risk	Safety Management Risk	Safety Management System Development Risk
Physical Risk	Acute Risk	Typhoon and Flooding		Operational Risk	Safety Management Risk	Safety Investment Risk
Physical Risk	Acute Risk	Typhoon and Flooding		Operational Risk	Safety Management Risk	Safety Hazard Management and Accident Management Risk
Transition Risk	Technology	Changes in Energy Efficiency Investment	Improvements in external terminal energy efficiency and the replacement of old assets with new ones may lead to impairment risks for existing projects, while rapid advances in external technology may render older projects less competitive in market bidding processes.	Operational Risk	Asset Management Risk	Asset Management Risk
Transition Risk	Policy	Electricity Pricing Policy Trends	With the full-scale rollout of the electricity spot market, combined with declining thermal coal prices and high renewable energy penetration rates, electricity prices during certain periods — such as midday — face significant downward pressure. The capture price of renewable energy may fall below the market average, leading to declines in spot market average prices in some provinces.	Operational Risk	Investment Management Risk	Investment Review & Decision Risk
Transition Risk	Policy	Electricity Pricing Policy Trends		Operational Risk	Production & Operations Risk	Trading Electricity Price Management Risk
Transition Risk	Reputation	External Sustainability Awareness	Failure to establish sustainability targets renders the Company unable to meet ESG and climate disclosure requirements from investors and regulatory authorities.	Operational Risk	Production & Operations Risk	ESG Management Risk
Transition Risk	Market	Changes in Energy Structure	During the rapid transformation of the energy structure, grid absorption capacity, energy storage deployment, and electricity market mechanisms are still not fully developed, which may affect the profitability of new energy projects. Meanwhile, the transition of traditional energy enterprises could intensify industry competition.	Operational Risk	Technology Risk	Emerging Technology Innovation & Application Risk
Transition Risk	Policy	Carbon Pricing	Increased compliance pressure and costs: Stricter carbon market regulation (e.g. data verification, allowance control) requires companies to establish carbon asset management systems, thereby increasing compliance costs. Potential industry risk: If sectors such as the heating industry are included in the carbon market, related companies may face rising carbon costs, along with pressure to purchase allowances or invest in low-carbon retrofitting.	Legal Risk	Legal & Compliance Risk	Compliance Management Risk
Transition Risk	Policy	Electricity Pricing Policy Trends	With the full-scale rollout of the electricity spot market, combined with declining thermal coal prices and high renewable energy penetration rates, electricity prices during certain periods — such as midday — face significant downward pressure. The capture price of renewable energy may fall below the market average, leading to declines in spot market average prices in some provinces.	Market Risk	Project Development Risk	Industry Market Risk
Transition Risk	Market	Changes in Energy Structure	During the rapid transformation of the energy structure, grid absorption capacity, energy storage deployment, and electricity market mechanisms are still not fully developed, which may affect the profitability of new energy projects. Meanwhile, the transition of traditional energy enterprises could intensify industry competition.	Market Risk	Project Development Risk	Industry Market Risk
Transition Risk	Reputation	External Sustainability Awareness	Inadequate disclosure of climate-related information as required by TCFD, the HKEX ESG Reporting Code, and other frameworks may undermine investor trust and capital market valuation.	Operational Risk	Information Disclosure Risk	Information Disclosure Risk

In the future, the Company will further improve its management mechanisms and gradually integrate all climate-related risks into the overall risk management framework to achieve routine and systematic control. By establishing a framework for climate risk identification, assessment, and management, and by considering the characteristics of physical risks and transition risks, the Company systematically analyzes the nature, likelihood, and potential impacts of risks through a combination of qualitative and quantitative methods. At the same time, through regular management reporting and internal evaluation mechanisms, the Company continuously monitors the dynamics of climate risks, holistically assesses their relative significance compared to other risks, and rationally determines response priorities, thereby effectively managing the significant impacts of climate change on business operations and enhancing resilience against risks. At the institutional level, the Company ensures standardized and routine operation of climate risk management by implementing the Comprehensive Risk Management Measures, which define risk classification criteria, assessment cycles, reporting pathways, and emergency response procedures.

In terms of climate-related opportunities management, the Company identifies and assesses potential opportunities by considering its business characteristics and strategic development direction, comprehensively evaluates the nature, feasibility, and potential impacts of various opportunities, and prioritizes the pursuit of these opportunities in operational decision-making. Through regular assessment by management, the Company maintains continuous attention to the dynamic changes of relevant opportunities. In the future, the Company will further optimize and improve the related processes and mechanisms.

◎ Climate Risk Management Process

Risk Identification and Monitoring

- Based on the Company's business characteristics and in conjunction with the TCFD framework and industry best practices, systematically define the scope of climate-related risks and establish a comprehensive risk inventory covering both physical risks and transition risks.
- By mapping climate related risks to existing risk categories and types, incorporate such risks into the Company's existing risk classification and risk inventory.
- Establish a dynamic monitoring mechanism for climate risks to continuously track domestic and international climate policies, carbon market developments, and extreme weather alerts.
- Integrate internal and external data sources to establish a climate risk early warning indicator system, enabling early identification and early warning of risks.

Risk Assessment and Response

- Quantitatively analyze the potential impacts of various risks on operations, assets, and finances under different scenarios using NGFS scenarios and IPCC climate models.
- Develop tiered and categorized response strategies and action plans based on risk assessment results, clearly define timelines, responsible parties, and resource allocation.
- Incorporate climate risks into investment decision-making processes, fully considering climate factors in the site selection of new projects and asset allocation.

Risk Governance and Disclosure

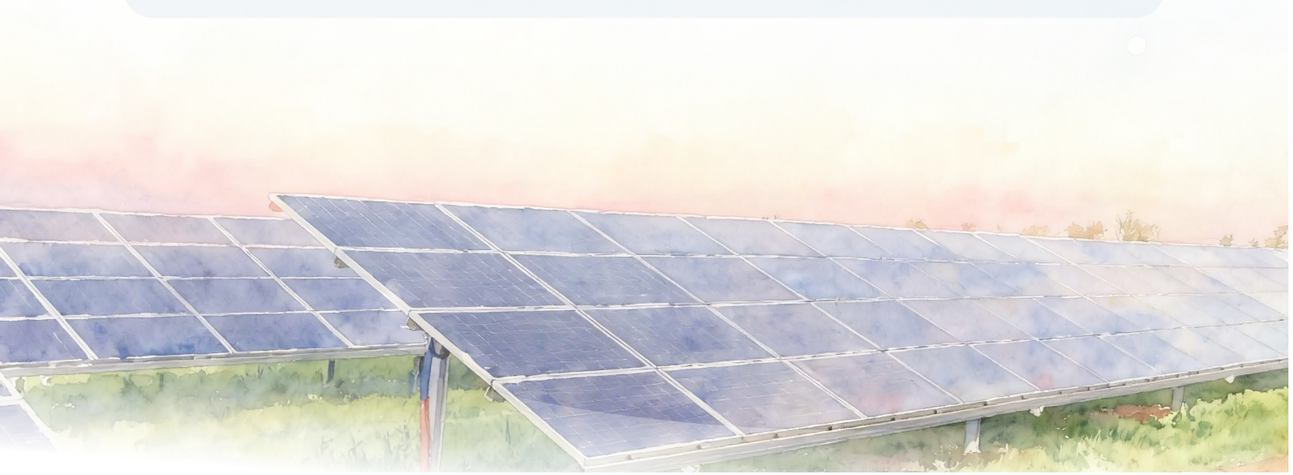
- Establish an ESG and climate risk oversight mechanism at the Board level to regularly review the progress of climate risk management work and significant matters.
- Systematically disclose climate-related risks, opportunities, and management measures in the annual report and ESG report in accordance with SEHK and international standards.
- Conduct regular performance evaluations of climate risk management to promote continuous optimization and upgrading of the management system.

04 Metrics and Targets

SHNE is committed to systematically managing climate risks and opportunities by progressively establishing clear and measurable climate-related metrics and targets. We are dedicated to transparently disclosing progress against our targets, continuously improving our greenhouse gas accounting and climate information disclosure systems, and fulfilling the climate responsibilities of a clean energy company through concrete action.

To this end, the Company has established a metrics and targets library aligned with material issues, encompassing indicators across three levels: regulatory requirements, international standards, and ratings. For the issue of climate change response, the Company has established the following metrics and targets.

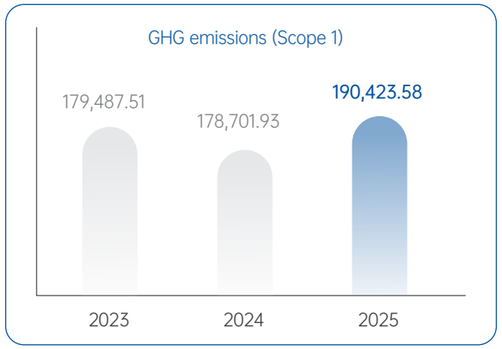
Level 1 Climate Change Indicator	Level 2 Climate Change Indicator
Climate Risk Governance	GHG Emissions Management
	Climate Governance Structure
	Climate Data Governance
Climate Change Strategy	Climate Risk and Opportunity Assessment
	Climate Strategy and Decision-making
	Financial Position, Financial Performance and Cash Flows
	Climate Resilience
Climate Change Risk Management	Climate Risk Management
Climate Change Metrics (Data)	GHG Emissions (Scope 1)
	GHG Emissions (Scope 2)
	GHG Emissions (Scope 3)
	Total GHG Emissions
	GHG Emissions Intensity
	Carbon Reduction Volume
	Internal Carbon Pricing
	Quantification of Financial Impacts of Climate Risks and Opportunities
Climate Change Targets	Carbon Emission Reduction Target
	Performance on Climate-related Risks and Opportunities



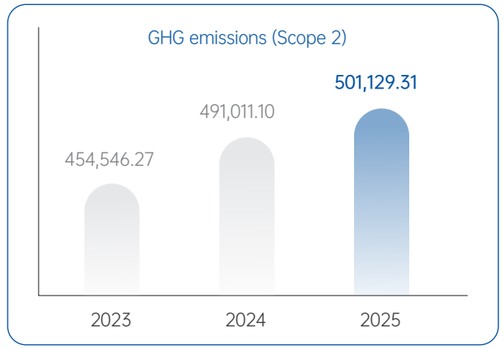
4.1 Climate-related Metrics and Values

Greenhouse Gas Emissions Profile[7]

Direct emissions



Indirect emissions



Value Chain GHG Emissions[8]

Total scope 3 emission **83,131.28** tCO_2e

Category 1: Purchased goods and services
221.76 tCO_2e

Category 2: Capital goods
58,435.76 tCO_2e

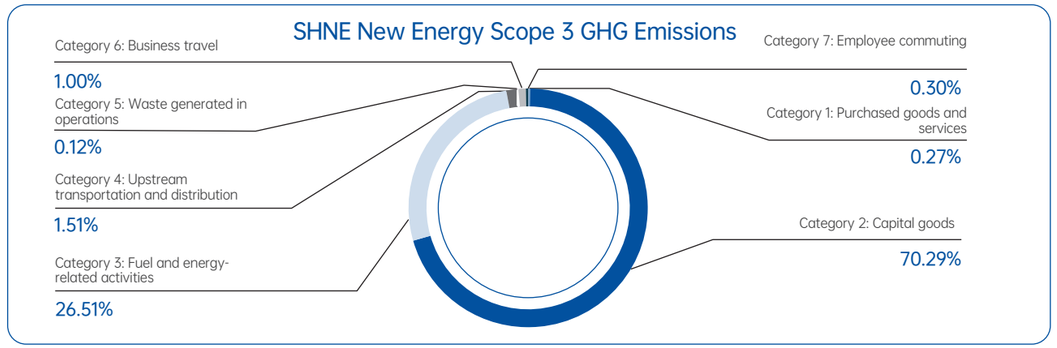
Category 3: Fuel and energy-related activities
22,036.65 tCO_2e

Category 4: Upstream transportation and distribution
1,256.33 tCO_2e

Category 5: Waste generated in operations
98.72 tCO_2e

Category 6: Business travel
832.08 tCO_2e

Category 7: Employee commuting
249.98 tCO_2e



7 The Company primarily refers to the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard for the statistical indicators related to GHG emissions, collects GHG accounting data through internal tools, and conducts calculations using the emission factor method. Emission factors for Scope 1 and Scope 2 mainly refer to official standards such as the Guidelines for Accounting and Reporting of Greenhouse Gas Emissions by Enterprises in Other Industrial Sectors (for Trial Implementation) and theAnnouncement on Issuing the 2023 Power Sector Carbon Dioxide Emission Factors .

8 The calculation methods and emission factors for different emission sources within Scope 3 are determined in accordance with the Greenhouse Gas Protocol , jointly published by the World Resources Institute (WRI) and the World Business Council for Sustainable Development, including Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard and Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard .

Climate Risk and Opportunity Metrics

01 Proportion of assets exposed to significant physical risks

The "proportion of assets exposed to significant physical risk" is defined as the share of total assets that satisfy the Company's internal criteria for significant physical risk, determined by comprehensively considering asset value and revenue contribution, the Company's historical loss records from physical risks, and the probability and extent of changes in physical risk under specified climate scenarios. Based on the calculation, this proportion is 16%, corresponding to the ratio of the asset amounts of Guangdong and Henan regions in 2025 to the Company's total asset amount in 2025.

02 Proportion of assets exposed to significant transition risks

Since transition risks primarily affect asset earnings capacity indirectly — through electricity price policies, the carbon market, and energy mix changes — it is not practical to categorically divide assets into those "exposed" and those "not exposed" to significant transition risks using a single metric. From a qualitative standpoint, the Company's overall transition risk exposure is relatively low within the industry. New Energy Segment assets are not at risk of stranding; transition risks primarily manifest as marginal compression of project returns resulting from electricity price market reforms. Heating Segment assets represent the most concentrated and identifiable transition risk exposure within the Company and are also the future priority focus for investment in clean transition.

03 Proportion of assets exposed to significant climate-related opportunities

The Company's core businesses (photovoltaic, wind power, and clean heating) are themselves at the heart of market demand driven by the low-carbon transition. Including total core revenues in the ratio would render the metric analytically meaningless, while including only incremental environmental value revenues would significantly underestimate the scale of the Company's substantive opportunities. Currently, directly quantifiable climate opportunity revenues are primarily derived from Green Electricity Certificate (GEC) sales and Green Power Agreement premiums, with the proportion still in a growth phase. As GEC prices continue to recover, the CCER mechanism is progressively refined, and the Green Power Agreement market expands, the Group's measurable climate opportunity revenue proportion is expected to rise continuously. The Group will disclose this metric with greater precision when conditions are sufficiently mature.

4.2 Internal Carbon Pricing

SHNE will progressively clarify its specific application pathways in investment evaluation and other processes during the improvement of the mechanism. To further deepen carbon asset management, SHNE is actively exploring the implementation of an internal carbon pricing (ICP) mechanism this year, aiming to stimulate internal emission reduction initiatives through price signals. Through benchmarking case studies and internal pricing implementation analysis, the Company has prioritized a shadow price mechanism. The reference benchmark for the internal carbon price is intended to be the CCER transaction price in the voluntary carbon market, reflecting the actual pricing signals of the domestic carbon market, and will be dynamically adjusted in line with market price trends.

Once established, the ICP mechanism will serve as a supplementary tool and decision-making reference for the Company's low-carbon transition. SHNE will progressively clarify its specific application pathways in investment evaluation and other processes as the mechanism matures.

Internal Carbon Pricing Back-Testing Practice

An internal carbon pricing model was developed and applied in back-testing to a number of recent low-carbon and energy conservation technology upgrade projects. The results show that, after incorporating carbon price factors, the payback periods of the projects were each shortened by 0.1 to 0.2 years to varying degrees, and the internal rates of return were also improved — demonstrating the positive role of the ICP mechanism in driving emissions reductions.

Heating Sector Project Examples

- **Xi'an Boiler Flue Gas Waste Heat Recovery Retrofit Project:** By installing an additional heat pump system to deeply recover flue gas waste heat using the existing flue gas heat exchanger, the project improved filtration efficiency while effectively reducing natural gas consumption.
- **Jinzhou Pump Retrofit Project:** Through optimising pump selection and upgrading equipment, the project reduced electricity consumption in the heating system and improved operational stability.
- **Xi'an Zone Control Valve Retrofit Project:** Through updating zone control valves and optimizing system balance, reduce energy waste caused by excessive heating while maintaining heating quality.
- **Ningxia Pump Retrofit Project:** Through optimising pump selection and re-matching the circulation system, the project improved heating efficiency and reduced electricity consumption.
- **Shandong Power Plant Waste Heat Recovery Project:** Waste heat from a waste-to-energy power plant was introduced as a clean heat source, enabling efficient utilisation of industrial waste heat and replacing conventional heating energy consumption with a zero-carbon heat source.

New Energy Sector

New Energy Vehicle Replacement Project: The Company purchased electric vehicles to replace traditional fuel vehicles at its stations in Heze, Shandong; Yulin, Shaanxi; and Yangzhou, Jiangsu, for station inspections, operation and maintenance, and daily commuting, directly reducing fossil fuel combustion emissions and lowering fleet operating costs. After the introduction of the internal carbon pricing mechanism, the internal rate of return (IRR) of the new energy vehicle replacement project has been effectively improved.

4.3 Target

To actively respond to the national deployment of the "Dual Carbon" strategy and promote the effective implementation of climate risk management and supervision mechanisms, the Company has set a target to peak its operational carbon emissions (Scope 1 and Scope 2) by 2030, with an aspirational goal of achieving peak emissions by 2029, based on its current carbon emission status and emission reduction potential. Meanwhile, through systematic planning of emission reduction pathways, the Company is committed to achieving carbon neutrality at the operational level by 2060. The Company monitors its emission reduction progress through annual carbon inventories, and the overall progress remains aligned with the 2060 carbon neutrality target.

Appendix: TCFD Cross-reference Table

TCFD Recommended Elements	Disclosure Requirements	Corresponding Section	Page
Governance	Describe the Board's oversight of climate-related risks and opportunities.	1. Governance	08
	Describe management's role in assessing and managing climate-related risks and opportunities.		08
Strategy	Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	2. Strategy	13-18
	Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.		35-36
	Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2° C or lower scenario.		13-35
Risk Management	Describe the organisation's processes for identifying and assessing climate-related risks.	3. Risk Management	45-48
	Describe the organisation's processes for managing climate-related risks.		45-48
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.		45-47
Metrics and Targets	Disclose the metrics used to assess climate-related risks and opportunities in line with the organisation's strategy and risk management process.	4. Metrics and Targets	53-54
	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas emissions, and the related risks.		52
	Describe the targets used to manage climate-related risks and opportunities and performance against targets.		54

Assurance Certificate

HKQAA
HONG KONG QUALITY ASSURANCE AGENCY
香港品質保證局

Independent Assurance Statement

1. Introduction

Hong Kong Quality Assurance Agency ("HKQAA", "we", "our", "us") was engaged by Shandong Hi-Speed New Energy Group Limited ("the Company") to conduct an independent assurance of the sustainability disclosures ("Sustainability Disclosures") presented in its 2025 Climate Action White Paper ("the Report") for the reporting period from 1 January 2025 to 31 December 2025 ("Reporting Period") and issue this Independent Assurance Statement ("Assurance Statement"). Our sustainability assurance activities and this Assurance Statement are subject at all times to the assumptions, dependencies, boundaries, limitations, exclusions, roles, responsibilities and independence as set out under Appendix A.

The objective of this sustainability assurance service is to provide an independent conclusion, with a limited level of assurance, on whether the Sustainability Disclosures have been prepared with reference to the following reporting criteria:

Recommendations of the Task Force on Climate-related Financial Disclosures (June 2017), released by the Task Force on Climate-related Financial Disclosures (TCFD)

2. Assurance Methodology

HKQAA's assurance procedure was conducted with reference to the International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information ("ISAE 3000"), issued by the International Auditing and Assurance Standards Board ("IAASB").

The evidence gathering processes were designed to obtain a limited level of assurance, as set out in the ISAE 3000, using a risk-based approach. Our assurance procedures included, but were not limited to:

- reviewing relevant policies, procedures, relevant documentation and records provided by the Company, including those related to sustainability-related information such as governance, risk identification, and performance metrics;
- interviewing key management and responsible personnel of the Company for reporting and sustainability-related governance;
- conducting analytical reviews of disclosures for plausibility and consistency with relevant external frameworks and internal supporting data;
- selecting representative samples of disclosures, with a focus on materiality and risk, and assessing the underlying evidence for each sample using judgmental sampling;
- evaluating the transparency of disclosed assumptions, dependencies, and boundaries; and
- assessing the completeness of coverage with respect to the requirements of the reporting criteria, including reviewing methodologies used for estimations, sensitivity analyses, and disclosures of uncertainties.

HKQAA
HONG KONG QUALITY ASSURANCE AGENCY
香港品質保證局

3. Conclusion

Based on the procedures performed, evidence obtained, and subject to the stated assumptions, dependencies, boundaries, limitations, and exclusions, nothing has come to our attention that causes us to believe that the Sustainability Disclosures in the Company's 2025 Climate Action White Paper for the Reporting Period from 1 January 2025 to 31 December 2025 are not presented, in all material respects, with reference to the requirements of the Recommendations of the Task Force on Climate-related Financial Disclosures (June 2017).

This Assurance Statement is made solely for the use of Shandong Hi-Speed New Energy Group Limited and the users of its 2025 Climate Action White Paper, and for use in the context and purpose described in the Introduction section of this Assurance Statement. We do not accept or assume responsibility for any other purpose or to any other person to whom this Assurance Statement is shown or in whose hands it may come. We confirm our independence from the Company in conducting this engagement.

The engagement leader on the assurance engagement resulting in this Assurance Statement is KT Ting.

Signed on behalf of Hong Kong Quality Assurance Agency

15 May 2026

Ref:14996093