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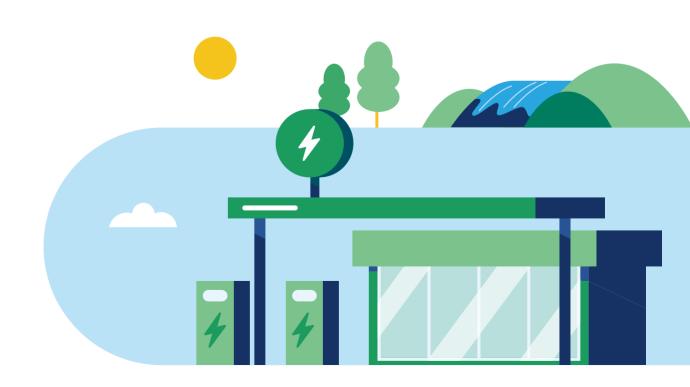
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# **About this report**

# Report Introduction

Hoshine Silicon Industry Co., Ltd. (hereinafter referred to as "Hoshine Silicon", "the Company," or "we") presents the 2024 annual Sustainability Report (hereinafter referred to as "this report" or "ESG report"), which aims to elaborate on the Company's institutional development and performance in environmental, social, and governance (hereinafter referred to as "ESG"). It objectively discloses the Company's management and achievements in sustainable development to meet the expectations of stakeholders and the public.

# Report Scope

**Business scope:** this report covers the Company's main businesses. For detailed business information, please refer to the Company's 2024 annual report. Unless otherwise specified, the content of this report encompasses Hoshine Silicon and its subsidiaries.

**Time scope:** the content of this report primarily covers the time scope from January 1, 2024, to December 31, 2024 (hereinafter referred to as the "reporting period" or "this year"). To enhance the completeness of this report, some content extends beyond this period.

Report release cycle: this is an annual report and represents Hoshine Silicon's first Sustainability Report.

Other definitions are as follows:

Shanshan Silicon	>>>	Refers to Hoshine Silicon (Shanshan) Industry Co., Ltd.
Xinjiang Silicon Industry New Materials	>>>	Refers to Xinjiang Hoshine Silicon Industry New Materials Co., Ltd.
Western Hoshine	>>>	Refers to Xinjiang Western Hoshine Silicon Industry Co., Ltd.
Eastern Hoshine	>>>	Refers to Xinjiang Eastern Hoshine Silicon Industry Co., Ltd.
Western Silicon Materials		Refers to Xinjiang Western Hoshine Silicon Materials Co., Ltd.
Shanshan Electric Power	>>>	Refers to Hoshine Electric Power (Shanshan) Co., Ltd.
Shanshan Energy Management		Refers to Hoshine (Shanshan) Energy Management Co., Ltd.
Hoshine Thermal Electric	>>>	Refers to Xinjiang Western Hoshine Thermal Electric Co., Ltd.
Xinjiang Green Energy	>>>	Refers to Shihezi Hoshine Green Energy Management Co., Ltd.

>>>	Refers to Xinjiang Central Hoshine Silicon Industry Co., Ltd.
	Refers to Shanshan Longsheng Carbon Manufacturing Co., Ltd.
>>>	Refers to Shihezi Western Ningxin Carbon Co., Ltd.
	Refers to Hoshine Silicon (Jiaxing) Industry Co. Ltd.
>>>	Refers to Ningbo Hoshine New Materials Co., Ltd.
	Refers to Hoshine Silicon (Luzhou) Industry Co., Ltd.
>>>	Refers to Inner Mongolia Saisheng New Materials Co., Ltd.
	>>> >>> >>> >>> >>>

# Report Preparation Basis

This report is prepared in accordance with the *Guidelines No. 1 of Shanghai Stock Exchange(hereinafter referred to as "SSE") for Self-Regulation of Listed Companies - Standardized Operations, Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies - Sustainability Report (Trial)*, and others, while also referencing the United Nations Sustainable Development Goals (SDGs). This report includes a detailed index of guidelines in the final section for readers' quick consultation.

# Report Information Sources

The information and data in this report are sourced from the Company's internal official documents, internal statistical materials, and publicly available information. Unless otherwise specified, all monetary amounts in this report are denominated in Renminbi (RMB).

# Report Reliability Assurance

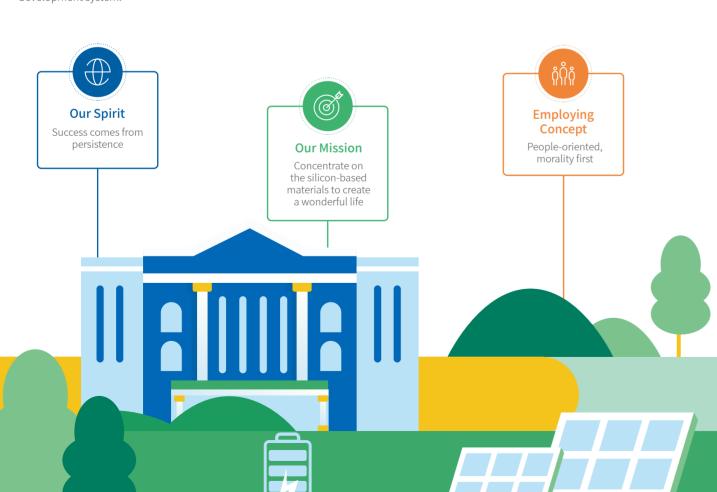
All content disclosed in this report has been reviewed and approved by the Board of Directors of Hoshine Silicon. The Company's Board of Directors and all directors guarantee that this report contains no false records, misleading statements, or material omissions, and assume legal responsibility for the authenticity, accuracy, and completeness of its content.

# **Company Profile**

Hoshine Silicon Industry Co., Ltd. was invested and established by Ningbo Hoshine Group in 2005 and successfully listed on the main board of the Shanghai Stock Exchange in 2017. It is the Company with the most complete silicon-based whole industrial chain in the world, the pioneer of the integrated green circular economy model of silicon-based new materials, and the leader of the overall solution for green energy resources.

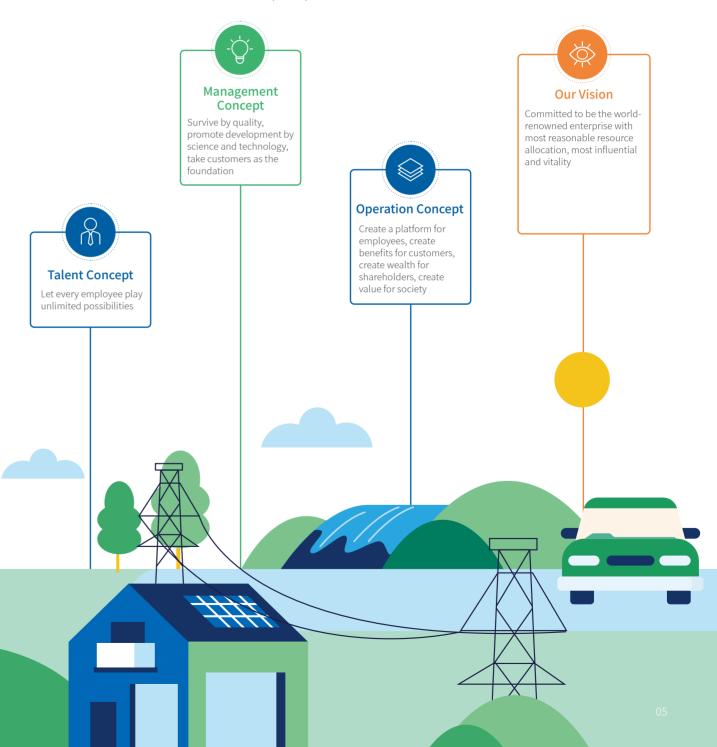
The Company has set up digital intelligent manufacturing bases in Xinjiang, Zhejiang, Inner Mongolia, Sichuan and other places, and has high-tech research and development centers in Shanghai and Hainan. Its businesses mainly cover multiple fields such as energy, silicon metal, silicone, carbon, new materials, third-generation semiconductor silicon carbide (SIC), the whole photovoltaic (PV) industrial chain, and energy storage. Among them, the production capacities of silicon metal and silicone have ranked first in the world for many consecutive years. The scientific research strength of emerging businesses such as SIC and PV ranks firmly in the first echelon of the industry. The related products are widely used in various fields such as aerospace and military industry, electronic communication, medical and health care, and automobile manufacturing, and its partners are all over the world.

The Company strives to contribute Hoshine's wisdom and strength to the global silicon-based new materials industry and green energy sector. On the one hand, we actively promote the large-scale promotion of clean energy and zero-carbon technologies, vigorously advocate green and low-carbon production methods, and take the lead in carrying out product carbon footprint certification within the industry to achieve green manufacturing. On the other hand, we actively create sustainable and green circular economy models for quality improvement and upgrading, enabling mutual empowerment among different industries within the "Green Circular Economy Industrial Park", and fully constructing a low-carbon and high-efficiency industrial sustainable development system.



# **Corporate Culture**

Hoshine Silicon places high importance on the construction and development of corporate culture, committed to building a distinctive and highly cohesive corporate culture to drive the Company's sustained and steady development. Through relentless efforts over the past nearly two decades, Hoshine team members have gradually formed shared career goals and value orientations, which have coalesced into the unique corporate culture of Hoshine Silicon.



#### HOSHIN 合 盛 硅

# **Corporate Values**

Abide by the national laws and company system, never violate the high-voltage line of the enterprise; be a person with morality first, honesty and integrity, words and deeds; requite kindness with kindness, requite resentment with justice, , to uphold fairness, honesty and trustworthiness. Use positive forces to have a positive impact on the surroundings.





Leading innovation with green environmental protection, everyone can innovate, everything can be innovative; embrace change, dare to break through, dare to try, not afraid of failure, good at summing up.

Professional and persistence, with the spirit of craftsmanship, constantly improving; diligence and efficient execution; courage to take responsibility, take the initiative to meet new challenges and tasks; hold curiosity, continuously improve learning, keep in mind the original heart and mission, and pursue excellence.





With an open and win-win attitude, we share industry growth with our partners; we have a big vision and can work together in a team to achieve our goals; we are willing to share our expertise and work experience and grow with our colleagues.

# **Corporate Honors and Awards**

Ranked 153<sup>rd</sup> in *Hurun China 500 Most Valuable Private Companies 2024* 

Hurun Research Institute

Ranked 141<sup>st</sup> in the "List of 2024 Top 500 New Economy Enterprises"

China Enterprise Evaluation Association

Ranked 94<sup>th</sup> in 2024 Top 500 National Enterprises from Zhejiang Province

Zhejiang Business Magazine

Annual Outstanding Enterprise in Sustainable Development

Shanghai United Media Group | Jiemian Global - 2024 [Smart Industry Awards]

Annual Steady Progress New Energy Company

Think Finance & Investor Network - 2024 Golden Bridge Awards

Excellent Corporate Governance Award of the Year

Shanghai United Media Group | Jiemian Global - 2024 [ESG Pioneer 60] Gold Certification<sup>1</sup>

**About Hoshine Silicon** 

Ecovadis

2024 Hangjia Aurora Award - China's Most Influential SiC Substrate Enterprise<sup>2</sup>

> "Hangjia Remarks on the 3<sup>rd</sup> Gen Semiconductors"

Excellent Green Energy Development Case

2024 3<sup>rd</sup> Green Finance Forum

The Most Promising Listed Company in New Materials

National Business Daily - 2024 14<sup>th</sup> China Listed Companies Reputation Awards

Growth Value Listed Company of the Year

21st Century Business Herald - 2024 Capital Market "Golden Sail" Cases

2024 Yinshi· Market Value Management Award

Zhejiang Daily Press Group, Yinshi Finance, RoyalFlush - 2024 Yinshi Awards

2024 Annual Best Investor Relations Management Listed Company Award

Securities Market Weekly - The 18<sup>th</sup> (2024) Capital Market Crystal Ball Awards

<sup>&</sup>lt;sup>1</sup> Obtained by Jiaxing Hoshine

<sup>&</sup>lt;sup>2</sup> Obtained by Hoshine New Materials

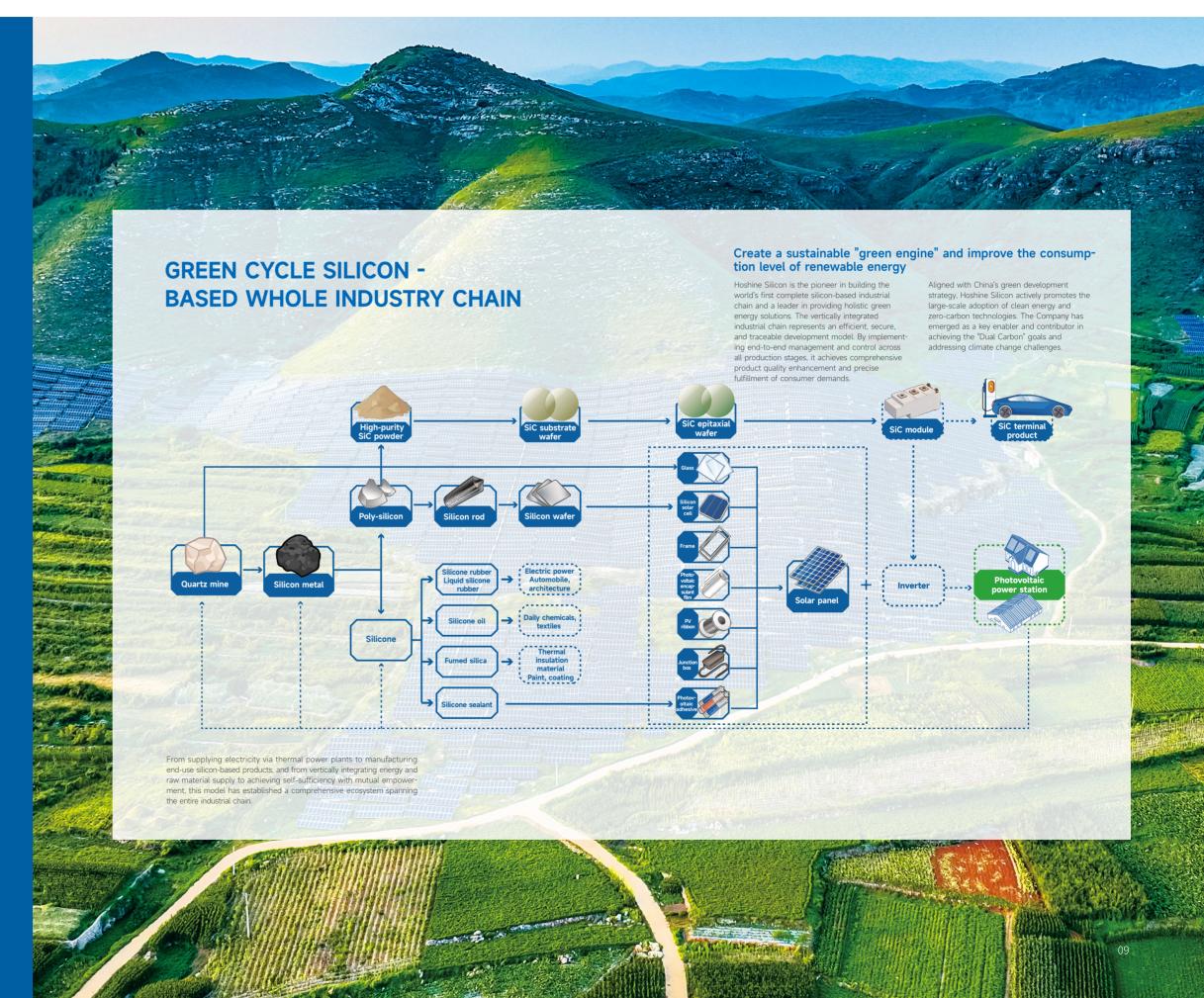
2024 | Sustainability Report

# Integrated Green Circular Economy Model of Siliconbased New Materials

Relying on the advantages of synergetic development of the industry chain, Hoshine Silicon leads the development of the industry through the integrated green circular economy model of silicon-based new materials, achieving an organic combination of energy and silicon-based materials, and enabling the implementation of the green circular model of "resources-products-renewable resources or recycled products".

Currently, with the advantages such as upstream-downstream connection, a whole industry chain, a high local conversion rate, and obvious characteristics of a circular economy, Hoshine Silicon has established a modern industrial system of silicon-based new materials with international competitiveness. The Company pioneered the construction of green circular economy parks for silicon-based new materials in Shihezi and Shanshan, Xinjiang. From the power supply by the heating and power plant to the production of terminal silicon-based products, and from the vertical supply of energy and raw materials to self-sufficiency and mutual empowerment, all by-products in the production process are recycled.

The successful implementation of this model not only demonstrates the leading position of Hoshine Silicon in technological innovation and sustainable development, but also sets a model for the green transformation of the whole silicon-based new materials industry. In 2024, the Company's silicon metal business segment, through industry chain synergy as well as technological innovation continued to improve the average daily output and effectively reduce the electricity consumption per ton, some of the average daily output of the mineral heat furnace has exceeded 70 tons, and the electricity consumption of smelting a single ton of silicon metal has even been reduced to less than 10,000 kWh; silicone business segment, some of the plants, through the technological transformation, the capacity of a single set of equipment has been increased from 300 tons per day to 330-350 tons per day and Innovative application of advanced equipment fractional distillation technology, as well as process equipment technology in the chloromethane system, and the use of advanced energy-saving equipment in large units of the public utility system have brought significant energy-saving benefits to the Company.



# **Governance Part**

# Responsible Hoshine, Refined Governance

Hoshine Silicon deeply recognizes the importance of integrity operations for long-term corporate development. Therefore, the Company is committed to advancing the construction of its governance system, actively integrating sustainable development concepts into its operations, and earnestly fulfilling social responsibilities. Simultaneously, the Company continuously strengthens corporate governance level by incorporating business ethics, risk management, information security, and other issues into its core development strategy, driving high-quality and sustainable development while establishing a positive corporate image.

Corporate Governance 12

ESG Governance 14

**Business Ethics** 18

Data Security and Customer 21

**Privacy Protection** 

UN Sustainable Development Goals Corresponding to This Chapter







# **Corporate Governance**

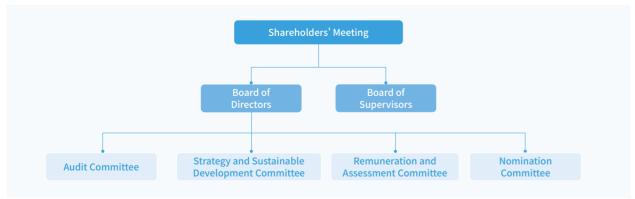
Hoshine Silicon continually enhances its governance levels through a sound governance framework and effective management procedures to ensure corporate governance efficacy. We consistently optimize our governance structure, implement risk management, continuously improve governance transparency, and effectively safeguard shareholders' equity.

# **Governance Structure**

Hoshine Silicon strictly complies with laws and regulations such as the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, and the Listing Rules of Shanghai Stock Exchange for Stocks.3 During the Reporting Period, in accordance with the new regulatory rules of the China Securities Regulatory Commission and the Shanghai Stock Exchange, and in combination with the actual situation of the Company, we revised documents such as the Rules of Procedure of the Special Committees of the Board of Directors and the Articles of Association of Hoshine Silicon Industry Co., Ltd., optimized the rules of procedure of the Board of Directors and its subordinate committees, strengthened the management norms of independent directors, and improved the decision-making and management level of the Board of Directors.

The corporate governance of Hoshine Silicon includes one meeting and two boards, i.e. the shareholders' meeting, the Board of Directors, and the Board of Supervisors. The shareholders' meeting, as the supreme authority, formulates the Company's major decisions. The Board of Directors, as the executive body, performs its responsibilities in accordance with the authorization of the shareholders' meeting and conducts the governance work of the Company. The Board of Supervisors, as the supervisory body, is responsible for supervising the actions of the Board of Directors to ensure that it exercises its functions and powers in accordance with the law. The Board of Directors has established the Audit Committee, Strategy and Sustainable Development Committee, Remuneration and Assessment Committee, and Nomination Committee. All members of these committees are served by directors, jointly promoting the efficient operation of the Company. During the Reporting Period, based on the original Board of Directors' committees, we adjusted the Strategy Committee to the Strategy and Sustainable Development Committee, and clearly included sustainable development management work within its scope of responsibilities, so as to improve the Company's sustainable development governance level.

We explicitly consider multiple factors such as gender, age, cultural and educational background, skills, knowledge, and professional experience when selecting candidates for the Board of Directors' members, in order to improve the work efficiency of the Board of Directors and ensure the scientific nature of decision-making. In addition, the Nomination Committee of the Board of Directors reviews and examines the structure, director number, and composition of the Board of Directors every year, and makes suggestions on any changes made to the Board of Directors to ensure the independence and fairness of its management and decision-making. During the Reporting Period, the Board of Directors of Hoshine Silicon was composed of a total of 9 directors, including 4 female directors.



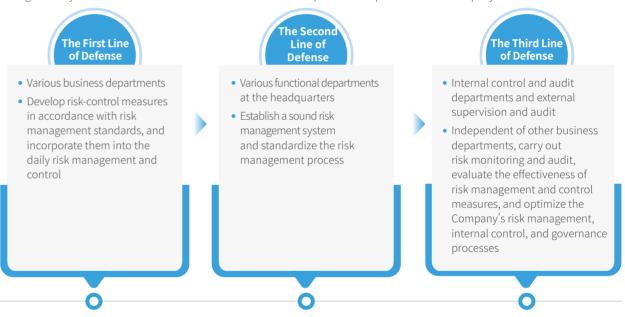
#### Hoshine Silicon's Governance Structure

<sup>3</sup>The revision is based on the latest version of the Company Law of the People's Republic of China, the China Securities Regulatory Commission's Measures for the Administration of Independent Directors of Listed Companies, Listed Company Supervisory Guideline No. 2 - Regulatory Requirements for the Management and Use of Raised Funds by Listed Companies, the Listing Rules of Shanghai Stock Exchange for Stocks as well as the Shanghai Stock Exchange Self-Regulatory Guidelines for Listed Companies No. 1 - Standardized Operations for Mainboard Listed Companies.

# **Risk Management**

Hoshine Silicon attaches great importance to risk management and internal monitoring, formulating regulations such as the Internal Control Evaluation Promotion System and the Internal Audit Management System. The Company strictly supervises business processes including finance, engineering, and operations, strengthens risk identification, early warning, and full-process control of contract performance, and integrates enterprise risk management into Hoshine Silicon's strategies and operation processes at all levels. We have formulated a unified risk investigation checklist, systematically analyzing and comprehensively managing risks in terms of potential impacts, risk levels, probabilities, control measures, etc., which facilitates the Company to efficiently manage various potential risks of all functional departments.

The risk management system of Hoshine Silicon is coordinated and controlled by the Board of Directors, and the Audit Committee under the Board of Directors is responsible for supervising the implementation of risk management to ensure the appropriateness and effectiveness of the management system and structure. Hoshine Silicon's internal control and audit departments regularly report to the Audit Committee, and conduct supervision and inspection on the implementation of risk management measures and related work. Hoshine Silicon has established three lines of defense for risk management, which support and strengthen our risk management system and escort the stable and sustainable development and operation of the Company.



Hoshine Silicon integrates ESG risk management and control into its daily risk management work, enhancing our awareness of ESG risk management. We have established an internal control effectiveness verification mechanism to ensure the effective implementation of the risk management mechanism, and continuously strengthened risk management and compliance training to further guarantee the implementation of the risk management system.



#### Hoshine Silicon Special Compliance Training for Independent Directors

In November 2024, Hoshine Silicon actively participated in the "Special Compliance Training for Independent Directors of Listed Companies in 2024" organized by the Shanghai Stock Exchange. The training content covered course topics such as the regulatory concepts and latest regulatory practices of information disclosure of listed companies, the legal responsibilities of independent directors under the registration system, the analysis of recent disciplinary action cases, and the causes and prevention of risks of listed companies. Through this training, the independent directors of the Company timely obtained the latest regulatory policies, providing strong support and guarantee for enhancing their own competence to perform duties, improving the corporate governance structure, and promoting the high-quality development of the Company.

# **ESG Governance**

Hoshine Silicon attaches great importance to ESG governance, continuously improves the ESG governance structure and management system, and actively integrates the concept of sustainable development into the Company's daily management and production operations. At the same time, we earnestly listen to and accept the demands of various stakeholders, and jointly explore the path of sustainable development.

# **ESG Governance Structure**

The Company has established a three-layer ESG governance structure with the Board of Directors as the supreme decision-making and management body, the Strategy and Sustainable Development Committee as the core, and the ESG task force responsible for implementation. The Board of Directors is responsible for supervising and approving ESG matters, and the Strategy and Sustainable Development Committee is responsible for overseeing the progress of ESG work and regularly reporting to the Board of Directors. The ESG task force is composed of various functional departments to ensure the effective implementation of ESG work.



Hoshine Silicon's ESG Governance Structure

# **ESG Management Practice**

Hoshine Silicon is committed to truly applying the ESG concept to the practice of promoting the sustainable development of the enterprise and acting as a promoter of high-quality ESG actions in the industry. While focusing on the high-quality development of its main business, we actively assume social responsibilities, pays attention to the demands of stakeholders and responds to them in a timely manner, so as to enhance its corporate influence and work hand in hand with value chain partners to promote the prosperity of the industry.

In addition, we attach great importance to the corporate sustainable development strategy and practice, constantly improve the understanding of ESG by the Board of Directors and management, and promptly adjust the Company's ESG development direction. The members of the Board of Directors of Hoshine Silicon actively participate in ESG knowledge training, keep abreast of the changes in exchange rules and updates of regulatory policies related to ESG, important industry news on key ESG issues, and analysis and sharing of ESG-themed case studies, etc., so as to improve the relevant skills and capabilities of the Board of Directors' members in sustainable development, and thus enhance the Company's ESG governance level.



# Special Training on the Sustainability Report of Listed Companies

In May 2024, the Shanghai Stock Exchange held the "Special Training on the Sustainability Report (ESG) of Listed Companies (First Session)", which covered the interpretation of Sustainability Report guidelines, ESG evaluation, rating and investment, carbon emission accounting methods and policies, and sharing of report compilation experience by listed companies. Hoshine Silicon actively organized its staff to participate in the training. This training has provided guidance for the Company in exploring high-quality development and enhancing its investment value, and has further improved the relevant personnel's understanding of the disclosure guidelines and standardized our information disclosure behavior related to sustainable development.



# Communications with Stakeholders

Based on the characteristics of our company's own business and drawing on the experiences and practices of global peers, we actively incorporate the feedback from stakeholders into our strategic and management decision-making processes, ensuring that the requirements and expectations of stakeholders are aligned with the Company's goals and actions.

Hoshine Silicon adheres to the corporate governance concepts of openness and transparency, placing paramount importance on stakeholders' core concerns. We have systematically established a diversified communication matrix encompassing face-toface communications, emails, phone communications, and new media platforms (WeChat Official Account), while implementing a multi-tiered dialogue mechanism that includes shareholders' meetings, annual/semi-annual reports, special disclosure documents, dual-track (online/offline) performance briefings, and institutional investor thematic conferences. Through institutionalized and regular two-way information exchange, we comprehensively listen to the stakeholders' demands, accurately gauge market expectations, and continuously optimize the inclusiveness and sustainability of strategic decision-making. During the Reporting Period, we focused on building strategic mutual trust system in capital markets, organizing and participating in over 150 diversified exchanges covering more than 500 investors through systematic investor relations management mechanism in the year, earning unanimous recognition from investors and shareholders, thereby laying solid foundations for enhancing capital market brand credibility.

Key Stakeholders	Communication Channels
Government and regulatory authorities	• Policy directives, work reports, information submissions, on-site inspections
Shareholders and investors	<ul> <li>Investor exchange conferences, reception of shareholder visits, response to shareholder hotline consultations</li> </ul>
Customers	Phone communications, periodic follow-ups
Suppliers and partners	<ul> <li>Tender meetings, supplier evaluation processes, collaborative exchanges, industry forums</li> </ul>
Employees	<ul> <li>Internal communication platforms, employee satisfaction surveys, employee visits and care</li> </ul>
Local communities	Community activities, volunteer services
Media and public	<ul> <li>Company website, daily communications and responses, public opinion monitoring, information disclosures</li> </ul>

# Matrix of Material Issues

Hoshine Silicon employs policy benchmarking, industry research, in-depth interviews, and questionnaire surveys to collect and analyze stakeholder inputs, constructing a multi-dimensional issue identification mechanism that accurately pinpoints the dimensions of core concerns and develops the Company's list of major issues. Based on the importance assessment results from all key stakeholders, we prioritized ESG-related issues to establish the important issue matrix, which was subsequently reviewed and approved by the Board of Directors in alignment with corporate strategy and operational policies to confirm the priority order of major issues.

# Preliminary Identification of Major Issues

• The Company's potential major issues were preliminarily identified through policy interpretation and analysis, reference to industry peers' practice, and organization of our current status.

# Stakeholder Communication

• Through interviews and exchanges with key stakeholders (investors, customers, regulatory authorities, etc.), we prioritized major issues according to stakeholders' focus areas.

# Assessment of Major Issues

Aligned with global sustainable development goals, our strategic direction, and stakeholder concerns, we
established our major issue matrix and made corresponding adjustments based on the situation of the industry
and the Company.

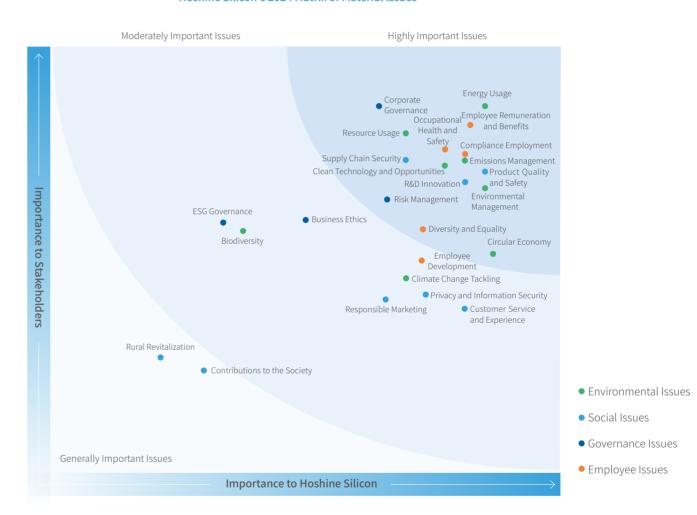
# **Review and Disclosure**

• The Board of Directors reviewed major issues and disclosed them in the 2024 ESG Report.

Hoshine Silicon's Major Issues Identification Process

During the Reporting Period, we identified 25 ESG issues in combination with corporate development strategy and industry-specific considerations, comprising 15 highly important issues, 8 moderately important issues, and 2 generally important issues.

#### Hoshine Silicon's 2024 Matrix of Material Issues









# **Business Ethics**

Hoshine Silicon strictly complies with laws and regulations including the Criminal Law of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China, and the Interim Provisions on Banning Commercial Bribery, having improved and updated management systems such as the Employee Conflict of Interest Management Policy. All employees are required to sign the Integrity and Self-disciplinary Commitment Letter and Employee Conflict of Interest Disclosure Form upon onboarding, respecting market competition principles and supporting and maintaining a fair and free market competition environment. We oppose all forms of commercial bribery, extortion, fraud, money laundering, monopoly, and unfair competition, maintaining zero tolerance towards any unethical business conduct. During the Reporting Period, Hoshine Silicon incurred no fines or settlements related to unfair competition, conflicts of interest, money laundering, or insider trading.

We have established a top-down business ethics management system that clearly defines responsibilities for business ethics management at all levels to foster a sound business ethics cultural atmosphere. Hoshine Silicon's Board of Directors has set up an Audit Committee responsible for monitoring the effectiveness of compliance management systems and relevant policies. The Company's Internal Control Department serves as the primary supervision and management department for business ethics management related matters, conducting regular and irregular supervisions and inspections of business activities across all functional departments, branches and subsidiaries, while investigating and addressing any unethical business conduct to ensure effective maintenance of our business ethics management.

The Company has joined the China Enterprise Anti-Fraud Alliance, adhering to its covenant by committing to not offer or accept bribes in business activities, operating with integrity and fair competition, and continuously implementing or executing effective anti-bribery policies. Additionally, we also joined the Sunshine Integrity Alliance with the mission of "integrity operations" to jointly create a trustworthy business environment for consumer confidence.

# **Board of Directors Audit Committee Internal Control Department Functional Departments** Hoshine Silicon's Business Ethics Management System





**Business Ethics Alliance** 

# **Business Ethics Regulation**

We integrate the audits and supervision of business ethics risks into both routine and specialized management work to further enhance the effectiveness of our anti-corruption and business ethics management.

At the audit level, Hoshine Silicon examines the execution of business ethics policies during business cycle audits, such as verifying the inclusion of the Supplier Commitment Letter for Integrity Cooperation in procurement contracts, thereby ensuring business ethical conducts are effectively implemented at the business level. In 2024, we conducted sales-collection and procurementpayment business cycle audits at Jiaxing Hoshine, with no instances of unethical business conduct identified temporarily.

At the supervisory level, to ensure effective execution of risk management measures, The Company's Internal Control Department supervises high-risk business ethics links through proactive and reactive reviews, guaranteeing the effective implementation of risk management work into daily work and reducing the occurrence of non-compliant incidents.

#### Proactive review



- · Conduct supervision and audits through routine and specialized monitoring
- Incorporate the management modules from the Basic Norms for Enterprise Internal Control into daily audits
- Supervise and inspect risk control activities and measures implemented by various departments, guided by a risk investigation checklist

#### Reactive review



- Accept and address internal and external complaints and reports regarding compliance issues
- Upon receipt of reports, the department conducts a preliminary review immediately to judge the authenticity, reasonableness, and urgency of the reported content, and assigns it to each local internal control department for investigation based on region

# Whistleblowing and Investigation Mechanism

We have established an open business ethics reporting platform to encourage stakeholders, including company employees, suppliers, and business partners, to report any misconduct against business ethics to us. The Company has implemented internal systems such as the Whistleblower Reward System, which fully defines specific situations to be reported, assigns departmental responsibilities, and outlines post-reporting measures taken.

#### Whistleblowing Channels

Phone and WeChat Email: hs tousu@hoshinesilicon.com

#### **Whistleblower Protection Measures**

We clearly stipulate that the information of whistleblowers will be strictly kept confidential. Except for the members of the Board of Directors, other personnel have no right to access the information related to the whistleblowing.

#### **Whistleblower Rewards**

We provide rewards to employees who actively monitor and report corruption behaviors, promoting the continuous monitoring of any potentially unethical, illegal, or dishonest activities.



# **Construction of Compliance Culture**

In order to encourage more employees to participate in the cultural construction of anti-corruption and anti-fraud, we actively conduct employee professional ethics training, implementing the concepts of openness, transparency, and integrity in public service. Our aim is to build a team of compliant talents and strengthen the clean and upright corporate atmosphere. During the reporting period, Hoshine Silicon organized business ethics and anti-corruption training covering directors, senior management, and employees, ensuring personnel at all levels realize the importance of business ethics.

#### Mail Push



Send a mandatory learning document, i.e. A Letter from the Internal Control Department to New Employees, to each new employee, reminding them of working with integrity and be brave enough to report incidents that violate business ethics

# **Induction Training for New Employees**



Conduct new employee induction training once a month, which includes content related to anticorruption, anti-bribery, and anti-fraud

Hoshine Silicon Business Ethics Training

# **Hoshine Silicon Anti-fraud Training**

On April 26, 2024, in order to enable employees to have a clearer understanding of the harm of fraud, Jiaxing Hoshine shared anti-fraud related knowledge with all employees at the employees' congress. The content included what fraud is, fraud around us, how to detect fraud, what the precursors of fraud are, and the "people's war" against fraud. This enhanced employees' compliance awareness and laid a solid foundation for the Company's clean culture construction and sustainable development.



Hoshine Silicon Anti-fraud Training Scene

# **Data Security and Customer Privacy Protection**

Hoshine Silicon deeply understands that information security is the key to the cornerstone of the Company's sustainable development and customer trust. The Company strictly complies with laws and regulations such as the *Cybersecurity Law* of the People's Republic of China, the Data Security Law of the People's Republic of China, and the Personal Information Protection Law of the People's Republic of China, and formulates internal systems such as the Information System Security Management Regulations and the Information Equipment Management System to ensure the continuity of business operations and the integrity of data, guiding Hoshine Silicon to practice the management of information security and data security.

We have established a leading group for network information security to comprehensively implement the main responsibility for network information security, improve the protection ability of network information security, and build a solid line of defense for information security.

# Main Responsibilities of the Leading Group for Network Information Security



- Implement the deployment and requirements of superior network information security work, ensuring that the network information security is at Level 2 or above
- Formulate network information security management systems to ensure the secure operation of network information
- Be responsible for carrying out inspections of network information security work, coordinating and planning as the whole the emergency response to network information security incidents
- Regularly conduct education and training on network information security

Meanwhile, the Company follows the *Emergency Response Plan for Network and Information Security* to execute an emergency handling mechanism for information leakage, aiming to prevent potential information security risks. When an information leakage incident occurs, the Operations Department of Hoshine Silicon will strictly adhere to the emergency plan response mechanism. Through the monitoring of security equipment and alarm information, it will quickly identify the cause of the security incident, promptly address information security threats, and compile a post-incident analysis report after the incident is resolved. Then, it will report to the Company's management in accordance with the information security incident management process, preventing and minimizing the network and information security emergencies and the resulting damage. During the Reporting Period, there were no data or privacy leakage incidents at Hoshine Silicon.



- After receiving reports of potential safety hazards, promptly update system patches to fix the vulnerabilities
- Delete or restrict access to pages that leak sensitive information without affecting businesses or functions
- Blur relevant sensitive information on the server side
- Conduct strict inspections on the data returned by the server side to ensure that the queried data is consistent with the data displayed on the page

Hoshine Silicon's Emergency Response Mechanism for Information Leakage



To strengthen cybersecurity management and the protection capabilities of business systems, Hoshine Silicon has effectively improved its ability to handle cybersecurity incidents and its security protection capabilities against external risks through tasks such as data protection encryption upgrades, information security attack and defense drills, and third-party vulnerability analysis.

#### **Data Protection Encryption**

- Strengthen access control to systems and data, and implement strong password policies, multi-factor authentication, access permission management, etc. to ensure that only authorized personnel can access sensitive information.
- Green Shield must be installed on all office computers in the Company, and the decryption requests and permissions must be strictly managed, with a "whitelist" implemented for mobile storage devices.

#### Information Security Attack and Defense Drills

- · Actively carry out internal attack and defense drills. By simulating real-world attack scenarios, test the defense capabilities and operating environment of internal systems.
- During the reporting period, we repaired system vulnerabilities discovered during the drills, and optimized security configurations to enhance the overall security of the system.

# Third-Party Vulnerability Analysis

• Have a third-party conduct a comprehensive review of the enterprise's information security, and promptly repair and update relevant software, systems, or equipment, including patching applications and upgrading systems. During the reporting period, we identified a total of 95 high-risk vulnerabilities, 569 medium-risk vulnerabilities, and 635 low-risk vulnerabilities.

### Hoshine Silicon's Information Security Protection Measure

The Company attaches great importance to and is committed to continuously cultivating employees' awareness of information security. Through regular holding of information security training and information security publicity and education, employees are encouraged to actively identify and prevent potential information security risks, and continuously strengthen the cultivation of all employees' awareness and capabilities of information security protection.

# Hoshine Silicon Information Security Experience Zone

During the National Cybersecurity Week from September 9 to 15, 2024, Hoshine Silicon actively responded and deeply participated in the event. We have specially set up an information security experience zone, allowing employees to experience various security threat scenarios immersively, such as simulated hacker attacks and handling of data leakage crises. Through these highly interactive and practical drills, employees can intuitively feel the importance of information security and learn how to effectively identify and respond to potential risks in their daily work, strengthening employees' awareness of information security.

# **Hoshine Silicon Cybersecurity Training**

In order to enable employees to better use security tools such as firewalls, intrusion detection systems, and anti-virus software, and to learn to actively use vulnerability scanning tools to promptly detect and fix system vulnerabilities, we have carried out cybersecurity training for employees. The training content includes the basic concepts of information security, common threats, and security protection measures. By explaining national and local information security laws and regulations, as well as the Company's internal information security policies and processes, the training enables employees to be aware of the correct handling procedures for information security incidents and standardizes the Company's information security management.

# **Environmental Part**

# Future Hoshine, Green Leadership

Hoshine Silicon regards environmental protection as its own responsibility and unswervingly implements the green development leadership strategy. The Company is committed to becoming a global leading supplier of sustainable silicon-based industry chains. We earnestly carry out energy and greenhouse gas management, environmental management, pollutant prevention and control, and resource utilization management in all aspects of production and operation, gradually exploring the action path to address climate change, so that we strive to achieve green, low-carbon, and long-term development, and integrate the concept of green production throughout the entire production process.

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UN Sustainable Development Goals Corresponding to This Chapter







02

# **Low-carbon Operations**

We actively respond to the national "dual carbon" strategic goals, implement the concept of sustainable development, and are committed to becoming an active participant in and contributor to the low-carbon transformation of the industry. The Company incorporates climate change into its sustainable development management, actively explores low-carbon development models, and implements green operations into practical actions by continuously optimizing production processes and improving energy utilization efficiency.

# **Climate Change Tackling**

Climate change is a major global challenge facing humanity today. With reference to the recommendations and guidance of the Task Force on Climate-related Financial Disclosures (TCFD), Hoshine Silicon incorporates climate change into its overall ESG management process, actively conducts the identification of climate change risks and opportunities, explores effective carbon reduction measures, and promptly reviews the effectiveness of its climate strategy and the achievement of carbon reduction measures, comprehensively enhancing the Company's ability to address climate change.

# Governance

Hoshine Silicon has established a climate governance structure covering the "decision-making level - organizational level - execution level", and clearly defines the management responsibilities at each level, effectively promoting the orderly implementation of management work for addressing climate change, continuously improving the effectiveness of climate change governance, and driving the low-carbon development of the whole industry chain.

# Board of Directors

Strategy and

• Be responsible for supervising and reviewing climate change-related strategies

- Supervise the performance of annual climate change-related policy management and the progress of goals
- Review the measures for addressing climate change submitted by the Strategy and Sustainable Development Committee
  - Identify, determine and assess the risks and importance of climate change issues
  - Supervise, evaluate and review the policies, management, performance and progress of relevant goals regarding climate change issues. Examine external trends related to climate change, as well as risks and opportunities, and mitigate the adverse impacts of climate change on the Company
  - Formulate and review the Company's vision, goals and strategies related to climate change, and actively communicate with the Board of Directors on the measures and actions required to improve the Company's performance in addressing climate change

**ESG Working Group** 



- Implement the Company's decisions and deployments for addressing climate change, and continuously improve the participation of specialized departments in climate change management
- Follow up on the execution of climate change management measures, and follow up on the progress of relevant performance and goal achievements
- Responsible for internal communication and external liaison

# Hoshine Silicon's Climate Change Governance Structure

We have provided the members of the Board of Directors with training on the theme of climate change in the form of knowledge sharing by external experts, etc., to support them in acquiring the necessary professional knowledge, so that they are competent in the management and supervision of climate change-related issues. In order to ensure the effective execution of various measures, Hoshine Silicon has incorporated climate change-related quantitative indicators into the performance assessment scope of relevant management personnel to incentivize and commend their contributions in the field of climate change.

# Strategy

Based on industry research reports, relevant policies issued by regulatory authorities, peer benchmarking, and external information retrieval, Hoshine Silicon understands the list of potential climate risks, and assesses the expected time dimension of the occurrence of risks and the degree of potential impact. According to the results of the climate risk assessment, the Company jointly discusses and formulates countermeasures with relevant business departments. In the identification of climate opportunities, we also combine mainstream practical cases to explore our climate opportunities.

Risk C	ategory	Risk Description	Response Measures	Potential Impact	Time Scope
Physical	Extreme weather conditions (such as heavy rain, typhoons, heavy snow, floods, high temperatures, and severe cold) may lead to traffic disruptions, damage to factory buildings, and limited raw material supply, resulting in production interruptions, depreciation of fixed assets, or work-related injuries and fatalities.		Establish a tracking mechanism for meteorological information, formulate management processes for extreme weather warnings and emergency disaster response measures, and conduct long-term prevention and effective response to sudden natural disasters such as extreme cold, typhoons, heavy rain, and floods.	Increased operating costs, asset impairment	Short- term
Risk	Chronic	The rise in average temperatures will lead to increased production costs in each factory, greater production risks, decreased employee productivity, and increased energy consumption for maintaining normal production (such as temperature and humidity), which in turn will affect company's operating costs and capital investment.	Continuously identify potential risks of climate change and formulate plans to enhance the capability to adapt to rising temperatures; Set up backup energy supply plans and consider the stability of energy suppliers to address the stability of energy supply during extremely hot periods.	Increased operating costs	Long-term
	Policy and law	With the gradual tightening of carbon emission management, there may be requirements for the carbon emissions of products, leading to an increase in company's operating costs.	Strengthen the carbon emission management system, continuously track the established environmental goals, and establish a management mechanism for carbon emission performance assessment indicators; Meet the current regulatory compliance requirements through measures such as optimizing the energy structure, strengthening scientific and technological innovation, and promoting the empowerment of digital technologies, and take responses measures in advance to emerging regulations that may or are about to be introduced.	Increased operating costs	Med-and- long-term
Transition risks	Market	Suppliers are affected by climate change risks, resulting in rising raw material prices and increased production costs.	Pay attention to the raw material market, ensure timely access to raw material price information and changes in energy policies to make responses; optimize supplier management and regularly analyze the risks of raw material supply.	Increased operating costs, decreased revenue	Med-and- long-term
	Reputation	Customers, consumers, and other relevant parties are increasingly concerned about company's performance in terms of brand values and climate change response; if company does not actively carry out climate change response actions, it may not be able to meet the expectations of stakeholders, resulting in damage to its own image and reputation.	Continuously promote R&D innovation in low-carbon products, and implement the concept of green and low-carbon in the production and operation process.	Decreased revenue, decreased asset value	Long-term

Opportunity Category	Opportunity Description	Potential Impact	Response Measures
New energy and e-mobility emerging markets	Against the backdrop of the "dual carbon" goals, public sectors, customers, and consumers prefer climate-friendly products and services, and there is a wide demand for new energy and e-mobility transformation.	Increased revenue	Accelerate the development of new energy emerging markets and strengthen cooperation, provide more products and services that meet market needs and expectations, and achieve long-term sustainable growth of business and revenue.
Renewable energy transformation  With the R&D and innovation of green technologies and the introduction of supportive policies, the accessibility of renewable energy will gradually increase, and the price may gradually decrease.		Reduced energy costs, increased revenue	Increase the proportion of renewable energy application in the production and operation links, reduce direct energy costs, meet the needs of downstream customers, and at the same time respond to the regulatory pressure and low-carbon goals faced by the Company in the terminal market.

# Impact, Risk and Opportunity Management

In order to enhance the resilience to climate change, effectively grasp and control climate-related risks and opportunities, Hoshine Silicon continuously strengthens its risk management capabilities, integrates climate change risks into the existing risk management framework of the enterprise in stages, and is committed to gradually reducing the impact of climate risks on the enterprise during the operation process to the minimum.



# Analysis and Screening of Climate Change Risks and Opportunities

- Analyze climate change risks and opportunities based on the TCFD framework and the practices of peers.
- Combined with the internal situation of the Company and the external environment, each functional department jointly screens out the climate change risks related to Hoshine Silicon.



# Determination and Assessment of Climate Change Risks and Opportunities

- Based on the analysis of industry characteristics and the opinions of stakeholders and external experts, clarify the specific climate change risks and opportunities applicable to Hoshine Silicon.
- For the confirmed climate change risks, assess their impacts on the Company's business, and assess factors such as the likelihood, impact, adaptability, and resilience of climate change risks and opportunities, so as to determine the priority of relevant management strategies.



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# Formulation of Climate Change Risk Response Plan

- Formulate effective response plans for the identified risks and regularly supervise the progress and results of risk response work for major climate risks.
- In the future, based on the characteristics of its own industry and business operations, analyze the factors for financial importance assessment to determine the climate-related financial impacts.

Hoshine Silicon's Climate Change Risk Management Process

# **Indicators and Goals**

Hoshine Silicon formulates energy consumption goals that are in line with the actual situation based on the production status of each business line, taking the business divisions as units, and links the key performance indicators of climate change and environmental management with the performance assessment of relevant core management personnel. In the future, we will formulate carbon emission goals at the Company level in combination with our own operating situation to effectively promote the realization of the Company's environmental and climate change goals and solidly promote the carbon reduction work.

Hoshine Silicon is well aware that Scope 3 Emissions is an important part of the greenhouse gas emissions in the enterprise value chain. As of the release date of this report, the subsidiaries Shanshan Electric Power, Hoshine Thermal Electric, and Jiaxing Hoshine have disclosed their carbon emission situations. In the future, we will continuously improve our ability to identify and measure carbon emissions throughout the whole industry chain, enhance the transparency of climate data in the value chain, and lay a solid data foundation for formulating scientific and reasonable goals.

Category	Unit	2024
Scope 1	tCO₂e	9,065,365.27
Scope 2	tCO₂e	8,838,382.528
Total greenhouse gas emissions (Scope 1 + Scope 2)	tCO₂e	17,903,747.80
Greenhouse gas emission intensity (Scope 1 + Scope 2)	tCO₂e / RMB one million of revenue	670.75

Hoshine Silicon's Scopes 1 and 2 Greenhouse Gas Emission Situations



### 02

# **Energy Usage and Carbon Emissions Management**

Hoshine Silicon strictly complies with the requirements of laws and regulations such as the Law of the People's Republic of China on Energy Conservation and continuously optimizes its energy management system. We have increased the intensity of low-carbon scientific and technological innovation for energy conservation, optimized the management of production processes, and continuously adopted new technologies to reduce energy consumption. While achieving energy conservation and emission reduction, we have also effectively managed operating costs and strived to achieve the green, low-carbon, and sustainable development of the enterprise.

# **Energy Management System**

We continuously carry out the work of establishing and improving the energy management system. For each production base, we formulate a series of management requirements for energy sources such as coal, natural gas, and electricity in terms of usage, metering, statistical reporting, consumption costs, etc., including the *Enterprise Energy Management System* and the *Energy Conservation Management System*. We are committed to reducing unnecessary energy consumption while meeting production needs.

Hoshine Silicon continues to strengthen the construction of its own energy management system. A three-tier energy management structure covering the general manager of the business division, the chief engineer, and the team leader of the production department has been established at the business division level, and corresponding responsibilities are defined based on the specific situations of the persons in charge at each rank. During the Reporting Period, Hoshine Silicon linked energy budgets to the performance of the corresponding departments, aiming to encourage departments to actively take measures to reduce energy consumption, improve energy utilization efficiency, and promote the overall improvement of the enterprise's energy management level.

Team leader

General manager

Chief engineer, deputy general manager of production, deputy general manager of maintenance, assistant to the general manager

Members

Head of Operation Department, head of Environmental Protection Department, head of Fuel Transportation Department, head of Warehousing Department, director of Testing Center of Testing Cen

- Bear the overall responsibility for energy management work.
- Implement and urge departments to execute laws, regulations, rules, policies, and guidelines related to energy management.
- Incorporate energy management work into the enterprise's economic and social development plans and annual plans, and organize the preparation and implementation of med-and-long-term special energy management plans and annual energy management plans.
- Encourage and support research on science and technology in energy management.
- Be responsible for the energy management work of the entire enterprise, supervise and guide each department to implement the indicators, and conduct annual assessment.
- Take measures to reduce energy consumption, losses, and emissions, and implement the strategy of combining conservation and development.
- Reasonably adjust the structure, promote the reduction of energy consumption, and eliminate backward production capacity, improving energy utilization efficiency.
- Incorporate energy management into the training system.
- Improve the energy statistical indicator system, improve and standardize energy statistical methods, ensuring the authenticity and integrity of energy statistical data.
- Actively carry out the publicity of energy management knowledge and energy conservation technology training, and support service work such as energy management and energy conservation consultation, design, assessment, testing, auditing, and certification.
- Establish an energy management goal responsibility system and a system for analyzing energy consumption statistics and energy utilization status.

Hoshine Silicon continues to promote the certification work of the energy management system and continuously improves its own energy management level. As of the end of the Reporting Period, subsidiaries Western Hoshine, Jiaxing Hoshine, Shanshan Silicon and Luzhou Hoshine have all obtained relevant certifications for the energy management system such as ISO 50001.



# **Energy Management Measures**

Combined with the current energy consumption model of Hoshine Silicon's industries, we have carried out measures such as optimizing production processes, improving equipment energy efficiency, and adjusting the energy consumption structure, exploring the energy conservation and carbon reduction paths of Hoshine Silicon based on multiple effective measures.

In order to have an in-depth understanding of the energy consumption status of each product, the Company promotes the development of product carbon footprint certification work, aiming to accurately grasp the carbon emission situation, clarify the carbon emission reduction goals and paths, and actively promote the enterprise's transformation towards green and low-carbon, laying a solid foundation for achieving sustainable development goals. As of the end of the Reporting Period, the silicone rubber products of Hoshine Silicon have successfully obtained carbon footprint certification, and the carbon footprint certification work of photovoltaic products is also being actively promoted.

We actively participate in the carbon trading market and efficiently complete the performance tasks through scientific formulation of trading strategies. At the same time, we are committed to promoting the discussion of carbon market policies and the formulation of standards, demonstrating the responsibility of power generation enterprises in addressing climate change and promoting energy transformation. During the Reporting Period, Shanshan Electric Power and Hoshine Thermal Electric, as power generation enterprises, have been respectively incorporated in the list of key greenhouse gas emission units in Xinjiang Autonomous Region and Xinjiang Production and Construction Corps in 2024. Among them, Shanshan Electric Power and Hoshine

Thermal Electric have full payment of carbon emission rights for the year 2023 in 2024. Currently, they are waiting for the carbon emission verification institution assigned by the superior environmental protection competent department to verify the 2024 emission situation of the factories. After that, the payment work will be carried out in an orderly manner. This is in line with the relevant national management regulations.

On the management side, we actively advocate energy conservation behaviors such as turning off lights when not in use in each business division, standardize the turning off of lighting equipment as much as possible without affecting normal production, and regularly conduct general knowledge and compliant operation training related to energy conservation and carbon reduction and clean production. In the actual production process, employees strive to reduce waste and losses caused by "runs, spills, drips, and leaks" and non-standard operations, and improve resource utilization efficiency.



Carbon Footprint Certification Certificate of Silicone Rubber Products

Energy Management Structure at the Business Division Level of Hoshine Silicon

Carbon Emission Reduction Measures	Business Segments	Project Description
	Silicon metal	Automated power distribution: we implemented optimized electric furnace power management system, reducing energy waste through automated power distribution.
	Silicone	Optimization of synthesis process: by introducing high-efficiency catalysts and precisely adjusting the reaction conditions, the conversion rate of a single reaction has been significantly improved; at the same time, through designing the pipeline layout and selecting high-efficiency mixing equipment, we ensure the uniform distribution and full mixing of raw materials, effectively curbing the local overheating phenomenon and significantly reducing the energy loss.
		Waste heat utilization: by installing heat exchangers, we collect the waste heat generated in high-temperature processes such as steam generators, and convert the waste heat into effective thermal energy that can be used in other relatively low-temperature production links, realizing the reuse of thermal energy resources, significantly reducing the overall heating demand in the process, and effectively improving energy use efficiency.
		<b>By-product utilization:</b> we adopt the newly developed technology to convert by-products into high-value-added products, significantly increasing the production capacity of a single set of silicone monomer unit.
Production process optimization Strengthen energy		Recycled use of condensate water: the condensate water generated during the production process is re-used into the system as a cooling medium or for other purposes after appropriate treatment, which not only reduces the demand for freshwater resources but also saves the energy required for heating water resources, effectively improving the utilization efficiency of water resources.
recovery, effectively utilize the waste heat, residual pressure and other energy sources generated during the production process,	Carbon	Waste heat utilization in the calcination workshop: we install a waste heat boiler system at the tail of the flue gas, redirect the reused waste heat to the production links that require a specific temperature for operation, effectively reducing the flue gas emission temperature. After the implementation of the technical transformation, all the steam produced annually by the newly added waste heat boiler is reused in the production system, significantly reducing coal consumption.
and improve energy utilization efficiency	Energy	<b>Technical transformation of low-temperature denitrification:</b> we remove the high-temperature catalyst and replace it with a medium-temperature catalyst, enabling the denitrification system to be put into operation at the initial stage of the unit's startup and accelerating the system's entry into an efficient state.
		Energy conservation in poly-silicon production process: waste heat energy conservation  1. Make full use of the waste heat generated during the production process of the reduction furnace, and adopt the multi-tower coupling technology of the distillation column, which greatly reduces the steam consumption.  2. Convey the waste powder generated during the production process to the trichlorosilane device for the production of chlorosilane, which greatly reduces the silicon consumption.
	Photovoltaic	Energy conservation in monocrystalline silicon and monocrystalline silicon wafer process: energy conservation by changing the thermal field structure and water cycle  1. By improving the structure of the thermal field of the monocrystalline furnace, the power in the crystal pulling process is reduced, thus achieving the goal of reducing power consumption.  2. The pure water used in the slicing process is recycled after passing through a filter press, reducing water consumption.
		Energy conservation in the solar panel process: thermal energy recovery  The compression heat generated by the air compressor is recovered and reused by being supplied to the equipment in the workshop that requires heat, thereby saving energy consumption.
		Energy conservation in the photovoltaic glass process: optimization of the kiln burner We optimize the distribution mechanism of natural gas among the burners, making the melting temperature curve in the kiln more reasonable, thus significantly improving the glass melting quality and reducing the natural gas consumption per unit in the glass production process.

Carbon Emission Reduction Measures	Business Segments	Project Description
		Adding a waste heat boiler: by adding a waste heat boiler, the waste heat of the flue gas is effectively converted into reusable energy, enabling the utilization of a large amount of high-temperature flue gas generated during the production process and improving the economic benefits of the enterprise.
	Silicon metal	Fan transformation: we carry out an integrated transformation of the dust treatment system, focusing on the upgrading of key equipment such as the main environmental protection fan and the dust collector. We implement a modular compartment addition transformation of the dust collector, which significantly improves the system's treatment efficiency. Based on the real-time data of the dust concentration, the operation parameters of the equipment can be dynamically optimized. After the transformation, the operation energy consumption of the system is significantly reduced, the dust emission stably meets the standard, and the operation and maintenance cost is reduced simultaneously, forming a virtuous cycle of coordinated optimization of environmental protection treatment and energy efficiency.
		Addition of a hydraulic turbine: the hydraulic turbine has been commissioned and put into use. Its performance during operation meets expectations. It can drive the fan to meet production needs just under the action of the recycled return water, without the need for an auxiliary motor to operate, achieving cost reduction.
Improvement of equipment energy efficiency Implement energy conservation transformation of equipment to improve equipment energy efficiency and reduce energy waste	Silicone	<b>Equipment technical transformation:</b> through innovative design and optimization of the internal components of the fluidized bed reactor, the methyl chloride gas distributor, and the gas-solid separation cyclone equipment structure of key devices, and by developing a new catalytic system and studying its synergistic effect with the quality of silicon metal, the Silicone R&D Center has successfully increased the production output of methyl chlorosilane and the operation cycle of the device.
		Application of innovative technologies: Our innovative applications include advanced distillation equipment, process technology in chloromethane systems, and energy-efficient machinery for large units of utility systems, collectively delivering notable energy-saving benefits.
		<b>Elimination of old equipment:</b> we eliminate old equipment with high energy consumption and introduce new efficient and energy-conserving equipment. This measure not only significantly reduces energy consumption but also improves production efficiency.
Car	Carbon	<b>Selection of energy-efficient equipment:</b> some high-energy-consuming equipment was used in the production process of the carbon segment. To achieve the energy conservation goal, we comprehensively select equipment with an energy efficiency level at Grade 2 or above. This helps the business division reduce energy consumption, save costs, and reduce carbon emissions.
		Energy conservation optimization of the cold end of the steam turbine: On the basis of the air-cooling system, a peak cooling unit is added to divert steam for cooling during summer. During spring, autumn, winter, or under low-load conditions, the air-cooling fans operate at variable frequency while the peak cooling unit is shut down to increase the unit operations
	Energy	Energy conservation transformation of the vacuum pump: we install a pre-condenser on the vacuum extraction header pipe to pre-cool the moist gas, reduce the volume flow rate of the medium, lower the power of a single pump, and recover the condensed water; we develop an intelligent two-stage triple-cone vacuum system that reduces energy consumption through flow path optimization, while integrating real-time monitoring and early warning functions to achieve synchronous improvement in electricity, water, and coal utilization efficiency.

Carbon Emission Reduction Measures	Business Segments	Project Description
	Energy	Capacity increase transformation of the mill: we replace key worn components and optimize the structural strength; upgrade the rotary separator system, retain the motor and variable frequency control module, and replace core solar panels such as the rotor as a whole to improve the separation efficiency of pulverized coal; reconstruct the casing sealing system, transform the tie rod sealing device and the structure of the manhole door to increase the output.
Improvement of equipment energy efficiency Implement energy conservation transformation of equipment to		Spraying the boiler with new coating: we implement coating reinforcement technical transformation for the problem of the decline in the boiler's thermal efficiency, and use a new type of composite coating to spray the water-cooled wall of the furnace chamber as a whole. By enhancing the radiation heat transfer efficiency in the furnace, the uniformity of the flame temperature field is improved, and the heat loss of the flue gas is effectively reduced. After the transformation, the boiler's thermal efficiency is improved, the coking rate of the heating surface is alleviated simultaneously, the maintenance cycle is extended, and both energy conservation and efficiency improvement as well as the equipment reliability are enhanced.
improve equipment energy efficiency and reduce energy waste		Boiler front warm air heater: we carry out the transformation of the boiler front warm air heater system. By constructing a thermal energy closed-loop system of "condenser-circulating water-warm air heater", we introduce the low-temperature circulating water that is idle in winter into the inlet air duct of the boiler fan. A two-group modular warm air device is innovatively designed to heat the ambient air to an appropriate temperature, providing an efficient solution for the utilization of the waste heat from the cold source of power plants in severely cold regions.
		Performance improvement of the steam-driven feed water pump: we optimize the flow channel structure, and improve the flow capacity by widening the flow-through cross-section and enhancing the surface finish; innovate the design of the impeller assembly, and adopt streamlined blades and wear-resistant coating technology to improve hydraulic efficiency and cavitation resistance; reconstruct the sealing system, and select high-temperature and high-pressure sealing materials and precisely control the clearance between the moving and stationary parts, enabling the two units after the transformation to completely get rid of the dependence on the electric pump.
Adjustment of the energy consumption structure		Selection of new energy lighting equipment: we successively install solar streetlamps within and around the factory area to save electricity.
we continuously optimize the energy structure, increase the proportion of clean energy use, reduce the consumption of traditional energy sources,	Carbon	Replacement of furnace gas used for gas generator with natural gas: we have eliminated the double-stage gas generator, and used a new natural gas transportation and decompression system, gradually replacing the original gas combustion system with a natural gas combustion system, and significantly improving energy utilization efficiency.
and effectively reduce the energy consumption during the production process.	Energy	Construction of photovoltaic project: photovoltaic power generation project in Shanshan County, Turpan City To ensure the stable supply and efficient utilization of energy, Shanshan Electric Power plans to invest in and construct a photovoltaic power generation project in Shanshan County, Turpan City. It is expected to adopt various models of energy storage systems to improve energy utilization efficiency and reduce losses.

# **Environmental Management**

Hoshine Silicon incorporates environmental protection and sustainable development into its corporate development strategy, continuously enhancing environmental management capabilities. The Company practices green operations, implements chemicals management, and prioritizes biodiversity conservation work, striving to build an eco-friendly enterprise.

# **Environmental Compliance Management**

We strictly comply with national environmental laws and regulations, including the Environmental Protection Law of the People's Republic of China, and have established standards and specifications such as the Environmental Protection Management System, the Environmental Protection Facility Operation System, and the Production Base Environmental Pollution Prevention and Control Responsibility System to ensure environment protection compliance throughout project construction and manufacturing processes.

# **Environmental Management System**

To ensure the efficient operation of the environmental management system, Hoshine Silicon has established a topdown environmental management structure, decomposing environmental management tasks item by item, providing strong support for continuously promoting the Company's environmental management. We have formulated an environmental management structure in which the general manager of the business division reports directly to the Company's Board of Directors, clarifying the environmental management responsibilities and authorities at each level, gradually strengthening the implementation and supervision of environmental management responsibilities, and further improving the enterprise's environmental governance level and environmental performance.



Hoshine Silicon's Environmental Management Structure

# **Environmental Risk Management**

In terms of environmental risk management, Hoshine Silicon strictly follows the requirements of the Measures for Emergency Management of Environmental Emergencies, the Interim Measures for the Administration of the Filing of Emergency Plans for Environmental Emergencies in Enterprises and Public Institutions (Trial) and other regulations, and regularly conducts investigations for hidden dangers of sudden environmental risks. At the same time, we organize each business division to formulate the Emergency Response Plan for Environmental Emergencies and file it, clarifying the emergency response procedures and handling measures, which effectively enhances the ability and level of the enterprise's internal response to environmental risks. During the Reporting Period, Hoshine Silicon did not have any major environmental pollution incidents, environmental administrative penalties or accidents such as excessive pollutant discharge or illegal discharge.

At the same time, through a comprehensive and meticulous environmental risk assessment process, we systematically identify various potential environmental risk points. Relying on professional environmental audit methods, we conduct in-depth verification and confirmation of the actual environmental risk situations of each business division to ensure the accuracy of risk identification.



# **Environmental Risk Assessment Project**

In 2024. Western Silicon Materials carried out a comprehensive environmental risk assessment work through a qualified third-party professional institution. This assessment reviewed the environmental risks around the Company, the environmental risk substances involved in the operation stage, the existing environmental risk prevention and control system, and the configuration of emergency measures. It carried out scenario analysis focusing on environmental emergencies and their harmful consequences, and conducted a gap analysis of the existing prevention and control system.

The final conclusion of the environmental risk assessment is that the existing environmental protection measures are feasible, the potential environmental risks are controllable, and the relevant emergency response work can be effectively carried out in case of environmental emergencies.

# **Environmental Compliance Audit**

Hoshine Silicon regularly conducts internal environmental audits and external reviews to supervise the operation of the environmental management system and the performance of environmental management work in each business division, and to improve the Company's environmental management level in a targeted manner. In terms of internal audits, we conduct environmental impact testing at the already commissioned production bases every year to ensure the compliance of environmental management. The Company also conducts environmental impact assessments on new construction projects in accordance with national environmental protection requirements, ensuring the environment protection compliance of new projects.

In addition, the Company regularly accepts daily supervisory comprehensive inspections, environmental management system inspections, special inspections of pollutant discharge permits, special inspections of hazardous waste, etc. by the ecological environment management department at the location of the enterprise, ensuring the effectiveness of the execution of environmental management policies and the effectiveness of risk management measures.



#### **Environmental Audit Project**



Environmental audits ensure that the Company can promptly discover and deal with potential environmental problems, effectively guaranteeing the environment protection compliance of the production process. This not only enhances our own ability to respond to environmental risks but also demonstrates the Company's sense of responsibility and commitment in environmental protection.

In 2024, both Shanshan Silicon and Xinjiang Silicon Industry New Materials carried out environmental protection audit work. Through monthly, quarterly, and annual audits, they continuously tracked and monitored the performance of the entire factory in terms of the generation, storage, and disposal of wastewater, exhaust gas, and waste, as well as the operation of environmental protection facilities, and other dimensions. According to the relevant requirements of the environmental impact approval and pollutant discharge permit report, they formulated an annual self-monitoring plan, and filled in the monitoring data in real-time on the national platform for archiving, monitoring, and reporting.

# **Environmental System Certification**

Hoshine Silicon continuously promotes the certification work of the environmental management system and plans to continuously extend the ISO 14001 certification to all production-type affiliated companies of the Company. At the same time, the Company also continuously conducts the certification work of clean production and green factories. As of the end of the Reporting Period, multiple subsidiaries of Hoshine Silicon had passed the ISO 14001 environmental management system certification.





Certification Situation of the Environmental Management System of Hoshine Silicon

# **Environmental Compliance Training**

Hoshine Silicon is committed to integrating the promotion of green environmental protection awareness into different operation scenarios such as offices and factory areas. It adopts various methods such as regularly conducting training on environmental protection knowledge and typical cases to promote the concept of sustainable development, so as to effectively enhance the environmental risk awareness and response skills of our employees.



- The full-cycle management specifications for hazardous waste cover key technical requirements such as storage standards and the
- A deep analysis of the legal system for the prevention and control of solid waste pollution systematically sorts out the core clauses of the new solid waste laws, the regulations on the management of
- In the practice of environmental risk prevention and control, we strengthen practical combat capabilities through the analysis of typical cases and simulated emergency handling drills. At the same time, we publicize the joint law enforcement mechanism for environmental violations and crimes related to hazardous waste, ensuring that managers accurately master the red lines of

• We strictly implement the requirements of national environmental protection policies and carry out training for all employees focusing on the interpretation of regulations and basic capacity building. By systematically explaining the latest environmental protection regulations, standards, and key points of practical operations, we focus on strengthening employees' ability to execute daily operation specifications and emergency handling. We transform environmental protection awareness into implementable codes of conduct and continuously consolidate the talent foundation for green development

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# **Green Office**

For office areas that are not involved in production, Hoshine Silicon also formulates relevant environmental management rules and regulations, including but not limited to the Regulations on the Use of Air Conditioners. We continuously conduct inspections of office areas, and issue management notices on energy conservation and consumption reduction irregularly for the identified phenomena of resource waste, deepening employees' concept of green office practices.

# **Chemicals Management**

Hoshine Silicon has formulated chemicals management systems such as the List of Chemical Categories and Management System and the Hazardous Chemicals Management System, establishing a special Safe Production Committee to manage hazardous chemicals. Employees are strictly required to operate chemicals in a stable, orderly, and accurate manner, ensuring that every step of the operation complies with safety specifications.





# **Chemicals Supervision**

The Company strictly complies with the relevant regulatory requirements of national chemicals management, and comprehensively implements the supervision work of chemicals, including hazardous chemicals. We have established a verification and registration management system for the entry and exit of hazardous chemicals, and implemented strict supervision and management of the entire life cycle of chemicals, including procurement, storage, use, and discarding, ensuring the standardization and refinement of chemicals management work.

# Filing of Hazardous Chemicals

- When the using department needs to use hazardous chemicals, it must first submit a paper application to the local police station
- After obtaining approval, the approved application report needs to be uploaded to the precursor chemicals supervision system on the chemicals management platform

#### Procurement and Registration of Hazardous Chemicals

- The procurement department signs a formal procurement contract with the distributors based on the approval information on the chemicals management platform, followed by procurement of hazardous chemicals
- After the goods arrive, the using department needs to promptly enter detailed information such as the usage quantity, specifications, and models of hazardous chemicals on the chemicals management platform, ensuring the accuracy and traceability of the data

#### Release from Warehouse and Storage of Hazardous Chemicals

- According to the actual needs, the using department needs to go through the release procedures from the warehouse in the precursor chemicals supervision system of the chemicals management platform
- All hazardous chemicals are strictly stored in special warehouses for hazardous chemicals, and the whole process is monitored and managed through the chemicals management platform, ensuring their safe storage and compliant use

Hoshine Silicon's Hazardous Chemicals Management Process

# **Emergency Handling Mechanism for Chemicals**

For the chemicals involved in the workplace, we clearly inform employees about the chemicals they may come into contact with and the existing hazards, and post the chemical components and relevant test data at the work site. The Company has formulated chemicals-related emergency handling mechanisms such as the Special Emergency Response Plan for Hazardous Chemicals Leakage Accidents.

We follow the principle of "people-oriented, safety first" and establish a special accident emergency rescue command headquarters, ensuring that in case of emergencies such as chemical leakage, the response and handling work can be carried out quickly, orderly, and efficiently. When a hazardous chemical leakage accident occurs, the Company immediately reports it to the local emergency management bureau, promptly activates the emergency supplies warehouse, and

handles the accident site if appropriate after wearing the equipment in accordance with the rules and regulations, minimizing the casualties and property losses caused by the accident disaster.

Hoshine Silicon adheres to the principle of "prevention dominant, drills first" and regularly conducts emergency drills related to chemical safety, aiming to improve employees' emergency handling ability for chemical-related emergencies. We attach great importance to cultivating employees' emergency response ability. By simulating emergency situations such as chemical leakage in real scenarios, we train employees to respond quickly and accurately and effectively control the development of the situation, maximizing the safety of personnel and the environment.

# **Chemical Emergency Drills**

The Company attaches great importance to the safety management of hazardous chemicals, and each production base actively organizes and conducts multiple emergency drill activities. Through this series of carefully designed practical drills, we strive to enable every employee to master solid chemical safety knowledge, strengthen their emergency response ability and practical operation skills in dealing with hazardous chemical leakage accidents, and comprehensively improve our emergency response ability to hazardous chemical leakage accidents.

### Drill on the Leakage of the Flange Connection at the Outlet of the Monomer Tank

• In June 2024, Shanshan Silicon organized a company-level emergency drill. This drill simulated the leakage accident scenario of the flange connection at the outlet of the monomer tank leaking. It was assumed that the shut-off valve of the storage tank malfunctioned, and a leakage occurred in front of the valve of the outlet pipeline of the storage tank during the handling by the instrument maintenance workers. Since the workers did not wear protective face shields, the material splashed onto their faces, causing burns. The drill focused on key links such as personnel rescue, warning and evacuation, fire prevention, plugging and material transfer operations, site cleaning, and environmental monitoring, comprehensively testing the Company's emergency handling ability for leakage accidents.

# Drill on the Leakage Caused by the Falling Off of the Methanol Crane Pipe at the Loading and Unloading Station in the Tank Area

•In September 2024, Shanshan Silicon organized a company-level emergency drill. This drill simulated the accident scenario of the methanol fluid loading arm falling off and leaking at the loading and unloading station in the tank area. In the set scenario, the methanol fluid loading arm fell off when the methanol tank truck was unloading. The escort of the methanol tank truck inhaled a large amount of methanol and fainted after closing the emergency shut-off valve. At the same time, due to static electricity, a fire was ignited. The drill focused on key links such as personnel rescue, warning and evacuation, firefighting, site cleaning, and environmental monitoring, further improving the Company's special emergency handling ability for methanol leakage accidents.





Hoshine Silicon Emergency Drill Site

# HOSHINE

# **Training on Chemical Safety**

The Company regularly provides multi-dimensional training, both online and offline, to employees involved in the use of chemicals, to enhance their understanding of the properties, characteristics, and potential risks of chemicals. This ensures that every employee can dispose of chemicals accurately and safely, jointly building a solid defense line for the ecological and environmental safety of the enterprise.

In 2024, Hoshine Silicon carried out several systematic chemical knowledge training sessions, covering managers and front-line operating employees. The content included the basic properties and characteristic classifications of chemicals, as well as the storage management requirements, safety precautions for use, and emergency handling measures in case of emergencies.

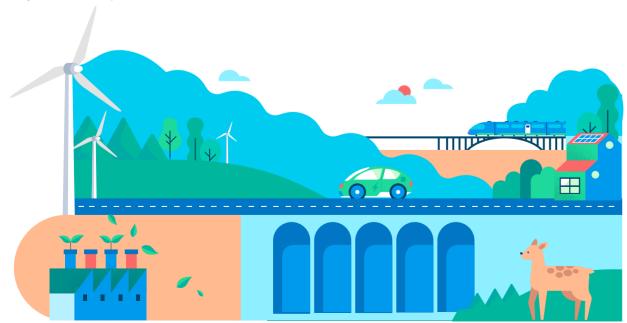
# **Ecosystem and Biodiversity Protection**

We deeply understand that biodiversity, as the foundation of life on earth, is also an important guarantee for the sustainable development of enterprises. Hoshine Silicon strictly complies with relevant laws, regulations, and policies such as the Forest Law of the People's Republic of China, the Regulations for the Implementation of the Forest Law of the People's Republic of China, the Regulations on Conversion of Farmland to Forests, the Measures for the Administration of Forest Cutting and Regeneration, and the Water Law of the People's Republic of China to carry out ecological protection work.

Hoshine Silicon always places ecological protection at the highest level of its business operations. All its activities, products, and services have not had a significant impact on biodiversity, and all office spaces, business premises, and industrial plants are not located within natural protection areas or in areas rich in biodiversity outside the protection areas. It neither damages the original vegetation and ecosystem, nor uses protected animals to conduct animal

experiments or uses protected plants and animals as raw materials in the production process.

The Company continuously pays attention to the impact of its own operations on biodiversity, and focuses on the protection and promotion of biodiversity. During the project construction and operation process, it makes every effort to avoid any damage to the natural ecosystem and actively carries out biodiversity protection and restoration work to create a suitable habitat environment for wild animals and plants. In addition, we continuously strengthen environmental awareness education for employees, encouraging full participation in ecological protection practices. Upholding the philosophy of respecting nature and protecting biodiversity, we have embedded ecological protection as a core component of our corporate culture. This commitment drives the Company's steady progress along a green, sustainable, and biodiversity-respecting development path.



# **Pollutant Discharge**

As a leading integrated enterprise in the silicon-based new material industry, the industry chain of Hoshine Silicon runs through multiple business segments such as silicon metal, silicone, carbon, photovoltaic, and energy, covering the entire process from ore mining, smelting and processing to the manufacturing of high-end materials. Due to significant differences in the production processes and raw material usage of each business segment, the types of pollutants generated also vary.

Combining its own industrial operation situation, Hoshine Silicon customizes and improves the discharge of wastewater, exhaust gas, and solid waste in accordance with laws and regulations such as the Water Pollution Prevention and Control Law of the People's Republic of China, the Air Pollution Prevention and Control Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste, and norms such as the Law of the People's Republic of China on the Promotion of Clean Production. The Company promotes clean production and tries to reduce or eliminate the impact of its own operations on the environment as much as possible.

# **Waste Disposal**

The Company practices the concept of "source reduction and resource recycling", formulates internal systems such as the *Hazardous Waste Management System*, the *Waste Management System*, and the *Supervision and Management Measures and System for Hazardous Waste*, and implements the compliant collection, classification, storage, transfer, and disposal of different types of waste.



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The non-hazardous waste generated during the production and operation of the silicon metal mainly includes desulfurized gypsum, silicon slag, microsilica powder, and used refractory bricks

Harmless treatment: the desulfurized gypsum and silicon slag are respectively stored in independently divided gypsum warehouses and storage yards. Some silicon slag is screened and returned to the furnace for use. The desulfurized gypsum and the remaining silicon slag are entrusted to a qualified third-party unit for unified disposal

Reduction: after being crushed, the used refractory bricks are mixed with refractory castables and used for repairing the lining of high-temperature industrial furnaces

**Recycling:** as one of the important by-products in the production process, the fine silicon metal powder undergoes strict quality control screening and processing to meet the market sales standards, realizing the effective utilization of resources and value maximization



The non-hazardous waste generated during the production and operation of the silicone mainly includes miscellaneous salts

Harmless treatment: after various types of non-hazardous waste are classified and collected, they are stored in warehouses that comply with safety regulations. Regularly, recyclers with corresponding disposal qualifications are entrusted to clean up and dispose of general solid waste



The non-hazardous waste generated during the operation of the energy business mainly includes desulfurized ash and fly ash

Harmless storage: conventional hazardous waste is stored in solid waste tanks and kept in warehouses with functions of preventing wind dispersion, fire, and spillage. Regularly, recyclers with corresponding disposal qualifications are entrusted to clean up and dispose of general solid waste



Segment

The non-hazardous waste generated during the carbon production and operation mainly includes waste tar, coal cinder, and used refractory bricks

**Harmless treatment:** the coal cinder is transported to the responsible company for treatment and is not stored in the factory; the used refractory bricks (waste materials removed during the repair of the furnace body in the calcination, roasting, and graphitization processes) are promptly cleaned up and recycled by a qualified third party

**Reduction:** the waste tar from coal tar and asphalt tar is temporarily stored in an underground tar tank, and then reused as a raw material in the kneading process of the molding workshop; metallurgical coke particles (used as thermal insulation covering materials in the roasting and graphitization workshops) are temporarily stored in a closed storage warehouse for repeated use; the waste oil is reused as a release agent in the pressing process of the molding workshop; the dust collected by the bag filter is uniformly stored in the recycled material warehouse and reused as a production raw material in the batching process of the molding workshop



The non-hazardous waste generated during the photovoltaic production and operation mainly includes silica slag, various packaging materials, cartons, and other materials

Harmless treatment: a General Solid Waste Management Ledger is set up. After various types of non-hazardous waste are classified and collected, they are stored in warehouses with functions of preventing wind dispersion, fire, and spillage. Regularly, recyclers with corresponding disposal qualifications are entrusted to clean up and dispose of general solid waste

Measures for Handling Non-hazardous Waste of Hoshine Silicon in 2024

# Management of Hazardous Waste

All business divisions of Hoshine Silicon are equipped with hazardous waste temporary storage sites that have passed the acceptance of environmental protection facilities as required. The hazardous waste is temporarily stored in the hazardous waste temporary storage room. The Company fills in the hazardous waste generation and disposal ledger, the hazardous waste management plan, the hazardous waste transfer sheet, etc. according to national regulations, and entrusts professional institutions with collection and disposal qualifications to handle the hazardous waste.

In accordance with the regulations of the operation location and the detailed requirements of environmental management systems such as ISO 14001 for hazardous waste, we formulate an annual hazardous waste generation plan, plan the generation of waste in each process and procedure of the production link, and clarify specific supervision measures.

# Compliant Disposal by a Third Party

- Silicon metal business: the hazardous waste generated during the production and operation mainly includes waste mineral oil, waste empty barrels, water glycol, waste lead-acid batteries, waste chemical reagents, and empty waste reagent bottles. All hazardous waste is safely and standardly disposed of by hazardous waste disposal units with corresponding qualifications in strict accordance with the requirements of relevant laws and regulations
- Carbon business: the non-hazardous waste generated during the production and operation mainly includes waste oil barrels, which are temporarily stored and managed relying on the hazardous waste warehouse
- Photovoltaic business: the hazardous waste generated during the production and operation mainly includes discarded packaging materials and containers, which contain or are contaminated with toxic and infectious hazardous waste. All hazardous waste is classified and collected in strict accordance with their physical and chemical properties, packed in packaging bags with special color markings, and then sent to the hazardous waste warehouse for centralized storage. Finally, they are handed over to the recyclers with hazardous waste disposal qualifications for disposal
- Energy business: the hazardous waste generated during the production and operation mainly includes waste mineral oil, waste catalysts, and discarded packaging that is contaminated with or contains waste mineral oil such as waste lubricating oil. We rely on standard hazardous waste warehouses for temporary storage and management, and sign contracts with qualified hazardous waste disposal units to dispose of the hazardous waste in accordance with the hazardous waste management plan

Measures for Handling Hazardous Waste of Hoshine Silicon in 2024

#### Resource Utilization

- Silicone business: the hazardous waste generated during the production and operation mainly includes dry waste catalyst, high-boiling residue slurry, wastewater treatment sludge, monomer conversion waste oil, monomer conversion residual liquid, activated carbon filter residue, waste sulfuric acid, and dilute hydrochloric acid recovered from the incineration de-
- For the waste sulfuric acid and the dilute hydrochloric acid recovered from the incineration device, the Company specially establishes a magnesium sulfate device and a hydrochloric acid analysis device to realize the recycling of these wastes
- For the high-boiling bottom residue generated during the production process, a technology for extracting copper from the bottom residue is developed. Copper element is extracted from the bottom residue, realizing the recycling of resources, and reducing the discharge amount of hazardous waste

#### **Transformation of Waste Treatment** Equipment

• Silicone business: we upgrade the equipment of the residue treatment facility of the incineration device and add density enhancement facilities to effectively improve the density of the residue, reduce the volume, and improve the subsequent treatment efficiency

Hoshine Silicon vigorously promotes the construction of smart factories, and constantly improve the Hazardous Waste Management System (HWS) of Hoshine Silicon, helping the factory manage hazardous waste in a compliant and efficient manner.

# Strengthening Compliance Management

Ensure that the whole process of the generation, storage, transfer, and disposal of hazardous waste complies with the requirements of national laws and regulations. Automatically inspect relevant permits and reports through the platform to avoid legal risks and improve the Company's compliance level.



# Refined Tracking and Monitoring

Assign unique identifiers to hazardous waste to achieve full-chain tracking from generation to final disposal, monitor the waste status and storage environment in real time, and prevent leakage and illegal disposal incidents.

Hoshine Silicon's Hazardous Waste Management System (HWS) Platform

# **Wastewater Discharge Reduction**

Wastewater discharged in our production and operation mainly includes the wastewater from equipment cleaning, pipeline cleaning, and domestic sewage within the factory area. The main pollutants are Chemical Oxygen Demand (COD), ammonia nitrogen, and so on. Hoshine Silicon has formulated internal systems such as the *Wastewater Management System* and the *Wastewater Discharge Management System*, continuously optimizing its own sewage treatment capacity, and strictly controlling the effect of wastewater treatment and the concentration of pollutant discharge.

Hoshine Silicon continues to promote the comprehensive utilization project of wastewater, and improves the recycling

rate of industrial wastewater, minimizing the external discharge of wastewater. During the Reporting Period, the Company's compliance rate of wastewater pollutant discharge reached 100%.

The Company's compliance rate of wastewater pollutant discharge reached

100%



#### Zero Wastewater Discharge

All production wastewater in the industrial silicon and carbon business has been recycled, mainly including the water for raw silica material washing, equipment cooling water, and desulfurization water. After being treated by the wastewater treatment system, the production wastewater is reused in the links such as silica washing, cooling circulating water, and sprinkling for dust suppression within the factory area

In the flue gas desulfurization treatment of the energy business, both wet desulfurization and dry desulfurization processes are adopted. For wet desulfurization, we select a high-efficiency desulfurizer, and fully use the wastewater to conduct flue gas treatment. After treatment, the wastewater is used for humidifying the fly ash in the ash silo and the ash storage yard. In dry desulfurization, the treated industrial wastewater is reused for the preparation of hydrated lime in the desulfurization system. Both processes have achieved zero wastewater discharge



#### Wastewater Monitoring

The silicone business installs an automatic monitoring system to monitor various pollutant indicators in the wastewater in real time and accurately, and conducts monthly, quarterly, and semi-annual environmental monitoring work to grasp the trend of pollutant discharge

To ensure the accuracy and reliability of the monitoring data, the Company regularly conducts manual monitoring work to calibrate and supplement the online monitoring equipment

### Wastewater Recycling

In the photovoltaic business, the reverse osmosis water generated during the production process is used for dilution and spraying in the scrubbing tower, and the steam condensate water from winter heating is reused for pure water preparation. This effectively reduces wastewater discharge and improves the utilization rate of resources

### Wastewater Management Measures of Hoshine Silicon in 2024

# **Exhaust Gas Emission Reduction**

Our production exhaust gas mainly comes from production, thermal power supply and other links. The main pollutants mainly include sulfur dioxide, nitrogen oxides, inhalable particulate matter, Volatile Organic Compounds (VOCs), malodorous gases, and other pollutants. Hoshine Silicon has formulated exhaust gas management systems covering all operation points, including the *Environmental Protection Management System*, the *Atmospheric Management System*, and the *Exhaust Gas Emission Management System*, to ensure that all exhaust gases are fully treated and emitted in compliance with regulations, and the emission concentration meets national standards.

In order to reduce the emission of toxic exhaust gases during the operation process, according to the properties of different exhaust gas pollutants, we select the corresponding best feasible solutions to carry out exhaust gas treatment work, continuously increase investment in environmental protection, optimize the environmental protection treatment process, and add high-efficiency terminal treatment devices. On the basis of meeting the standard emission requirements, we further reduce the concentration of pollutants in the exhaust gas.

#### **Silicon Metal Business Segment**



• Exhaust gas treatment of submerged arc furnace: the flue gas produced by the mineral heat furnace, the flue gas produced by the process of discharging the flue gas collected by the gas collector, unified after the waste heat recovery device, into the bag filter processing, the processed flue gas sent to the denitrification and desulfurization device to continue to deal with, to ensure that the waste gas in the standard discharge

#### **Energy Business Segment**



 Ultra-low emission of dust exhaust gas: by using filter bags with higher toughness, better high-temperature resistance, and better air permeability, the dust emission of the waste gas treatment unit can be extremely low, and the concentration of fume and dust emissions can be reduced

#### **Photovoltaic Business Segment**



- Ammonia recovery from tail gas of the dry process: based on the four-stage spray absorption process for heat exchange and convection, ammonia water is successfully produced and reused, reducing the ammonia concentration in the tail gas emissions
- Innovative treatment of acidic exhaust gas: the usual solution for treating acidic exhaust gas requires the use of flake sodium hydroxide to prepare an alkaline solution. We use the waste alkali solution that was originally scheduled to be discharged during the PV cell production process for neutralization to absorb components such as hydrofluoric acid and hydrochloric acid in the exhaust gas

# Silicone Business Segment



• Cascading treatment of exhaust gas: the production exhaust gas passes through the circulating water and refrigerant condensation recovery system for recovery in sequence, and then is sent to the incineration device for incineration treatment. The incinerated flue gas needs to go through multiple purification processes such as SNCR denitrification, semi-quench tower cooling, bag filter dust removal, water washing, alkali washing, and activated carbon adsorption in sequence to ensure that its emission indicators strictly meet the special emission limit requirements specified in the Emission Standard of Pollutants for Petrochemical Industry (GB 31571-2015)

#### **Carbon Business Segment**



- Waste heat recovery: the calcining furnace uses the gas and natural gas from the gas generator as the initial fuel. The flue gas generated in the calcination process is cooled down by a waste heat boiler and then sent to the power plant for incineration through pipelines
- Double exhaust gas treatment: the roasting furnace uses the water atomization spray treatment method and the electrostatic tar precipitators to carry out secondary treatment of the asphalt smoke and SO2 exhaust gas. Ningxin Carbon's calcination furnaces, roasting furnaces, and graphitization furnaces channel all processed emissions (after dust removal and temperature reduction) to power plants for incineration via pipeline networks
- Continuous exhaust gas monitoring: both the calcining furnace and the roasting furnace are equipped with continuous online monitoring equipment to strictly monitor the emissions of particulate matters, nitrogen oxides, and sulfur dioxide. We entrust a professional unit to conduct quarterly testing in accordance with the requirements of the pollutant discharge permit, and all indicators are satisfactory

Exhaust Gas Management Measures of Hoshine Silicon in 2024

# **Resource Usage**

Hoshine Silicon actively explores effective ways to reduce resource utilization, scientifically and rationally plans and uses precious resources such as water resources and packaging materials, and contributes to the construction of a resourceconserving and environment-friendly society.

# **Usage of Water Resources**

Hoshine Silicon strictly adheres to laws and regulations such as the Water Law of the People's Republic of China, the Law of the People's Republic of China on Water and Soil Conservation, the Water Pollution Prevention and Control Law of the People's Republic of China, and the Measures for the Implementation of the Water Drawing Permit System, and formulates targeted water resource management guidelines, including the Enterprise Energy Management System. We attach great importance to and focus on optimizing water resource management throughout the entire value chain, strengthening control over the water use process, applying innovative equipment, and promoting awareness of water conservation, etc., to systematically improve the efficiency of the Company's water resources management.

Our types of water resources include tap water, river water, and reclaimed water, and the usage scenarios cover aspects such as product addition, process application, production assistance, cleaning, reclaimed water utilization in the production process, as well as daily life. At the water drawing end, we actively increase the utilization rate of reclaimed water; at the water use end. we are committed to reducing the water consumption of existing equipment through a series of technical transformations, and continuously improving the Company's water-conserving capabilities.



Hydraulic turbine transformation project: the hydraulic turbine has been transformed. Compared with the same period last year, the transformed hydraulic turbine has reduced the operation time of the cooling tower fan. At the same time, the planned electric fan has been replaced with a hydraulic turbine, significantly reducing energy consumption.

Circulating water system: the system consists of the water for the electric furnace body, the copper tiles of the electric furnace, the taper sleeve, and the short circuit network, as well as the cooling water for the transformer oil cooler. During the entire cooling process, an indirect cooling method is adopted to achieve the recycling of

Plan for improvement of reclaimed water utilization rate: Central Hoshine has formulated a "one enterprise, one strategy" sewage treatment and recycling plan, analyzed the water use scenarios, and formulated a plan to increase the utilization rate of reclaimed water, ensuring compliant wastewater discharge.

Water Resource Management Measures of Hoshine Silicon in 2024

# **Reduction of Packaging Materials**

- · Central Hoshine actively takes reduction and recyclable measures during the production and management of batteries. Optimizing the packaging quantity of PV cell increases the capacity of a single package, saving packaging
- Shanshan Silicon has improved the graphite electrode packaging by removing the wooden baffles at both ends of the graphite electrode and using reusable nylon cable ties for fixation.

#### Recycling of Packaging Materials

- Western Hoshine replaces the original single-use cartons with steel barrels to transport raw rubber, reducing the daily average carton consumption.
- Western Hoshine reuses old ton barrels, aiming to reduce resource consumption during the operation process.

Packaging Material Management Measures of Hoshine Silicon in 2024

# **Packaging Material** Management

Hoshine Silicon continuously strengthens the sustainable management of packaging materials. We strictly abide by relevant laws and regulations in the Company's operation places, continuously promote the lightweighting and recycling of packaging materials, and are committed to reducing the environmental impact of packaging materials.

The Company continuously optimizes the use of packaging materials. On the one hand, we implement vertical integration of the industry chain within the park, concentrating raw material processing, production and processing, and finished product packaging in one area for centralized management. On the other hand, we are committed to improving the recycling rate of packaging materials, recycling and reusing product outer packaging to reduce material waste.





# Social Part 3

# **Excellent Hoshine, Scaling New Heights**

Hoshine Silicon adheres to the development concept of "seeking for survival with quality, promoting development through technology, and taking customers as foundation" to continuously pursues excellent product quality and stable product performance and accelerates the application and transformation of scientific and technological achievements, thus continuously improving the customer experience. At the same time, we are well aware that the innovation ability of employees is the key to promoting the rapid development of the industry. The Company adheres to the people-oriented strategy and gives back to society with practical actions.

Quality Management 50

Customer Experience 61

Supply Chain Security 64

Caring for Employees 67

Community Co-construction 73

UN Sustainable Development Goals Corresponding to This Chapter







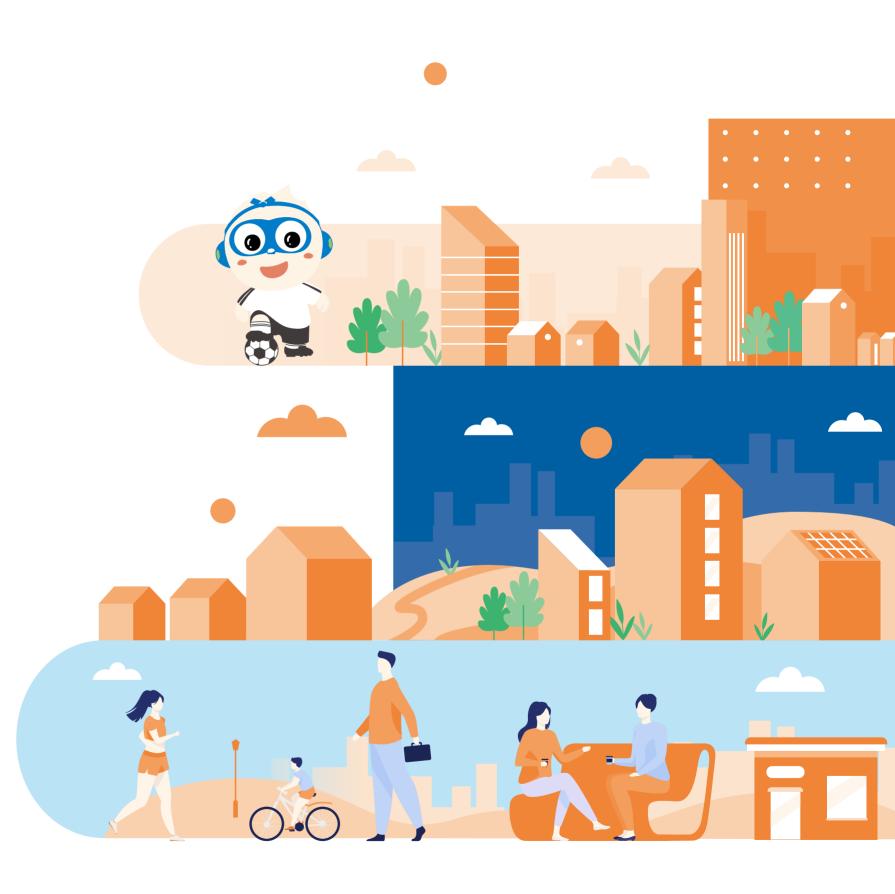












# **Quality Management**

High-quality product quality is the cornerstone of the healthy development of an enterprise. Hoshine Silicon adheres to the guidance of science and technology and innovation-driven development. The Company continuously explores new technological paths and management models, focuses on innovation, and strives for quality improvement, contributing great strength to promoting industrial innovation and upgrading and achieving sustainable high-quality development.

# **Quality Management and Control**

As one of the enterprises with the most complete business chain and the largest production scale in China's silicon-based new material industry, we mainly manufacturer two categories of products: silicon metal and silicone, with a wide range of application fields. We attach great importance to product quality and are committed to implementing strict and comprehensive control over the product quality at every link to provide safe and stable products.

# **Construction of Quality Management System**

Hoshine Silicon strictly complies with applicable quality and safety laws, regulations, and industry standards such as the Law of the People's Republic of China on Product Quality. According to the characteristics of different products, the Company formulates management and supervision systems and procedures such as the Product Quality Management System, the Inspection Management System for Raw Materials, Auxiliary Materials and Products, and the Unqualified Product Control Procedure to meet various industrial quality standards of the Company.

The Company strictly controls product quality, sets quality goals aimed Handling rate of user at achieving "100% qualified rate of products leaving the factory", "0 occurrence of quality and safety accidents", and "100% handling rate of user complaints", <sup>4</sup>and links these goals with the performance of relevant responsible persons to effectively ensure product quality.

# Company Quality Targets

Qualified rate of products leaving the factory

and safety accidents

complaints 100%



Occurrence of quality

We have established a complete quality management system and actively implemented the ISO 9001 quality management system to reduce the potential risks of product quality problems and effectively safeguard the rights and interests of customers. As of the end of the Reporting Period, among the Hoshine Silicon's 12 subsidiaries in various business segments, 46% have obtained the ISO 9001 quality management system certification.

# Quality Information Management System (LIMS) Empowers Quality Management Work

The quality information management system (LIMS) of Hoshine Silicon integrates various quality testing data during the production process and realizes full-process quality monitoring from raw materials to finished products. It can promptly detect quality problems through data analysis and assist in root cause analysis to continuously improve the production process.

At the same time, LIMS standardizes the quality management process of the factory, and establishes a quality traceability system, enabling quick location of the defective batches and sources. As of the end of the Reporting Period, this system has been widely applied in business segments such as silicone, silicon metal, and energy.



Hoshine Silicon's Quality Information Management System

# Full-process Product Quality Management

Hoshine Silicon continuously improves the construction of the quality management system, conducts full-process quality control from raw material procurement, production and processing, and finished product acceptance to product sales, etc., thus ensuring the effective implementation of quality management and control.

	Silicon Metal Segment <sup>5</sup>	Silicone Segment <sup>6</sup>	Carbon Segment <sup>7</sup>	Photovoltaic Segment <sup>8</sup>
Management system	Silicon Metal Product Customer Complaint Management System	<ul> <li>Quality Management System for Silicone Sealant Project</li> <li>Accident Management Regulations, etc.</li> </ul>	<ul> <li>Quality Management and Control of Incoming Raw Materials</li> <li>Control over the Execution Standards of the Production Process Technology in the Production Workshop, etc.</li> </ul>	<ul> <li>Unqualified Product Control Procedure</li> <li>Regulations on Incoming Inspection Management</li> <li>Management Specification for Abnormal Reliability of Solar panel Products, etc.</li> </ul>
Management Measures for the Raw Material Procurement Link	After all raw materials enter the factory, dedicated personnel will take samples and send them to the quality inspection center for laboratory testing, preventing unqualified raw materials from being put into the production line     The particle size of raw materials will be analyzed to control the particle size distribution ensure uniform mixing, avoiding the influence of too coarse or too fine raw materials on the reaction in the furnace	All raw materials entering the production line will be strictly screened and inspected to evaluate the quality indicators (such as purity and impurity content) of each batch of raw materials to ensure that they meet the production requirements	When the materials enter the factory, samples will be taken and tested for each vehicle to prevent the mixing of unqualified raw materials.     For the qualified raw materials, they must be fully covered for stacking to prevent impurities from entering and affecting the usage effect     Before use, the laboratory personnel should be notified to take samples for testing. Only after the main physical and chemical indicators are qualified can the raw materials be put into production	• Unannounced inspections of suppliers will be conducted to physically inspect their production or operation sites to ensure the continuous compliance and quality reliability of suppliers
Management Measures for the Production and Processing Links	During the smelting process, monitor certain process parameters to ensure appropriate temperature and stable operation of graphite electrodes and other equipment	More advanced separation and purification technologies are used to improve the monomer synthesis efficiency and product purity     An automated control system is introduced to enhance operation accuracy and consistency	During production, the implementation of various specified process parameters is tracked, including testing the product appearance, size, and usage indicators in the early stage and analyzing them, checking the internal structure, taking samples from each part, calculating the bulk density, and checking the homogeneity of each part of the product, ensuring product quality     Irregular process inspections are conducted on the charging temperature, spacing, covering material thickness, temperature control, etc.	• A special product quality improvement team is established to successively improve the problems found in the production process, including the series connection and rework improvement, fragmentation rate improvement, and scrap rate improvement of solar panel

Hoshine Silicon utilizes high-quality quartz mine as raw material to produce silicon metal.

<sup>4</sup> Quality goals: Product qualification rate and customer complaint rate goals have been established for silicone products, while corresponding product qualification rate goals have been set for carbon products.

<sup>&</sup>lt;sup>6</sup> Hoshine Silicon's silicone products mainly include silicone rubber, silicone sealant, silicone oil, fumed silica, and others.

The carbon production process of the Hoshine Silicon mainly includes four production stages: forming, roasting, graphitization, and finished product machining. We timely revise the process regulations according to production requirements to ensure the production process is controllable

BHoshine Silicon, using materials such as monocrystalline silicon wafers produced upstream, engages in the production of mid-stream photovoltaic cell (doublesided monocrystalline N-type cell) and is involved in the solar panel (high-efficiency N-type solar panel products) industry.

HOSHINE 合 盛 硅 业

#### Modern quality In order to improve product Inspectors are required to regularly study and testing equipment quality reduce product and technologies are resistivity, and increase take exams on quality • The quality inspection center introduced including bulk density, the later-stage standards to improve inspects the finished silicon Gas Chromatographytheir professional skills: quality and usage data of produced every day to ensure Mass Spectrometry (GCproducts are compared and The work connection Management the quality of the finished MS), and Inductively fed back. of each quality module Measures for Coupled Plasma Atomic Defects in products during in the workshop is products. Regular quality analysis **Emission Spectrometer** processing are investigated, improved. For example, Product meetings and furnace master including those caused by the manufacturing Acceptance meetings are held to discuss Any unqualified process positions and manual operations and Link the influencing factors of products are timely inherent product defects, inspection positions product quality and the marked, with the for full-process rectification. exchange jobs for Irregular coordination tests rectification plan learning purposes, and corresponding disposal methods proposed are conducted to verify major abnormalities fed and timely isolation for whether processing accuracy back are timely dealt meets standards storag Recall process during transportation: when unqualified products • A product recall mechanism is are found among the established. When a product Each finished product must shipped products, recall event occurs, relevant A strict product trackgo through strict testing, and a risk assessment only after all indicators are is conducted and technical and production ing system is implemented. Once a probdepartments are organized qualified can a certificate of such products will Management to conduct strict quality lem is found, it can be conformity be affixed; be disposed of in Measures for inspections on the recalled quickly located and compliance with the Transportation protection is products and analyze the handled to reduce the provided in a way that buffer risk assessment results Sales Link problems throughout the risk of defective proddevices are added to prevent and actual situations; the products from being production process; ucts flowing into the Disposal of unqualified • Corrective measures are damaged due to rolling back products after delivery: investigated and formulated9 corresponding according to 8D procedures measures for rectification are taken when unqualified products are found

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# Central Hoshine Establishes a Photovoltaic Laboratory

The photovoltaic laboratory is an independent internal testing institution specializing in the testing of solar photovoltaic products. It complies with the management requirements of ISO/IEC 17025 and is mainly responsible for material characterization testing, solar panel reliability testing, standard plate management and transfer, and failure analysis. It has leading product testing capabilities in the industry.

The laboratory can carry out dozens of tests in materials, performance, safety, physics, optics, environment, and outdoor testing, and possesses more than one hundred sets of domestic and foreign advanced testing and analysis equipment. The testing center has full-time laboratory management, inspection, and research analysis personnel who are proficient in various testing and analysis technologies of photovoltaic materials and panels, providing strong support for the product quality of photovoltaic cell and solar panel.

9 8D Process: this includes team formation, problem description, emergency response, root cause analysis, permanent improvement plan, implementation of improvement measures, preventive measures, team recognition and future planning.

# **Quality Culture Construction**

In order to enhance the quality risk awareness and quality management capabilities of all employees, Hoshine Silicon organizes systematic and professional quality training and conducts examinations every year. The training covers content such as the quality management system, quality control methods and techniques, quality inspection and evaluation, and quality risk management, cultivating the quality awareness and skills of employees and partners to ensure the continuous improvement of product quality. In addition, the Company also regularly carries out the "Quality Month" activity, and arranges special training for operators to further enhance their professional skills and practical operation abilities.

#### **Training of Quality Management System**

It mainly revolves around the standards and principles of the quality management system. The content includes the basic knowledge, framework, requirements, and implementation methods of the quality management system, ensuring that the requirements of the quality management system are followed during the work process, thus improving the quality of products and services

#### **Quality Control Methods and Techniques Training**

The content focuses on specific quality control means and techniques, such as Statistical Quality Control (SQC) and process quality control. Through such training, participants can master various quality control tools and techniques to identify problems and take effective measures for improvement in actual operations.



#### **Quality Inspection and Evaluation Training**

The content covers the standards, methods, and evaluation techniques of quality inspection. Through the training, participants learn to use appropriate inspection tools and equipment for quality inspection, and at the same time, master the methods and techniques of product quality evaluation to ensure that products meet quality requirements and customer expectations.



#### **Quality Risk Management Training**

The content includes how to identify quality risks. assess the risk level, and formulate risk control measures. Through the training, participants can enhance their awareness and response capabilities to quality risks, ensuring the quality and safety of products and services.

# Quality Training of Hoshine Silicon in 2024



# **R&D Innovation System**

Since its establishment, Hoshine Silicon has grown into a leading enterprise in the fields of silicon-based new materials such as silicon metal, silicone, and poly-silicon. Focusing on silicon-based new materials and photovoltaic new energy as its main core businesses, the Company continuously conducts industrial extension and technological development. We adhere to the innovation-driven development strategy, continuously deepen technological and industrial upgrading, and strive to contribute more wisdom and strength to the development of the global silicon-based new material industry and the energy field.

During the Reporting Period, the Company has filed a total of 180 patents, including 41 invention patents. Of these, 113 patents were granted authorization, with 16 being invention patents. The Company actively contributed to industry standardization by leading or participating in the formulation or revision of 60 technical standards. Additionally, over 50 scientific and technical articles were published, supported by R&D investments totaling RMB 570 million. As of the end of the reporting period, the Company maintained a robust patent portfolio with 675 valid patents in force, including 87 invention patents.

#### **During the Reporting Period**

Total patents applied Including invention patents

Total patents granted

Number of patents granted to the Company

As of the end of the Reporting Period

180 Pcs

**41** Pcs

**113** Pcs

675 Pcs

We regard innovation as an inherent requirement for the highquality development of the industry. We have established a complete R&D innovation system and formulated systems such as the *Enterprise R&D Center Research and Development Organization Management System* and the *Scientific Research Project Application Management System* to standardize the Company's R&D innovation processes. The Company has built a bottom-up R&D innovation management structure. Each business division has set up technical R&D-related departments and put forward further requirements for R&D innovation according to the characteristics of its own products. The person in charge of each business division reports the relevant R&D

innovation situations to the Board of Directors after collecting

At the same time, Hoshine Silicon has built a complete innovation platform for employees, continuously increased R&D investment and offered R&D talents. The Company has formulated internal systems such as the *Intellectual Property Work Management and Incentive System* and the *Technical R&D Reward Management Measures* to reward members of the project R&D team and stimulate the vitality of the scientific research team, driving the development of the enterprise through innovation.

# Silicon Metal Segment

The production technology of silicon metal is relatively mature. In 2024, Hoshine Silicon carried out a series of R&D optimizations on the production technology and added intelligent and automated systems, greatly improving production efficiency, saving labor costs, and effectively increasing the recovery rate of materials.

### DCS (Distributed Control System)



The operation of the traditional silicon metal furnace depends on manual control, which has the problems of low efficiency and large errors. We use a DSC integrated control system to automate key operations such as graphite electrode lifting & lowering and pressing & releasing, transformer gear adjustment, and high-voltage power on and off, reducing human intervention. This technology improves operation accuracy and efficiency, reduces the risk of manual operation, and realizes intelligent control of the production process.

# Filtering and Processing Data

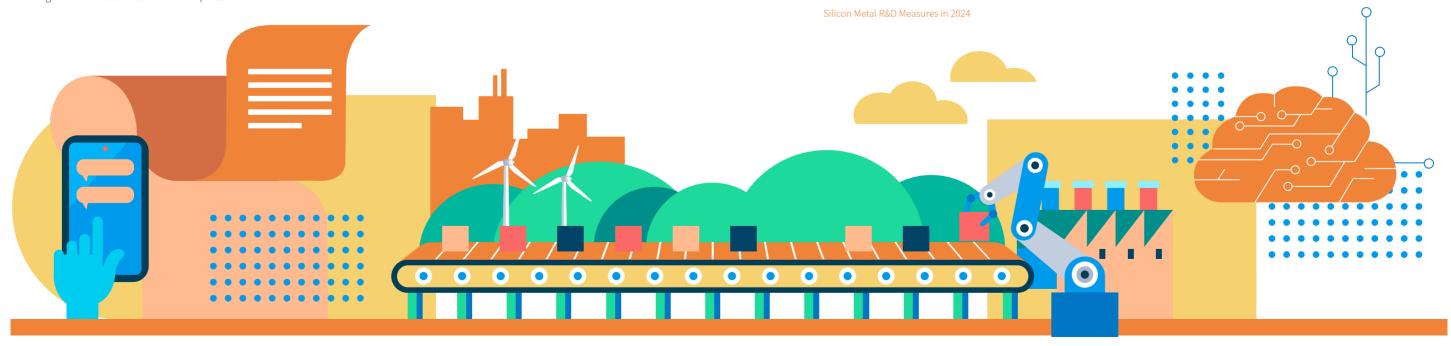


During the operation of the silicon metal furnace, data such as voltage and current fluctuate frequently, directly affecting the judgment and control of the furnace condition. We use a five-stage filtering technology to process real-time data, refreshing it every 0.5s to ensure that the data is stable and can accurately reflect the changes in the furnace condition. This technology improves the reliability of the data, provides an accurate basis for the monitoring and adjustment of the furnace condition, and ensures the stability of production.

#### **Optimizing Power Distribution Logic**



The traditional power distribution logic relies on fixed parameters and is difficult to adapt to the changes in complex working conditions, resulting in high energy consumption and low efficiency. We dynamically calculate and set parameters based on the proportional relationship between current and voltage, realizing the automatic adjustment of the graphite electrodes and the linkage of the transformer gear after the power setting, achieving power distribution balance. This technology effectively optimizes the energy consumption distribution, improves production efficiency, and reduces operating costs.



# Silicone Segment

Based on the mission of "Concentrate on silicon-based materials to create a wonderful life", Hoshine Silicon gives full play to the production capacity advantages of the Company's existing silicon-based new material production base, breaks through the technical barriers of key materials and equipment, and realizes the upgrading and improvement of product processes.



#### **Technology Innovation**

- Increasing production and reducing consumption during the long-cycle operation of silicone monomer synthesis
- Innovative application of the heat pump distillation system in the distillation process of silicone monomers
- Development of fumend silica with multiple specific surface area models
- Quality improvement of vinyl-terminated silicone fluid products
- Development of the continuous production process technology of dimethyl silicone oil



#### **New Product R&D**

- Development of liquid silicone rubber for encapsulation of photovoltaic modules
- Development of functional silicone oil series products
- Development of silicone sealants and potting sealants for silicone solar panel
- Development of high-transparency extrusion process silicone rubber

Silicone R&D Achievements in 2024

# Silicon Carbide Segment

In the field of third-generation semiconductors, the Company has now fully mastered the core process technologies of the whole industry chain of silicon carbide materials, including raw material synthesis, ingot growth, substrate processing, and wafer epitaxy. The Company has broken through the technical barriers of key materials (porous graphite, coating materials) and equipment. The yield rate of the Company's silicon carbide products is at the leading level among domestic enterprises, and in terms of key technical indicators, the Company has caught up with the level of international leading enterprises.

The 6-inch silicon carbide substrates have been fully mass-produced, with a carbide yield rate of over 95% and a stable epitaxial wafer yield rate of over 98%, which is at the leading position in the industry



In terms of the R&D of 8-inch silicon carbide substrates, the Company has started small-batch production thanks to its self-developed system and efficient R&D



Hoshine's Silicon Carbide R&D Process

# **Photovoltaic Segment**

Hoshine Silicon focuses on cultivating "new quality productive force" and actively develops clean energy products with the advantages of advanced technology, high quality, high efficiency, and sustainability. Currently, Hoshine Silicon has achieved the R&D and production of products across the whole photovoltaic industry chain, including poly-silicon, monocrystalline silicon wafer, PV cell and solar panel. Among them, part of the products have been applied in the market. The Company will continue to promote technological innovation and product upgrading in the photovoltaic industry chain, leading the green energy transformation, and striving to build a clean and beautiful world with the whole society.

#### **PV Cell Industry**

- Silicon oxide/poly-silicon layer deposition technology
- N-type emitter technology
- High sheet resistance dense grid technology

### Solar Panel Industry

- Development of products preventing dust deposition and snow accumulation
- Development of all-black series module products
- Development of polyurethane composite frame materials



PV Cell Industry

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Solar Panel Industry

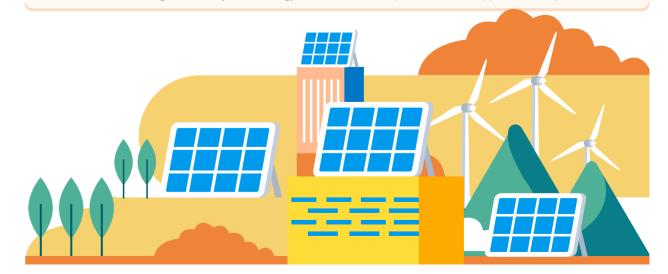
Photovoltaic R&D Innovation Achievements in 2024

# **Energy Segment**

Guided by the market and relying on technology, Hoshine Silicon improves the scientific and technological performance of the Company's main business through the transformation of technological achievements, and has achieved remarkable results.



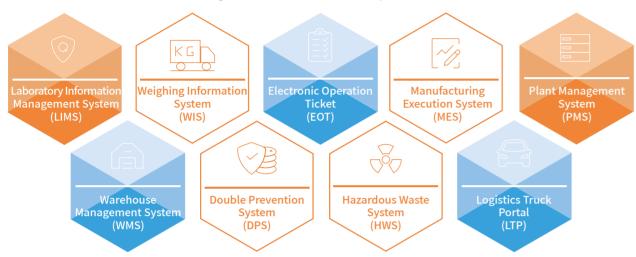
Shanshan Electric Power has established its own R&D center and established the "Clean Coal-fired Power Generation Research Center" with Shihezi University. The Company carries out joint research on key parameter testing technologies in the coal-fired power industry, and the construction of scientific and technological innovation capabilities in metrology and testing in the coal-fired power industry, etc., and actively promotes the transformation of scientific and technological achievements, increasing the intensity of technology research and development as well as application and promotion.



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# **Digital Construction**

As a technology innovation-oriented enterprise, Hoshine Silicon achieves the deep integration of IT (Information Technology), CT (Communication Technology), and OT (Operational Technology) through digital strategies, digital thinking, digital technologies, etc. We clarify the principles and guidelines for promoting intelligent manufacturing, and build nine systems for the intelligent manufacturing base to achieve all-weather safe and efficient production. We also provide a comprehensive solution that can be used for reference and co-creation for the digital transformation of the industry.



Nine Information Systems of the Intelligent Manufacturing Base

# **Key Projects and Standard Formulation**

In recent years, Hoshine Silicon has established R&D platforms such as the "Hoshine Silicon-Based New Materials Provincial High-Tech Enterprise Research and Development Center", the "Zhejiang Hoshine Silicon-based New Materials Research Institute", the "Zhejiang Provincial Key Enterprise Research Institute of Silicon-Based New Materials, Hoshine Silicon Industry", the "Zhejiang Provincial Enterprise Technology Center", and the "National Postdoctoral Workstation".

To further improve industry standards and standardize the production process, the Company has led or participated in the formulation or revision of more than 50 national, industry, or group standards, including the *Norm of Energy Consumption Per Unit Product of Dimethyl Cyclosiloxane*, the *Silicon Metal*, the *Methods for Chemical Analysis of Silicon Metal* and the *Cleaner Production Evaluation Indicator System for Dimethylsiloxane Enterprises*.

With the support of the continuously improved R&D platforms and industry standards, we have completed the national torch program industrialization demonstration project of "Annual Production Capacity: 3,000 Tons of Cosmetic Grade Decamethylcyclopentasiloxane (D5)", major scientific and technological projects in Zhejiang Province such as "Research, Development, and Industrial Application of Key Technologies for Large-Scale Silicone Monomer Synthesis", and a number of scientific and technological plan projects in Jiaxing City such as "Research on Catalytic Purification Technology for Dimethyldichlorosilane and Its Industrial Application". Many projects such as "High-quality Fumed Silica HS-200" and "Dimethyldichlorosilane" have been listed as new provincial industrial products in Zhejiang Province.

# **Industry Cooperation**

Hoshine Silicon continues to strengthen its close cooperation in production, education, research, and application with well-known scientific research institutions in the industry. The Company builds implementation bases for the incubation and industrialization of new products and new technologies, converts scientific and technological achievements into productive forces, and turns intellectual property rights into economic benefits, achieving sustainable development.

As of the end of the Reporting Period, the Company has established R&D institutions such as the "Zhejiang Provincial Key Enterprise Research Institute of Silicon-Based New Materials", the "Zhejiang Provincial Postdoctoral Workstation", and the "Provincial Academician and Expert Workstation", and R&D platforms such as the "Hoshine Silicon-Based New Materials Provincial High-Tech Enterprise Research and Development Center", the "Zhejiang Hoshine Silicon-based New Materials Research Institute", the "Zhejiang Provincial Key Enterprise Research Institute of Silicon-Based New Materials, Hoshine Silicon Industry", the "Zhejiang Provincial Enterprise Technology Center", the "Zhejiang Provincial Postdoctoral Workstation", and the "Provincial Academician and Expert Workstation". It has carried out industry-university-research cooperation with scientific research institutions such as the Institute of Process Engineering, Chinese Academy of Sciences, Zhejiang University, East China University of Science and Technology, and Hangzhou Normal University.



Cooperation with Hangzhou Normal University on the project "Research on the Production Control of 110 Silicone Rubber and the Structured Control of Silicone Rubber"

Through the research on the sources of terminal hydroxyl groups and terminal hydroxyl group removal agents, the hydroxyl group content can be reasonably controlled to improve the structuration and mechanical properties of the silicone rubber.

In response to the situations such as hardening during the storage of silicone rubber compounds, decreased plasticity, gradual loss of processability, difficulties in mold filling, and the emergence of serious "structuring" issues, we have employed appropriate structure control agents and formulated suitable recipes. Coupled with corresponding processing techniques, we have ultimately managed to extend the storage period of the silicone rubber to 12 months.



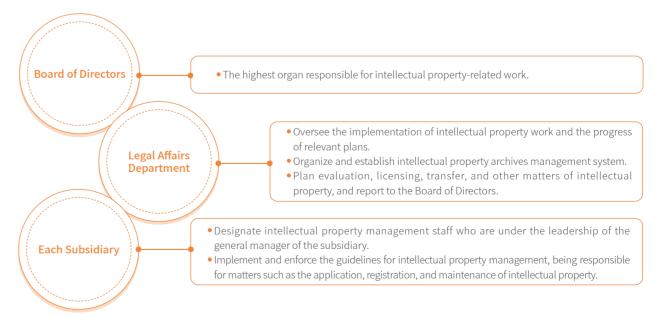
Collaborative Development Project with Shihezi University: "Research on the Enhancement of the Quality of Vinyl Terminated Silicone Fluid and Hydrogen-terminated Silicone Oil"

During the production of vinyl terminated silicone fluid, the silica powder filler can cause the mixture to suddenly thicken, which in turn impairs the mixing effect of subsequent additives and the quality of the final product. Furthermore, when producing textile auxiliaries using hydrogen-terminated silicone oil, there are occasional cases of incomplete polymerization. This leads to poor transparency and a rough hand-feel of the final product, thereby affecting the softness of the textiles.

To address silicone oil thickening issues, we utilize novel catalytic technologies and equipment to enhance the molecular weight distribution of our products and reduce residual impurities. In response to incomplete polymerization, we optimize reaction conditions and implement control over key raw material indicators, as well as develop a stepwise polymerization process, to ultimately achieve our objectives.

# **Intellectual Property Protection**

Hoshine Silicon places great emphasis on intellectual property protection. It has formulated internal regulations including the *Intellectual Property Management System*, *Intellectual Property Management Procedure*, and *Intellectual Property Management Manual* to improve its intellectual property compliance management system and has developed a well-structured intellectual property management structure.



Hoshine Silicon's Intellectual Property Management System



The Company safeguards its innovative outcomes and the legitimate rights and interests of its intellectual property through a diverse range of measures. Meanwhile, we actively provide intellectual property training to relevant internal staff to enhance their awareness of intellectual property. This not only prevents others from infringing on our intellectual property but also ensures that our employees do not infringe on the intellectual property of others.

### **Due Diligence**

Clearly define the employment conditions for practitioners, and comprehensively consider the educational attainment, training effectiveness, work experience, etc. of incoming employees.

#### **Employee Non-Disclosure Agreement**

Clearly stipulate the signing of confidentiality agreements, with more stringent requirements for personnel in special positions (such as those related to technology).

#### **Patent Search and Analysis**

Before filing a patent application, conduct a patent search, prepare a patent search report, patent disclosure statements, drawings, etc., and submit them to the patent application agency.

### **Risk Warning**

Regularly monitor and pay attention to the intellectual property trends in the same and relevant industries, keep abreast of the product R&D trends in these industries, and promptly file intellectual property applications and carry out risk prevention.

#### **Dispute Resolution**

Once an infringement incident is detected, our company will get in touch with the other party, communicate in a friendly manner to handle the situation, and safeguard the Company's legitimate rights and interests.

#### Hoshine Silicon's Intellectual Property Management Measures

# **Customer Experience**

Hoshine Silicon, adhering to a customer-oriented philosophy, constantly strives for higher-quality services. By perfecting the customer service system, conducting responsible marketing, and protecting customer privacy and security, it spares no effort to offer customers an outstanding product-using experience.

# **Customer Service**

We have established a complete customer service system and formulated internal regulations such as *Management Policy of Customer Service Department* to standardize customer service operations. Through a variety of initiatives, we safeguard the rights and interests of customers and consumers.



Customer Service Safeguard Measures of Hoshine Silicon

# **Customer Complaint Handling**

We are committed to continuously improving our products and services by establishing *Customer Complaint Handling Policy* and developing diversified customer feedback channels to ensure timely and comprehensive understanding of, and response to, customer needs and feedback.



Customer Feedback Channels

In handling customer complaints, Hoshine Silicon places emphasis on actively listening to the concerns of customers and consumers, examining the complained products and recording relevant information. Through efficient complaint resolution mechanism, we safeguard the legal rights and interests of customers and consumers and conduct follow-up visits to maintain strong customer relationships. When customer complaints occur, externally, we strictly adhere to the customer complaint management process to address the complaints. We also analyze the reasons for the complaints to continuously enhance customer satisfaction.

#### Develop Preliminary Solutions

After the process is submitted and reaches the after-sales account manager stage, the after-sales account manager proposes a preliminary solution

# Summarize Complaint Information

Once the salesperson receives a customer complaint, they collate the complaint information (including product, model, quantity, photos, etc.) and initiate the complaint handling process

# **Classify and Transfer Complaints**

Complaints are transferred according to different categories (quality problems, logistics problems, management problems, etc.)



# Analyze and Investigate

The production department immediately investigates the root cause of the customer's complaint through means such as monitoring and operation records. After identifying the cause, the team members conduct analysis and discussion

# Communicate and Resolve Problems

The factory, business division, and sales department work in coordination to put forward solutions. The salesperson then communicates with the customer to resolve the problems

Hoshine Silicon's Customer Complaint Handling Process

# **Responsible Marketing**

Hoshine Silicon has always adhered to the concept of responsible marketing and is committed to providing consumers with authentic and reliable products. In our marketing, advertising, and sales practices, we strictly abide by relevant laws, regulations, and industry norms in the regions where we operate. In line with compliance requirements, we have established a strict review process to ensure that all marketing materials can only be released after being approved by authorized management personnel of the Company.

We regularly offer training on responsible marketing to all employees involved in marketing activities. Newly hired employees are required to participate in training on matters needing attention in product marketing and conduct on-site learning at the factory, strengthening our stance on responsible marketing. During the Reporting Period, no major marketing-related violations occurred at Hoshine Silicon.

Furthermore, Hoshine Silicon actively participates in a series of important exhibitions such as the Silicone Professional Exhibition, the Activated Carbon Exhibition, and the International Photovoltaic Power Generation and Smart Energy Exhibition, demonstrating the Company's product strength and an open-inclusive attitude.



# Hoshine Silicon Makes a High-profile Debut at the SNEC 2024 with its New Products

In June 2024, the SNEC 17<sup>th</sup> (2024) International Photovoltaic Power Generation and Smart Energy Conference & Exhibition, one of the most influential photovoltaic events globally, was grandly held at the National Exhibition and Convention Center (Shanghai). This exhibition gathered over 3,500 domestic and foreign enterprises, with over 500,000 visitors and more than 5,000 experts and scholars. It jointly created a vast and professional international communication platform for photovoltaic enterprises and industry audiences.

As an integrated leader in the silicon-based new material industry, Hoshine Silicon, a new entrant in the photovoltaic field, proudly presented the Hoshine Good Life Pavilion. It made a high-profile appearance at the SNEC 2024 with its new products, the 210R rectangular PV cell and anti-dust self-cleaning solar panels, demonstrating Hoshine's strong strength and innovative achievements in the photovoltaic field and injecting powerful impetus into the development of green and clean energy.



# **Customer Privacy Protection**

With the continuous progress of digitalization, Hoshine Silicon attaches great significance to the protection of customer privacy and the security of internal data. It has been continuously ramping up its efforts in safeguarding privacy and data security, thus providing a strong safeguard for its high-quality development. We have incorporated customer privacy protection into the *Trade Secret Protection Management Policy* and implemented a series of measures to safeguard customer privacy and data security.



The Company collects necessary customer information and related personal data solely for legitimate business operations and justifiable purposes. It also takes stringent measures to ensure that user privacy data is properly protected and managed

The Company employs a data leakage prevention system, installs encryption software on all office computers, manages decryption requirements and permissions in a strict manner, and implements a "whitelist" policy for mobile storage devices





When an employee discovers that there is a possibility of the Company's trade secrets being leaked, they are obliged to report to the department head and take immediate preventive measures. If the Company's trade secrets have already been leaked, both the discoverer and the relevant parties are obligated to report it immediately and take remedial measures

The Company issues documents containing regulations related to customer privacy protection and confidentiality. Each department organizes all its staff to study the relevant content and conducts irregular spot checks



Customer Privacy Protection Measures of Hoshine Silicon



Effective supply chain management is a pivotal element for the Company's business continuity and sustainable development. Hoshine Silicon attaches great significance to the sustainable development of its supply chain. It continuously optimizes the supplier management system and integrates the ESG concept into the full lifecycle management of suppliers, ensuring the high-quality and stable development of the supply chain.

# **Supplier Full-process Management**

Hoshine Silicon places great emphasis on supplier management. It strictly complies with laws and regulations such as the *Bidding Law of the People's Republic of China*, revises and implements the *Supplier Management Rules*, and exercises full-process control over various aspects including supplier admission, assessment, and exit.

We have refined and updated the *Supplier Code of Conduct*, which covers all suppliers, including those providing packaging materials, auxiliary materials, electrical instruments, equipment, and raw materials. This code standardizes suppliers' behaviors in the ESG field and incorporates the assessment and evaluation of suppliers' sustainable development into the full-process management, aiming to build a responsible and sustainable supply chain.

# **Supplier Admission**

At the sourcing stage, we conduct a preliminary review of the documents submitted by suppliers according to the admission requirements for different categories. Suppliers that meet the admission thresholds will go through the approval process within the system, and preference will be given to those with better ESG performance in aspects such as environmental management, safety management, and quality management systems. We adhere to the principle of local and nearby supplier procurement. Through a fair and just admission evaluation mechanism, we prevent and mitigate potential adverse impacts that the supply chain may have on Hoshine Silicon.

At the certification stage, Hoshine Silicon conducts a comprehensive, objective, and targeted overall evaluation, assessing suppliers' qualifications from dimensions such as product quality, business risks, and risk control capabilities. In 2024, the Company formulated the *Supplier Category Upgrade and Downgrade Standards*, which clearly define the admission standards for different categories of suppliers, enabling refined and standardized management of supplier qualification information.

# Supplier Assessment

At the evaluation stage, we implement hierarchical management of suppliers and carry out diversified audit for suppliers of different levels in accordance with the *Supplier Category Admission and Upgrade and Downgrade Standards*. We require all suppliers to fill out the *Supplier Evaluation Form* and conduct regular product quality and safety audits to ensure the quality and safety of the products and services provided by them.

At the performance evaluation stage, Hoshine Silicon conducts an annual performance assessment of its cooperative suppliers based on their comprehensive performance in dimensions such as business operations, technology, product quality, safety, environmental protection, and sustainable development management. According to the assessment scores, suppliers are classified into categories such as admitted suppliers, qualified suppliers, excellent

suppliers, and strategic partners. Under the same application conditions, we will give priority to suppliers with better performance grading results, so as to encourage suppliers to continuously enhance their sustainable development capabilities.

Meanwhile, the Company has established a supplier risk management mechanism and analyzes and evaluates the potential risks of suppliers. We have formulated the *Standards for Factory Inspection Forms and Sample Submission by Category*. Through regular reviews, follow-up on improvements, on-site inspections and visits, and control of qualification validity periods, we enhance the effectiveness of supplier risk management, ensuring that supplier quality, compliance, and risk prevention and control meet the Company's standards.

# **Supplier Exit**

For suppliers that do not pass the performance assessment, Hoshine Silicon will suspend procurement and immediately demand rectification. Suppliers that meet the rectification requirements can have their qualification reconfirmed. If a supplier fails to carry out rectification in a timely manner or fails to meet the rectification requirements, it will be phased out after approval through the established procedures. In addition, we have implemented a supplier reward and punishment management mechanism, established a violation management and blacklist mechanism to restrain suppliers' illegal and unethical behaviors. Suppliers with serious violations will be promptly removed from the supply chain, optimizing supplier resources.

# **Sustainable Supply Chain**

Hoshine Silicon strengthens the development of a clean, transparent, green, and healthy supply chain. We continuously standardize supplier management to ensure the stability of the supply chain, promote clean procurement, and work together with supplier partners to advance the concept of sustainability and achieve collaboration and mutual benefits.

# Human Rights Risk Control in the Supply Chain

To further control human rights risks in the supply chain and ensure the long-term sustainable development of the supply chain, Hoshine Silicon has established a supplier compliance system against forced labor and formulated the *Measures for Supplier Internal Risk Management*, comprehensively strengthening the management and prevention of human rights risks in the supply chain.

In accordance with relevant rules and regulations, we identify potential forced labor risks in the supply chain. When such risks occur, we take corrective actions through processes such as assessment, investigation, rectification, and reexamination to address the forced labor risks in the supply chain and implement corresponding corrective measures

We refer to the 11 forced labor indicators of the International Labour Organization (ILO) and require that suppliers, factories, and their partners post workplace regulations that include these indicators

We further extend the training program on labor rights to its supply chain. The training focuses on providing compliance advice in areas such as labor rights, interpretation of forced labor indicators, and health and safety, while also sharing experiences in implementing the *Supplier Code of Conduct* 

Human Rights Risk Control Measures in the Supply Chair

# **Ensure Supply Chain Stability**

Guided by the principle of "Supply Guarantee First, Economic Priority", Hoshine Silicon continuously carries out supply-chainrelated work in a stable, orderly, and continuous manner, constantly optimizing processes, strengthening risk management, and ensuring the safety, efficiency, and sustainable development of the supply chain.

We implement a material reserve strategy for 15-day production supplies to respond to emergencies and changes in market demand

We select three alternative suppliers to ensure the diversity of the supply chain and reduce the risk of relying on a single supplier

In response to potential extreme weather conditions such as heavy snow in regions like Xinjiang, we increase material reserves in advance to mitigate the impact of climate-related risks on the supply chain

By adopting diversified transportation modes such as "railway transportation and rail-sea intermodal transportation", we enhance the stability and efficiency of the supply chain, reducing logistics delays and costs

2024 Supply Chain Stability Guarantee Measures of Hoshine Silicon

# Clean Procurement

Hoshine Silicon has always regarded honesty and trustworthiness as the guiding principles for its business operations. It has formulated the Supplier Code of Conduct and required all suppliers to fill out the Supplier Code of Conduct Questionnaire. This ensures that suppliers understand and pledge to abide by our ethical and business norms, jointly maintaining a fair, transparent, and honest supply chain environment.

We firmly adopt a zero-tolerance stance towards fraud and malpractice in the procurement process. All suppliers are required to comply with anti-corruption regulations and sign the Supplier Anti-corruption Commitment. Once a supplier is found to have integrity issues, it will be blacklisted in accordance with the regulations, and the cooperation will be terminated. In addition, Hoshine Silicon encourages suppliers to obtain qualification certifications in areas such as quality, human rights and labor, and occupational health and safety. It advocates that suppliers establish higher ESG principles and standards beyond the legal minimums to guide and manage their daily operations.

# Supplier Empowerment

Hoshine Silicon values communication and interaction with its partner suppliers. Through diverse training programs with rich themes, it helps suppliers enhance their sustainable development capabilities. During the Reporting Period, we used multiple channels such as enterprise WeChat, telephone, email, on-site visits, exhibitions, public platforms, and industry associations to ensure the sustainable development of both the Company and our supplier partners, and to boost the development of local industries.

We actively conduct supplier empowerment training. The training content includes supply chain anti-forced labor, health and safety, environmental protection, business ethics, labor standards, and zero-tolerance items, further improving the ESG-related performance of suppliers.



# **Caring for Employees**

Hoshine Silicon has always regarded its employees as the Company's precious assets. It continuously improves the human resources management system, safeguards employees' rights and interests, perfects the remuneration and benefits system, establishes a broad talent development platform, and provides a healthy and comfortable working environment, constantly enhancing employees' sense of happiness and belonging.

# **Employee Rights Protection**

The Company strictly adheres to laws and regulations such as the Labour Law of the People's Republic of China, the Labour Contract Law of the People's Republic of China, and the Social Insurance Law of the People's Republic of China, and conducts employment activities in accordance with the law. We have formulated and promulgated systems such as the Employee Handbook and the Social Responsibility Management Manual, clearly defining processes related to employee recruitment, remuneration, benefits, attendance, training and development, performance management, rewards, and punishments, further standardizing the human resources management system.

### Avoidance of Forced Labour

Hoshine Silicon attaches great importance to the basic rights and freedoms of workers. By establishing an antiforced labor compliance system and relevant measures, it firmly opposes any form of forced labor and eradicates any act of recruiting, transporting, transferring, sheltering, or receiving forced laborers. Based on the anti-forced labour indicators of the International Labour Organization (ILO), the Responsible Business Alliance (RBA) guidelines, SA8000, and relevant national laws and regulations, the Company has formulated and implemented the Anti-Forced Labour Policy and Management Commitment and the Rules for the Implementation of Anti-forced Labour. These documents clearly prohibit all Hoshine Silicon enterprises, suppliers, and outsourced labour service providers from using any form of forced labour.

We regularly conduct external audits related to human rights to evaluate the implementation of the anti-forced labour policy. For example, Eurofins Consumer Products Assurance (Eurofins CPA) carried out a two-day on-site corporate social responsibility audit for Hoshine, and the SGS Group conducted a one-day Together for Sustainability audit and a two-day Sedex Members Ethical Trade Audit for Hoshine. The audit results did not reveal any involvement of Hoshine in the 11 forced labor indicators set by the ILO.

In addition, we regularly organize special training sessions on anti-forced labor for employees, introducing to them corporate social responsibility and labor rights-related content, such as the identification and prevention of child labour, as well as legal obligations related to wages, benefits, working hours, non-discrimination, and the prohibition of abuse. Hoshine Silicon also regularly distributes the New Employee Questionnaire and the Employee Regular Questionnaire to confirm with employees that the Company complies with anti-forced labor-related policies.

# **Prohibition of Child Labour**

The Company firmly opposes any form of child labour use and adheres to legal employment practices. All employees of the Company meet the minimum working age requirements specified by the relevant laws and regulations of the countries or regions where the Company's business is located. We have formulated and issued the Regulations on the Management of Child Labour and Underage Workers. Under these regulations, we rigorously verify the actual ages of employees to prevent the accidental employment of child labour due to false age information provided by employees. We also commit not to cooperate with any suppliers or contractors that use child labour. In addition, the Company has established a child labour relief strategy. In the event that a child is mistakenly hired, the Company will promptly settle all the remuneration owed, remove the child from the workplace, and assist the child in receiving school education until the child reaches the age beyond that defined as a child.

# Promotion of Reasonable Working Hours

Hoshine Silicon advocates for reasonable working hours for its employees, strictly prohibits forced labour, and clearly defines that employees have legitimate rights such as holidays. To safeguard employees' legitimate rights and ensure their reasonable rest time, the Company has implemented a facial recognition attendance system and a comprehensive working hours system in compliance with legal regulations. The Company encourages employees to arrange their working hours rationally to achieve a balance between work and life.

# **Equal Employment**

We adhere to the principle of equal employment, strictly prohibiting any form of discrimination. We firmly oppose any unjust treatment during the recruitment process due to factors such as gender, age, nationality, marital status, and race, ensuring fairness and equality in employment. If employees experience discrimination or harassment, they can report it to the relevant department. If an investigation confirms the existence of discrimination or harassment, disciplinary measures, including termination of employment, will be taken against the individuals involved.

In 2024, there were no incidents of child labour, forced labour, workplace discrimination, or sexual harassment at Hoshine Silicon. The labour contract signing rate reached 100%.

# **Attraction and Development**

We advocate a diverse and inclusive corporate culture, attach great importance to employees' well-being and career development, and actively create a platform for rapid growth and development. We are committed to fostering a culture characterized by fairness, transparency, diversity, and inclusiveness.

# **Employee Recruitment**

Talent is a crucial pillar for the development of an enterprise. In line with its own development needs, Hoshine Silicon has formulated systems such as the Recruitment Management System and the Headquarters Interview Process. These systems standardize all aspects of employee recruitment and selection, clarify recruitment and hiring criteria, ensuring that the personnel recruitment process is legal, compliant, fair, and just.

Hoshine Silicon actively constructs diversified talent recruitment channels. It attracts diverse talents in an all-round way through multiple channels, including online recruitment platforms, offline job fairs, and headhunting services. On the one hand, based on the nature of its business, the Company meets the recruitment needs of front-line employees. On the other hand, it enters university campuses and holds numerous campus recruitment fairs, focusing on expanding the reserve of high-quality talents.

To address temporary employment requirements and promote employment, the Company has implemented a flexible labor employment strategy. By releasing recruitment information through multiple channels, organizing online and offline recruitment fairs, providing pre-job training, and strengthening dynamic supervision and information feedback, the Company ensures that flexible workers receive equal pay for equal work as employees in similar positions in the employing units, thus safeguarding the rights and interests of workers.

# Hoshine Silicon's "Spring Breeze Project" Talent Recruitment Project

To match the Company's strategic plan and meet the needs of business expansion, Hoshine Silicon has launched the "Spring Breeze Project" talent recruitment initiative, targeting young talents in society at large. In 2024, the Company carried out large-scale recruitment promotion in 17 districts and counties in Gansu, Qinghai, and Ningxia through synchronous online and offline publicity. As a result, it effectively attracted 1,263 young talents from schools and society to join Hoshine





# **Employee Development**

We attach great significance to the career development and promotion of employees. In accordance with internal systems related to employee career development, such as the Management Measures for New Employee Induction Training, Management Measures for Mentor-Apprentice System, and Reward System for Professional Titles and Vocational Qualification Certificates, we standardize the employee promotion incentive mechanism and the knowledge and skills training management system, providing institutional support for employees at every stage of their growth.

The Company has formulated a clear, transparent, and complete employee promotion system, which encourages employees to make continuous progress and grow in their careers. It ensures that employees are provided with promotion paths that are in line with their career plans and personal strengths.

Hoshine Silicon is committed to constructing a comprehensive and multi-level talent cultivation system. By formulating "Agile Talent Operation Plans" at each level, it aims to offer customized development support for employees at different levels and in different positions. In addition, we have set up an online learning platform, which not only expands the learning channels and scope for employees but also dynamically preserves experiences. It helps employees acquire knowledge in a more flexible and diverse way and, through visual means, enables employees to more quickly understand and master job-related skills. In 2024, the Company launched a number of key training programs for employees at different ranks.

# Hoshine Silicon Employee Training System

# **Eagle Training Camp**

Training Goal: Help vocational college graduates master job-specific knowledge and skills and meet iob requirements

Training Model: Assigning mentors for job practice to provide one-on-one guidance to enhance professional skills and job adaptability

# **Newcomer Training Camp**

Training Goal: Help undergraduate campus recruits enhance their ability to analyze and solve problems in practice and reserve talents for key positions

Training Model: Rotation learning in the main workshop; assigning mentors for job practice and management advisors for project research to provide one-on-one guidance to improve the comprehensive abilities of trainees

# **Cornerstone Training Camp**

Training Goal: Develop a group of reserve talents with strong technical capabilities and a good command of advanced management methods and tools

Training Model: Assigning mentors for one-on-one guidance to enhance professional skills; combining training with practice to improve job adaptability

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# Elite Training Camp

Training Goal: Develop a group of reserve personnel with excellent professional skills and a good grasp of advanced management concepts and techniques for key positions

Training Model: Concentrated training in internal and external professional courses; combining training with practice to improve job suitability

We have established a series of job-skills training programs based on job requirements, which support employees in mastering the knowledge and skills necessary for their work and enable them to achieve substantial development. Hoshine Silicon provides eligible employees with opportunities to pursue excellence and build unique advantages. It encourages them to receive higherlevel professional training and acquire knowledge and skills beyond the scope of their work, such as obtaining certificates in chemical general control, special operations, special equipment, occupational health, hazardous chemicals, and work safety.

Meanwhile, we actively support employees in obtaining official degrees, academic qualifications, and external certifications issued by educational institutions. The Company bears the relevant training costs and provides subsidies to employees who obtain certificates, to encourage them to independently improve their professional skills.

# **Care and Communication**

Hoshine Silicon is deeply aware of the significance of employees' sense of happiness and belonging to the Company. It spares no effort in enriching employees' off-work lives, demonstrating its profound care for employees through tangible actions.

# **Employee Remuneration and Benefits**

Hoshine Silicon is dedicated to offering employees competitive remuneration packages. Guided by a value-oriented principle, the Company has formulated systems such as the *Remuneration Management System* and the *Performance Management System*. These systems ensure that the remuneration standards are fair within the Company and competitive in the external market, fully motivating employees and contributing to the Company's sustainable development as well as the realization of employees' personal value. The Company's Board of Directors has a Remuneration and Assessment Committee, which conducts performance evaluations in accordance with relevant regulations to guarantee the fairness and impartiality of employee performance appraisals.

On top of legally signing labour contracts and making contributions to the five social insurances and one housing fund, we actively maintain non-remuneration benefits for employees, including employee dormitories, accommodation allowances, meal allowances, phone bill subsidies, regular health check-ups, holiday benefits/activities, and team incentive funds. We also ensure the effective implementation of various welfare measures such as sick leave, maternity leave, paternity leave for caregiving, breastfeeding support, and special holiday benefits during festivals like the Eid al-Adha and the Eid al-Fitr Festival in Xinjiang.

# **Employee Communication**

Hoshine Silicon respects and gives full attention to the opinions and feedback from employees. This not only increases employees' participation in the Company's development but also effectively enhances team cohesion, further promoting our development. We have established the *Employee Complaint Handling Procedure* and actively set up information feedback channels, including the General Manager's mailbox, complaint hotline, WeChat for complaints, the Company's DingTalk platform, Human Resources Communication Station and the Employees' Congress. These channels ensure that employees have accessible ways to voice their grievances and their rights and interests are safeguarded.

The Company approaches every employee's complaint and report with the utmost seriousness. It conducts in-depth investigations into each case one by one and handles them appropriately, all the while ensuring that feedback is provided within the stipulated time limit. We have clearly defined a whistleblower protection mechanism, which guarantees the confidentiality of the informer's information. By safeguarding employees' complaint and reporting data, we ensure that their privacy and security remain inviolable.

We conduct an annual employee satisfaction survey that covers multiple dimensions, including the work environment, remuneration and benefits, career development, and corporate culture. Based on the feedback and suggestions obtained, we continuously optimize our workplace environment.

# **Employee Care**

Hoshine Silicon shows care for the physical and mental health of its employees. A series of humanistic care activities and cultural and sports activities have been carried out according to the actual needs of employees, making every employee feel the warmth of the Company. Over the years, Hoshine Silicon has closely centered around the main theme of ethnic work in the new era, which is the awareness of the Chinese nation community. It has actively launched various caring activities and public welfare undertakings for ethnic minority employees, such as "Summer Heat Relief", "Winter Warmth Delivery", "Eid al-Adha Gala", and assistance to employees in hardship. These efforts have truly brought warmth to the hearts of a large number of ethnic minority employees.

Meanwhile, Hoshine Silicon respects multi-ethnic cultures and has established an Ethnic Affairs Management Committee. It adopts a governance model where ethnic minority employees help each other, aiming to build a harmonious and inclusive multi-ethnic labor relationship. There are more than 10,000 ethnic minority employees from over 40 ethnic groups within Hoshine Silicon. The Company provides them with excellent working and living conditions and has become one of the exemplary enterprises in the Xinjiang region for "promoting ethnic unity and achieving common prosperity".

# Hoshine Silicon Celebrates Festivals Together with Ethnic Minority Partners

The Shihezi and Shanshan parks of Hoshine Silicon celebrate major traditional festivals like the Spring Festival, Midautumn Festival, Eid al-Adha, and Eid al-Fitr together with ethnic minority partners. The Company organizes festival galas and Mandarin competitions and distributes festival benefits.





Hoshine Silicon Xinjiang Region Spring Festival Cultural Performance and Mandarin Competition

The Company attaches great importance to the work experiences and needs of employees with disabilities, female employees, and ethnic minority employees, and is committed to creating an inclusive, equal, and caring working environment.

# Inclusion of Employees with Disabilities

 The Company actively creates a friendly work environment for employees with disabilities, offering jobs with moderate intensity and flexible hours.
 They can choose suitable work hours based on their conditions and have the option for remote work, reducing commuting burdens.



# Care for Female Employees

- We have established private rest rooms and nursing rooms for female employees, aimed at better protecting their privacy and meeting the daily needs of those who are breastfeeding.
- We provide regular gynecological inspect, breast cancer screenings, and comprehensive maternity insurance for our female employees, ensuring their health and well-being.



# Valuing Ethnic Minority Colleagues

- We have set up a halal food window in the park cafeteria to better meet the dietary habits of ethnic minority employees.
- On the basis of the original training materials and courses, we have supplemented and developed bilingual training materials and courses to help ethnic minority employees master job skills more quickly.
- In some of our parks, we have organized one-on-one pairing between Han Chinese and ethnic minority employees. This initiative helps ethnic minority employees enhance their professional skills and improve their daily Mandarin communication abilities.

Hoshine Silicon's Employee Care Measures

# HOSHINE

# Occupational Health and Safety

Hoshine Silicon continuously strengthens its work safety management system. Through measures such as providing health and safety training, the Company is dedicated to creating a safe and healthy working atmosphere, safeguarding the well-being of its employees. During the Reporting Period, there were no major or extremely serious safety accidents at Hoshine Silicon.

# Safe Production

We strictly comply with laws and regulations, including the Work Safety Law of the People's Republic of China and the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases. We have formulated systems such as the Work Safety Goal Management System and the Safe Production Responsibility Management System, clearly defining the responsibilities and obligations of managers and employees at all levels in work safety. Based on a clear work safety management structure, we rigorously implement a full-staff safety production responsibility system. The Safety and Environment Department is required to sign work safety goal responsibility agreements with the heads of various industries and workshops every year to ensure the achievement of annual work safety goals and the safety of personnel in the production process.

Each production unit of Hoshine Silicon has established a work safety management organization, which regularly supervises and inspects the safety management of the production site and conducts comprehensive safety hazard inspections. The aim is to promptly detect and eliminate all kinds of safety hazards. Once potential hazards or safety risks are discovered, the Company immediately makes detailed records and continuously follows up until the problems are properly resolved, achieving 100% rectification. This approach prevents and reduces the occurrence of safety accidents at the source.

Our production units formulate emergency response plans for potential accidents, focusing on major hazards and onsite incident handling. These plans are designed to guide employees in dealing with safety accidents promptly and effectively, thereby reducing production safety risks. Meanwhile, we foster a strong safety culture through regular safety-related training and practical drills, such as emergency evacuation exercises and heatstroke response simulations, to reinforce awareness of work safety in practice.

# **Occupational Disease Prevention**

Hoshine Silicon strictly adheres to occupational health-related laws and regulations, including the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases, the Measures for the Management of Occupational Health Examinations, and the Regulations on Work-related Injury Insurance. A series of systems, such as the Occupational Health Management System and the Emergency Rescue and Management System for Occupational Disease Hazards, have been formulated to ensure the health and safety of all employees. During the Reporting Period, a total of 12 subsidiaries of Hoshine Silicon have obtained occupational safety management system certifications.

# Health Risk Identification

- We hire a third party every year to conduct regular occupational health tests and tests for occupational hazard factors. Simultaneously, we carry out the identification, assessment, and management of occupational health risks.
- We assign dedicated personnel to regularly inspect production equipment and the working environment, identify potential safety hazards, and establish equipment maintenance plans to reduce the risk of personnel injury caused by equipment

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#### Occupational Health Examination

 We regularly organize comprehensive occupational health examinations for employees every year and promptly arrange pre-employment, in-service, post-resignation, and emergency health examinations.

# Specialized Training on

 We regularly conduct specialized training sessions for all employees exposed to occupational hazards every year. These sessions cover the popularization of laws and regulations knowledge, occupational health and hazard protection, occupational health education, work injury prevention, mental health, and stress management, and are followed by assessment and evaluation. Occupational Disease Hazard Warnings and Protection

Occupational Health Management and Health Surveillance

and Safety Facilities

Factory

Layout and

**Facilities** 

Noise and Powe Frequency Electric Field Protection Heatstroke and Cold Prevention Measures

Hoshine Silicon's Production Process Safety Measures

# **Community Co-construction**

Hoshine Silicon is actively engaged in social welfare undertakings. It takes proactive actions in areas such as educational support and merit-based rewards, respect for the elderly and care for the young, disaster relief and poverty alleviation, rural revitalization, and low-carbon environmental protection, fulfilling its corporate social responsibility.



# Respect and Care for the Elderly

Hoshine Silicon offers care services to the elderly, distributes elderly-care subsidies, promotes the culture of respecting the elderly, and boosts the sense of happiness among the elderly.





### Educational Support and Merit-based Rewards

Hoshine Silicon has donated scholarships and teaching equipment to schools in regions such as Zhejiang, Xinjiang, and Sichuan, contributing to the enhancement of educational quality.





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# Support for the Needy and Disabled

Hoshine Silicon facilitates the integration of disadvantaged groups into society and improves their quality of life through aid projects, employment support, and the rental of assistive devices.





# Rural Revitalization

Hoshine Silicon responds to the Rural Revitalization Strategy, promoting the development of rural areas through industrial investment, technical support, and talent cultivation.



# **Rural Revitalization**

The Company actively answers the call of the national Rural Revitalization Strategy, driving the economic development and social progress in rural areas. We assist local farmers in increasing their income and improving their living standards by creating employment opportunities and backing the development of rural industries. In 2024, Hoshine Silicon purchased over 30,000 boxes of Aksu apples from Xinjiang and distributed them as Spring Festival benefits to all its employees. This action helps local fruit farmers increase their income and prosper, contributing to the sustainable development of rural regions.



Hoshine Silicon Purchases Xinjiang Aksu Apples

Hoshine Silicon's Occupational Health and Safety Management Measures

# **Contributions to the Society**

Hoshine Silicon actively participates in community activities, giving full play to its corporate social responsibility. It endeavors to improve the quality of life and development level of local communities, striving to create a more beautiful and sustainable community.

Since 2022, Hoshine Silicon has been continuously promoting the "Together with Me in Charity" series of public welfare projects. It focuses on carrying out public welfare activities in five major areas: educational support and merit-based awards, respect for the elderly and care for the young, disaster relief and assistance, rural revitalization, and low-carbon environmental protection. Through financial and material support as well as the joint participation of employees and caring members of society, it aims to drive the development of public welfare and promote social harmony and progress.



# Hoshine Silicon Holds Tree Planting Day Activities to Fulfil Environmental Responsibilities

In 2024, we organized tree-planting initiatives and low-carbon campaigns for employees, fostering their enthusiasm for sustainable practices while strengthening team cohesion. These efforts showcased Hoshine Silicon's commitment to environmental stewardship and social responsibility.









# "Together with Me for Barrier-free Love" Donation Campaign

In 2024, Hoshine Silicon organized the "Together with Me for Barrier-free Love" donation campaign in multiple regions. This effectively contributed to the development of public welfare for people with disabilities and actively fulfilled the Company's social responsibility. As one of the inaugural member organizations of Cixi City's Disability Assistance Alliance, Hoshine Silicon actively fulfills its organizational mission of "Uniting Philanthropic Strength for a Brighter Future." We participated in the launch ceremony of Cixi City's 34th National Disability Day and collaborated with multiple local governments and social organizations to conduct a series of charitable donation initiatives, demonstrating its commitment to supporting vulnerable groups.

In Cixi, the Hoshine Charity Foundation has taken the lead in establishing assistive device rental stations in Ningfeng Village (Changhe Town) and Binhe Community (Baisha Road Subdistrict). Through the donation of wheelchairs, walkers, etc., the Foundation is effectively addressing the practical needs of individuals with disabilities and elderly residents. In Xinjiang, the Foundation has partnered with Shanshan County Kindness Social Work Service Center to provide living supplies and assistive devices to residents with disabilities. Additionally, through a targeted RMB100,000 donation to Shihezi Charity Federation, the Foundation supported a disabled curling competition, empowering participants to build confidence and social integration through sports.



Hoshine Silicon is dedicated to promoting the humanitarian spirit and charity culture. It actively participates in social welfare undertakings, with the donation scope covering care for nursing homes, optimization of grassroots convenient services, promotion of high-quality education development, and assistance in rural revitalization. The aim is to help disadvantaged groups and promote the development of social welfare. In 2024, the Cixi Hoshine Charity Foundation was rated as an "Advanced Organization for Charitable Donations" by the Cixi Municipal People's Government and was proposed to be rated as a 3A-level social organization. It has become a member organization of the Cixi City's Disability Assistance Alliance.







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# **Key Performance Table**

# **Environmental Performance**

Indicator	Unit	Data of 2024
Energy Consumption <sup>10</sup>		
Direct Energy Consumption		
Diesel Consumption	Ton	6,960.48
Gasoline Consumption	Ton	39.38
Coal Consumption	Ton	4,927,538.51
Natural Gas Consumption	Normal Cubic Meter	145,423,896.94
Indirect Energy Consumption		
Purchased Electric Power Consumption	MWh	16,683,618.66
Purchased Steam	Ton	381,397.00
Renewable Energy Consumption		
Renewable Energy Use	TCE	438,387.30
Total Energy Consumption		
Total Energy Consumption (direct)	TCE	3,689,907.10
Total Energy Consumption (indirect)	TCE	2,099,464.39
Total Energy Consumption (excluding renewable energy)	TCE	5,789,371.49
Integrated Energy Consumption Intensity (excluding renewable energy)	TCE/RMB One Million	216.89
Greenhouse Gas Emission <sup>11</sup>		
Total Greenhouse Gas Emissions (Scope 1 and Scope 2)	Carbon Dioxide Equivalent - Ton	17,903,747.80
Direct Greenhouse Gas (Scope 1)	Carbon Dioxide Equivalent - Ton	9,065,365.27
Indirect Greenhouse Gas (Scope 2)	Carbon Dioxide Equivalent - Ton	8,838,382.53
Greenhouse Gas Emission Density	TCO₂e /RMB One Million	670.75
Exhaust Gas		
Total Exhaust Gas Emission	$M^3$	11,078,808.80
Exhaust Gas Emission density	M <sup>3</sup> /RMB One Million	415.06

<sup>&</sup>lt;sup>10</sup> The energy consumption calculation for operations in China is based on the General Principles for Calculation of the Comprehensive Energy Consumption (GB2589-2020) issued by the State Administration for Market Regulation and the Standardization Administration of China.

Indicator	Unit	Data of 2024
Sulphur Oxide SOx Emission	Ton	1,050.72
Sulphur Oxide SOx Emission Intensity	kg/RMB One Million	39.36
Nitrogen Oxide NOx Emission	Ton	5,399.66
Nitrogen Oxide NOx Emission Intensity	Kg /RMB One Million	202.29
/OC Emissions	Ton	6.63
/OC Emissions Intensity	Kg /RMB One Million	0.25
Particulate Matter (PM) Emissions	Ton	868.11
Particulate Matter (PM) Emission Intensity	Kg /RMB One Million	32.52
Nastewater		
Total Wastewater Discharge	Ton	2,147,434.59
COD	Ton	260.49
Ammonia Nitrogen	Ton	12.73
Nastewater Discharge Density	Ton/RMB One Million	80.75
Naste		
Hazardous Waste		
Hazardous Waste Transfer Volume <sup>12</sup>	Ton	102,512.29
Hazardous Waste Recycling and Reuse Volume	Ton	39,157.37
Volume of Hazardous Waste Treated by other Method <sup>13</sup>	Ton	63,354.92
Harmful Waste Density	Ton/RMB One Million	3.84
Non-hazardous Waste		
Non-hazardous Waste Collection Volume (non-recyclable)	Ton	43,899.91
Non-hazardous Waste Collection Volume (recyclable)	Ton	520,731.86
Non-hazardous Waste Density	Ton/RMB One Million	21.15
Nater Resource Consumption		
Total Water Consumption	Ton	20,843,814.80
Tap Water/Municipal Water Drawing Volume	Ton	20,843,814.80
Nater Use Intensity	Ton/RMB One Million	780.89

<sup>&</sup>lt;sup>11</sup> The main sources of greenhouse gas emissions of the Company are the use of purchased electric power, the consumption of natural gas, as well as the use of diesel, coal, and gasoline. The calculation scope includes Hoshine Silicon Industry Co., Ltd. and all its stable production subsidiaries. Scope 1: Greenhouse gas emissions are accounted for based on the Guidelines for Accounting and Reporting Greenhouse Gas Emissions of Other Industrial Enterprises (Trial) issued by China's National Development and Reform Commission (NDRC) and the 2006 IPCC Guidelines for National Greenhouse Gas Inventories published by the Intergovernmental Panel on Climate Change (IPCC).

<sup>&</sup>lt;sup>12</sup> Transfer Volume = Recycling and Reuse Volume + Volume Treated by Other Methods

 $<sup>^{\</sup>rm 13}$  Other treatment methods include incineration treatment and landfill treatment.

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Indicator	Unit	Data of 2024
Use of Packaging Materials		
Total Amount of Packaging Materials Used	Ton	54,505.59
Plastics	Ton	22,398.24
Paper	Ton	15,405.44
Glass	Ton	0
Metal	Ton	12,692.08
Other Categories	Ton	4,009.83
Packaging Material Usage Density	Tons/RMB One Million	2.04

# **Social Performance**

Indicator	Unit	Data of 2024
Product Quality and Safety		
Number of Product Safety and Quality Accidents	Case	0
Amount of Accident Damage	RMB Ten Thousand	0
Number of Product Recall Batches	Times	211
R&D Innovation and Intellectual Property		
R&D Expenses	RMB One Hundred Million	5.7
R&D Investment Ratio	%	2.10
Number of National Science and Technology Award Winners	Pcs	0
Number of Supplier Collaborations in R&D	Pcs	4
Number of patents granted to the Company	Pcs	675
Number of invention patents	Pcs	87
Number of various standards formulated or revised as a lead or participant	Pcs	60
Number of scientific and technological articles published	Article	Nearly 50
Customer Service		
Complaint Handling Rate	%	100
Customer Satisfaction (out of 100)	/	93.48

Indicator	Unit	Data of 2024
Customer Privacy and Security		
Number of Customer Privacy Breaches	Case	0
The Amount of Money Involved in the Customer Privacy Breach	RMB Ten Thousand	0
Number of suppliers		
Total Number of Suppliers	Nr.	6,708
Number of Suppliers by Region		
Number of Mainland China suppliers	Nr.	6,697
Northeastern China	Nr.	219
Northern China	Nr.	477
Central China	Nr.	400
Northwestern China	Nr.	1,594
Southwestern China	Nr.	511
Eastern China	Nr.	3,197
Southern China	Nr.	299
Number of Suppliers from Chinese Hong Kong, Macao and Taiwan	Nr.	4
Number of Foreign Suppliers	Nr.	7
Supplier ESG Management		
Number of Suppliers that have Signed the Supplier Code of Conduct	Nr.	5,56214
Ratio of Suppliers that have Signed the Supplier Code of Conduct	%	82.92
Number of ESG/CSR-related Training Sessions Conducted for Suppliers	Times	1
Total Duration of ESG/CSR-related Training Conducted for Suppliers	Hour(s)	884
Number of Employees		
Total number of Employees	Person	21,994
Number of Employees by Employment Type		
Full-time	Person	21,653
Part-time	Person	341
Number of Employees by Gender <sup>15</sup>		
Male	Person	16,755
Female	Person	4,898

<sup>&</sup>lt;sup>14</sup> Hoshine Silicon has required our suppliers to sign a Supplier Code of Conduct since 2023. The data is based on the upgraded system and is gradually covering all suppliers.

 $<sup>^{\</sup>rm 15}$  The total number of people is the total number of full-time employees.

Data of 2024

Unit



Number of Employees by Age <sup>36</sup> Under 30 Person 11,735  30-50 (including 50) Person 9,062  Over 50 Person 656  Number of Employees by Work Area <sup>17</sup> Mainland China Person 21,653  Chinese Hong Kong, Macao and Taiwan Person 0  Overseas Person 0  Number of Staff by Rank <sup>36</sup> Senior Management Person 125  Middle Management Person 3,206  Regular Employee Regular Employee Person 17,451  Employee Training  Total Number of Full-time Trained Employees Participation(s) 410,465 <sup>16</sup> Percentage of Trained Employee 96 100  Total Hours of Employee Training Hour(s) Over 40 million <sup>76</sup> Training and Development Expenses RMB Ten Thousand 416.95  Labour Diversity  Number of Women in Management (both junior, middle and senior) Person 66  Proportion of Women in Senior Management 96 4.80  Number of Women in Management Person 60  Proportion of Women in Management Person 60  Proportion of Women in Middle Management Person 60	Indicator	Unit	Data of 2024
30-50 (including 50) Person 9,062  Over 50 Person 856  Number of Employees by Work Area <sup>17</sup> Mainland China Person 21,653  Chinese Hong Kong, Macao and Taiwan Person 0  Overseas Person 0  Number of Staff by Rank <sup>18</sup> Senior Management Person 125  Middle Management Person 871  Junior Management Person 3,206  Regular Employee Person 17,451  Employee Training  Total Number of Full-time Trained Employees Participation(s) 410,465 <sup>19</sup> Percentage of Trained Employee 96 100  Total Hours of Employee Training Hour(s) Over 40 million <sup>40</sup> Training and Development Expenses RMB Ten Thousand 416.95  Labour Diversity  Number of Women in Management (both junior, middle and senior) Person 363  Proportion of Women in Senior Management Person 6  Proportion of Women in Senior Management 96 4.80  Number of Women in Middle Management Person 60  Proportion of Women in Middle Management Person 60  Proportion of Women in Middle Management Person 60	Number of Employees by Age <sup>16</sup>		
Number of Employees by Work Area <sup>17</sup> Mainland China Person 21,653  Chinese Hong Kong, Macao and Taiwan Person 0  Overseas Person 0  Number of Staff by Rank <sup>18</sup> Senior Management Person 125  Middle Management Person 871  Junior Management Person 3,206  Regular Employee Person 3,206  Regular Employee Training  Total Number of Full-time Trained Employees Participation(s) 410,465 <sup>19</sup> Percentage of Trained Employee % 100  Total Hours of Employee Training Hour(s) Over 40 million <sup>20</sup> Training and Development Expenses RMB Ten Thousand 416.95  Labour Diversity  Number of Women in Management (both junior, middle and senior) Person 363  Proportion of Women in Senior Management Person 6  Proportion of Women in Senior Management Person 6  Proportion of Women in Middle Management Person 60  Proportion of Women in Middle Management Person 60	Under 30	Person	11,735
Number of Employees by Work Area <sup>17</sup> Mainland China Person 21,653  Chinese Hong Kong, Macao and Taiwan Person 0  Overseas Person 0  Number of Staff by Rank <sup>18</sup> Senior Management Person 125  Middle Management Person 871  Junior Management Person 3,206  Regular Employee Person 17,451  Employee Training  Total Number of Full-time Trained Employees Participation(s) 410,465 <sup>19</sup> Percentage of Trained Employee 96 100  Total Hours of Employee Training Hour(s) Over 40 million <sup>10</sup> Training and Development Expenses RMB Ten Thousand 416.95  Labour Diversity  Number of Women in Management (both junior, middle and senior) Person 363  Proportion of Women in Senior Management Person 66  Proportion of Women in Senior Management Person 66  Proportion of Women in Middle Management Person 60  Proportion of Women in Middle Management Person 60	30-50 (including 50)	Person	9,062
Mainland China Person 21,653  Chinese Hong Kong, Macao and Taiwan Person 0  Overseas Person 0  Number of Staff by Rank <sup>18</sup> Senior Management Person 125  Middle Management Person 871  Junior Management Person 3,206  Regular Employee Person 17,451  Employee Training  Total Number of Full-time Trained Employees Participation(s) 410,465 <sup>19</sup> Percentage of Trained Employee % 100  Total Hours of Employee Training  Training and Development Expenses RMB Ten Thousand 416.95  Labour Diversity  Number of Women in Management (both junior, middle and senior) Person 363  Proportion of Women in Senior Management Person 6  Proportion of Women in Senior Management Person 6  Proportion of Women in Middle Management Person 60  Proportion of Women in Middle Management Person 60	Over 50	Person	856
Chinese Hong Kong, Macao and Taiwan Person 0  Overseas Person 0  Number of Staff by Rank <sup>10</sup> Senior Management Person 125  Middle Management Person 871  Junior Management Person 3,206  Regular Employee Person 17,451  Employee Training  Total Number of Full-time Trained Employees Participation(s) 410,465  Percentage of Trained Employee % 100  Total Hours of Employee Training Hour(s) Over 40 million <sup>20</sup> Training and Development Expenses RMB Ten Thousand 416.95  Labour Diversity  Number of Women in Management (both junior, middle and senior) Person 363  Proportion of Women in Senior Management Person 6  Proportion of Women in Senior Management % 4.80  Number of Women in Middle Management Person 60  Proportion of Women in Middle Management Person 60  Proportion of Women in Middle Management Person 60	Number of Employees by Work Area <sup>17</sup>		
Overseas       Person       0         Number of Staff by Rank <sup>18</sup> Senior Management       Person       125         Middle Management       Person       871         Junior Management       Person       3,206         Regular Employee       Person       17,451         Employee Training       Total Number of Full-time Trained Employees       Participation(s)       410,465 <sup>19</sup> Percentage of Trained Employee       %       100         Total Hours of Employee Training       Hour(s)       Over 40 million <sup>30</sup> Training and Development Expenses       RMB Ten Thousand       416.95         Labour Diversity         Number of Women in Management (both junior, middle and senior)       Person       363         Proportion of Women in Senior Management       Person       6         Proportion of Women in Senior Management       %       4.80         Number of Women in Middle Management       Person       60         Proportion of Women in Middle Management       %       6.89	Mainland China	Person	21,653
Number of Staff by Rank <sup>18</sup> Senior Management       Person       125         Middle Management       Person       871         Junior Management       Person       3,206         Regular Employee       Person       17,451         Employee Training         Total Number of Full-time Trained Employees       Participation(s)       410,465 <sup>19</sup> Percentage of Trained Employee       %       100         Total Hours of Employee Training       Hour(s)       Over 40 million <sup>20</sup> Training and Development Expenses       RMB Ten Thousand       416.95         Labour Diversity         Number of Women in Management (both junior, middle and senior)       Person       363         Proportion of Women in Senior Management       Person       6         Proportion of Women in Senior Management       %       4.80         Number of Women in Middle Management       Person       60         Proportion of Women in Middle Management       %       6.89	Chinese Hong Kong, Macao and Taiwan	Person	0
Senior ManagementPerson125Middle ManagementPerson871Junior ManagementPerson3,206Regular EmployeePerson17,451Employee TrainingTotal Number of Full-time Trained EmployeesParticipation(s)410,46519Percentage of Trained Employee%100Total Hours of Employee TrainingHour(s)Over 40 million 20Training and Development ExpensesRMB Ten Thousand416.95Labour DiversityAumber of Women in Management (both junior, middle and senior)Person363Proportion of Women in Management (both junior, middle and senior)%8.64Number of Women in Senior ManagementPerson6Proportion of Women in Senior Management%4.80Number of Women in Middle ManagementPerson60Proportion of Women in Middle ManagementPerson6.89	Overseas	Person	0
Middle ManagementPerson871Junior ManagementPerson3,206Regular EmployeePerson17,451Employee TrainingTotal Number of Full-time Trained EmployeesParticipation(s)410,46519Percentage of Trained Employee%100Total Hours of Employee TrainingHour(s)Over 40 million 20Training and Development ExpensesRMB Ten Thousand416.95Labour DiversityPerson363Proportion of Women in Management (both junior, middle and senior)%8.64Number of Women in Senior ManagementPerson6Proportion of Women in Senior Management%4.80Number of Women in Middle ManagementPerson60Proportion of Women in Middle ManagementPerson60Proportion of Women in Middle ManagementPerson60Proportion of Women in Middle ManagementPerson60	Number of Staff by Rank <sup>18</sup>		
Junior ManagementPerson3,206Regular EmployeePerson17,451Employee TrainingTotal Number of Full-time Trained EmployeesParticipation(s)410,46519Percentage of Trained Employee%100Total Hours of Employee TrainingHour(s)Over 40 million 20Training and Development ExpensesRMB Ten Thousand416.95Labour DiversityNumber of Women in Management (both junior, middle and senior)Person363Proportion of Women in Senior ManagementPerson6Proportion of Women in Senior ManagementPerson6Proportion of Women in Middle ManagementPerson60Proportion of Women in Middle ManagementPerson60Proportion of Women in Middle ManagementPerson60	Senior Management	Person	125
Regular EmployeePerson17,451Employee TrainingParticipation(s)410,46519Total Number of Full-time Trained EmployeesParticipation(s)410,46519Percentage of Trained Employee%100Total Hours of Employee TrainingHour(s)Over 40 million 20Training and Development ExpensesRMB Ten Thousand416.95Labour DiversityLabour DiversityNumber of Women in Management (both junior, middle and senior)Person363Proportion of Women in Senior ManagementPerson6Proportion of Women in Senior Management%4.80Number of Women in Middle ManagementPerson60Proportion of Women in Middle ManagementPerson60Proportion of Women in Middle Management%6.89	Middle Management	Person	871
Employee Training  Total Number of Full-time Trained Employees Participation(s) 410,465 <sup>19</sup> Percentage of Trained Employee % 100  Total Hours of Employee Training Hour(s) Over 40 million <sup>70</sup> Training and Development Expenses RMB Ten Thousand 416.95  Labour Diversity  Number of Women in Management (both junior, middle and senior) Person 363  Proportion of Women in Senior Management Person 6  Proportion of Women in Senior Management Person 6  Proportion of Women in Middle Management 96  Person 60  Proportion of Women in Middle Management 96  Person 60	Junior Management	Person	3,206
Total Number of Full-time Trained Employees Participation(s) 410,465 <sup>19</sup> Percentage of Trained Employee % 100  Total Hours of Employee Training Hour(s) Over 40 million 20  Training and Development Expenses RMB Ten Thousand 416.95  Labour Diversity  Number of Women in Management (both junior, middle and senior) Person 363  Proportion of Women in Management (both junior, middle and senior) % 8.64  Number of Women in Senior Management Person 6  Proportion of Women in Middle Management Person 60  Proportion of Women in Middle Management Person 60	Regular Employee	Person	17,451
Percentage of Trained Employee	Employee Training		
Total Hours of Employee Training  Hour(s)  Over 40 million 20  RMB Ten Thousand  416.95  Labour Diversity  Number of Women in Management (both junior, middle and senior)  Person  363  Proportion of Women in Management (both junior, middle and senior)  Number of Women in Senior Management  Person  6  Proportion of Women in Senior Management  Person  6  Proportion of Women in Middle Management  Person  60  Proportion of Women in Middle Management  Person  60	Total Number of Full-time Trained Employees	Participation(s)	410,465 <sup>19</sup>
Training and Development Expenses RMB Ten Thousand 416.95  Labour Diversity  Number of Women in Management (both junior, middle and senior) Person 363  Proportion of Women in Management (both junior, middle and senior) % 8.64  Number of Women in Senior Management Person 6  Proportion of Women in Senior Management % 4.80  Number of Women in Middle Management Person 60  Proportion of Women in Middle Management % 6.89	Percentage of Trained Employee	%	100
Labour DiversityNumber of Women in Management (both junior, middle and senior)Person363Proportion of Women in Management (both junior, middle and senior)%8.64Number of Women in Senior ManagementPerson6Proportion of Women in Senior Management%4.80Number of Women in Middle ManagementPerson60Proportion of Women in Middle Management%6.89	Total Hours of Employee Training	Hour(s)	Over 40 million <sup>20</sup>
Number of Women in Management (both junior, middle and senior)Person363Proportion of Women in Management (both junior, middle and senior)%8.64Number of Women in Senior ManagementPerson6Proportion of Women in Senior Management%4.80Number of Women in Middle ManagementPerson60Proportion of Women in Middle Management%6.89	Training and Development Expenses	RMB Ten Thousand	416.95
Proportion of Women in Management (both junior, middle and senior) % 8.64  Number of Women in Senior Management Person 6  Proportion of Women in Senior Management % 4.80  Number of Women in Middle Management Person 60  Proportion of Women in Middle Management % 6.89	Labour Diversity		
Number of Women in Senior ManagementPerson6Proportion of Women in Senior Management%4.80Number of Women in Middle ManagementPerson60Proportion of Women in Middle Management%6.89	Number of Women in Management (both junior, middle and senior)	Person	363
Proportion of Women in Senior Management%4.80Number of Women in Middle ManagementPerson60Proportion of Women in Middle Management%6.89	Proportion of Women in Management (both junior, middle and senior)	%	8.64
Number of Women in Middle Management     Person     60       Proportion of Women in Middle Management     %     6.89	Number of Women in Senior Management	Person	6
Proportion of Women in Middle Management % 6.89	Proportion of Women in Senior Management	%	4.80
	Number of Women in Middle Management	Person	60
Number of Women in Junior Management Person 297	Proportion of Women in Middle Management	%	6.89
	Number of Women in Junior Management	Person	297

Proportion of Women in Junior Management	%	9.26
Employees' Rights and Interests		
Union Membership Rate	%	100
Incidents Related to Child or Forced Labour	Pcs	0
Labour Contract Signing Rate	%	100
Health & Safety		
Number of Workdays Lost Due to Work-related Injuries	Days	14,630
Employee Coverage of Work-related Injury Insurance	%	100
Employee Coverage of Safety Production Liability Insurance	%	57.90
Work Injury Insurance Expenditure	RMB Ten Thousand	1,060.39
Work Safety Liability Insurance Expenditure	RMB Ten Thousand	7,712.10
Social Investment		
Total Funds of Social Contribution	RMB Ten Thousand	224.3
Total Funding for Rural Revitalization	RMB Ten Thousand	33.8
Aggregate Participation in Public Charity Commitment	Participation(s)	Nearly 200
Total Volunteer Service Hours	Hour(s)	Nearly 800

Indicator

 $<sup>^{\</sup>rm 16}\,$  The total number of people is the total number of full-time employees.

 $<sup>^{\</sup>rm 17}\,$  The total number of people is the total number of full-time employees.

 $<sup>^{\</sup>mbox{\tiny 18}}$  The total number of people is the total number of full-time employees.

<sup>&</sup>lt;sup>19</sup> The plants implement an essential knowledge and compliance training program with weekly sessions, leading to elevated aggregate figures in both participant volume and training duration.

<sup>&</sup>lt;sup>20</sup> The plants implement an essential knowledge and compliance training program with weekly sessions, leading to elevated aggregate figures in both participant volume and training duration.

# **Governance Performance**

Indicator	Unit	Data of 2024
Business Ethics		
Total Duration of Directors' Participation in Anti- corruption Training	Hour(s)	8
Total Participation of Directors in Anti-corruption Training	Participation(s)	3
Total Duration of Management Participation in Anti- corruption Training	Hour(s)	1
Total Participation of Management in Anti-corruption Training	Participation(s)	102
Total Duration of Employees' Participation in Anti- corruption Training	Hour	16
Total Participation of Employees in Anti-corruption Training	Participation(s)	835
Number of Corruption and Bribery Cases	ltem	$1^{21}$
Information Security		
Number of information security incidents	Item	0
Amount involved in information security incidents	RMB Ten Thousand	0

# Shanghai Stock Exchange (SSE) Guidelines Index

Dimension	Nr.	Issues	Corresponding chapter
Environment	1	Climate Change Tackling	Future Hoshine, Green Leadership: Low-carbon Operations
	2	Pollutant Discharge	Future Hoshine, Green Leadership: Pollutant Discharge
	3	Waste Disposal	Future Hoshine, Green Leadership: Pollutant Discharge
	4	Ecosystem and Biodiversity Protection	Future Hoshine, Green Leadership: Environmental Management
	5	Environmental Compliance Management	Future Hoshine, Green Leadership: Environmental Management
	6	Energy Usage	Future Hoshine, Green Leadership: Low-carbon Operations
	7	Usage of Water Resources	Future Hoshine, Green Leadership: Resource Usage
	8	Circular Economy	Future Hoshine, Green Leadership: Resource Usage
Society	9	Rural Revitalization	Excellent Hoshine, Scaling New Heights: Community Coconstruction
	10	Contributions to the Society	Excellent Hoshine, Scaling New Heights: Community Coconstruction
	11	Innovation-driven	Excellent Hoshine, Scaling New Heights: Quality Management
	12	Ethics of Science and Technology	Not Applicable
	13	Supply Chain Security	Excellent Hoshine, Scaling New Heights: Supply Chain Security
	14	Equal Treatment to Small and Medium-sized Enterprises	Excellent Hoshine, Scaling New Heights: Supply Chain Security
	15	Safety and Quality of Products and Services	Excellent Hoshine, Scaling New Heights: Quality Management Excellent Hoshine, Scaling New Heights: Customer Experience
	16	Data Security and Customer Privacy Protection	Responsible Hoshine, Refined Governance: Data Security and Customer Privacy Protection
	17	Employees	Excellent Hoshine, Scaling New Heights: Caring for Employees
Sustainability- related Governance	18	Due Diligence	Responsible Hoshine, Refined Governance: ESG Governance
	19	Communications with Stakeholders	Responsible Hoshine, Refined Governance: ESG Governance
	20	Anti-commercial Bribery and Anti- corruption	Responsible Hoshine, Refined Governance: Business Ethics
	21	Anti-unfair Competition	Responsible Hoshine, Refined Governance: Business Ethics

<sup>&</sup>lt;sup>21</sup> The Company has issued the Announcement of Hoshine Silicon Industry Co., Ltd. on Receiving the Criminal Judgment and the Litigation Progress on August 16, 2024.

