



2023
ENVIRONMENTAL,
SOCIAL AND GOVERNANCE
(ESG) REPORT

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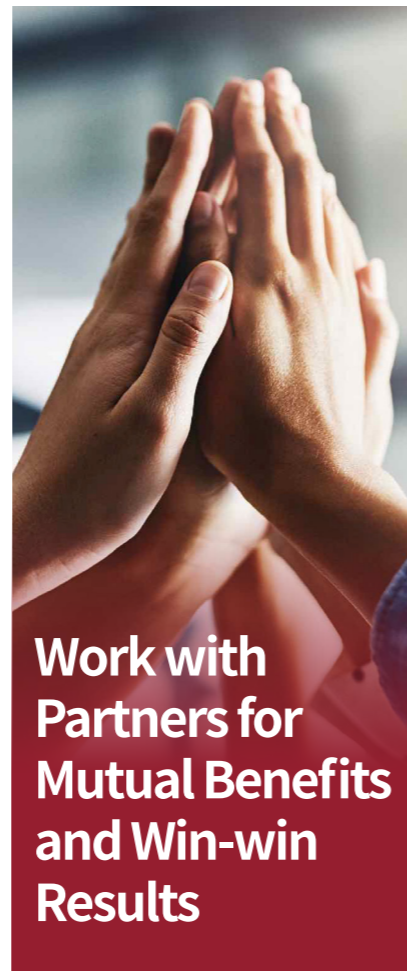
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Consolidate the Foundation and Put Governance First



Innovate Products and Develop Technology



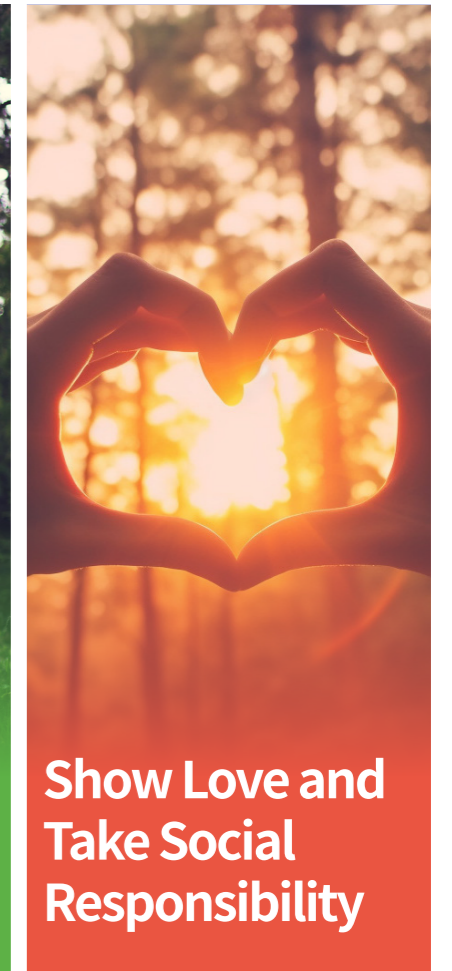
Work with Partners for Mutual Benefits and Win-win Results



Join Hands with Employees for Mutual Growth and Progress



Environmental Protection and Sustainable Development



Show Love and Take Social Responsibility

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About This Report

This Report aims to disclose the practice and performance of Shuangliang Eco-energy Systems Co., Ltd. (stock code: 600481) in environmental, social and governance (ESG) for 2023 to stakeholders including the government and regulatory agencies, shareholders and investors, customers, suppliers and industries, employees, and the public.

» Timeframe

This Report is an annual report, covering the period from January 1, 2023 to December 31, 2023, with some content taken backward or going beyond the above span to enhance its comparability and completeness.

» Reporting Entities

This Report incorporates Shuangliang Eco-energy Systems Co., Ltd. and its subsidiaries. For convenience, "Shuangliang Eco-energy Systems Co., Ltd." is also hereinafter referred to as "Shuangliang Eco-energy", the "Company" or "We". The names and abbreviations of the subsidiaries are explained in the text respectively.

» Basis of Preparation

Sustainable Development Goals (SDGs) in 2030, issued by the United Nations

The Ten Principles of the Global Compact, issued by the United Nations

GRI Standards, issued by the Global Commission on Standards for Sustainable Development

ISO 26000 - Guidance on Social Responsibility (2010), issued by International Standardization Organization

Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-ESG5.0), issued by the Chinese Academy of Social Sciences

Guidelines on Corporate Social Responsibility Reporting (GB/T36001-2015), CNS

Guidelines on Environmental Information Disclosure of Listed Companies in Shanghai Stock Exchange

Self Regulatory Guidelines for Listed Companies in Shanghai Stock Exchange

» Data Source and Description

The data and cases used in this Report come from the original internal ledger of Shuangliang Eco-energy, relevant statistics and records of the Company's actual operation, policy documents, prospectus, etc. The financial data herein are all in RMB.

» Reliability Assurance

Shuangliang Eco-energy undertakes that this Report is free from any misrepresentation, misleading statement or material omission, and will be liable for the authenticity, accuracy and completeness of the content herein.

» Access to the Report

The electronic version of this Report may be downloaded from such platforms as the official website of Shuangliang Eco-energy (<https://www.shuangliang.com/>) and the official website of Shanghai Stock Exchange. The Report is written in both Chinese and English. In case of any ambiguity between the two language versions, the Chinese version shall prevail.

» Contact

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Message from the Chairman



At Shuangliang Eco-energy, we firmly believe in the imperative of continual evolution to remain relevant in a rapidly changing world. The life of an enterprise will be renewed and continued through the change in interaction with the environment. In this belief, bearing in mind our strategic focus, we step up amidst twists and turns under the unyielding entrepreneurial spirit to promote the healthy, stable, sustainable, and high-quality development of the enterprise.



With our efforts to improve our industrial layout, Baotou New Energy Photovoltaic Industrial Park has been fully completed, which brings an output of 100GW monocrystalline silicon materials and a 20GW (Phase I) photovoltaic module industry chain, making it a benchmark digital factory of speed in Baotou. This shows our leading pace and strength in the field of new energy. Setting an example for the industry, we not only actively make for the promotion of the economy, but also help drive the transformation and upgrading of the energy structure, thereby achieving sustainable development and making important contributions to China's green energy industry.

Our new generation JSDJ S1-Series alkaline water electrolyzer sees a breakthrough innovation, with internationally advanced performance as appraised by the Industry and Information Technology Department of Jiangsu, which has caused a sensation in the industry and attracted many state-owned and central enterprises after launching. Meanwhile, the energy and water-saving industrial circulating water system innovatively developed by us has been successfully selected as a nationally encouraged project, establishing its promotion value in the industry. With outstanding quality, in addition to winning the "Wuxi Mayor Quality Award", we also received the "Jiangsu Provincial Governor Quality Award", the highest quality award established by the provincial government.

Nowadays are witnessing an unprecedented reform of the world, the times, and the technologies. Risk and opportunity coexist. When there is a challenge, there is a chance. The more difficulties we face, the more we need to maintain composure and confidence. On the rugged and sweaty road ahead of us, we keep working together towards glorious success. Since listing on the Shanghai Stock Exchange in April 2003, in recent years, Shuangliang Eco-energy has completed an A-share private placement for RMB3.488 billion and a convertible bond financing of RMB2.6 billion, greatly helping develop the industry with strong capital support.

Chairman of Shuangliang Eco-energy
Miao Wenbin

About Shuangliang Eco-energy

» Main Business

The Company mainly engages in, among others, energy-saving and water-saving equipment systems as well as photovoltaic new energy systems. In the realm of energy saving and water saving, our lithium bromide cooling and heating units and air cooled system products are in a leading position in the industry, while the efficient heat exchanger products maintain the first market share in the air separation field. In terms of photovoltaic new energy, leveraging years of our accumulation in photovoltaic technology, business experience and industry resources, etc., we vigorously expand our photovoltaic monocrystalline silicon business, successfully establishing our market position and image in the photovoltaic monocrystalline silicon industry chain with excellent product quality and a large number of good orders.

In 2023, in response to the national goal of "carbon neutral" and the global energy transition, we independently researched and developed the Shuangliang Green Electricity Intelligent Hydrogen Production Equipment, dedicating ourselves to R&D and innovation in the field of hydrogen energy, and joined hands with peers to promote the construction of a comprehensive hydrogen application ecological chain for boosting the sustainable and high-quality development of the hydrogen industry and the green transformation of the energy structure.


| Company Profile

Established in 1995, Shuangliang Eco-energy Systems Co., Ltd. ("Shuangliang Eco-energy", stock code: 600481) has always been eco-friendly and innovative, committed to becoming a digitally-driven and full-life-cycle carbon neutral solution provider with core competitiveness in such fields as energy saving, water saving and clean energy.

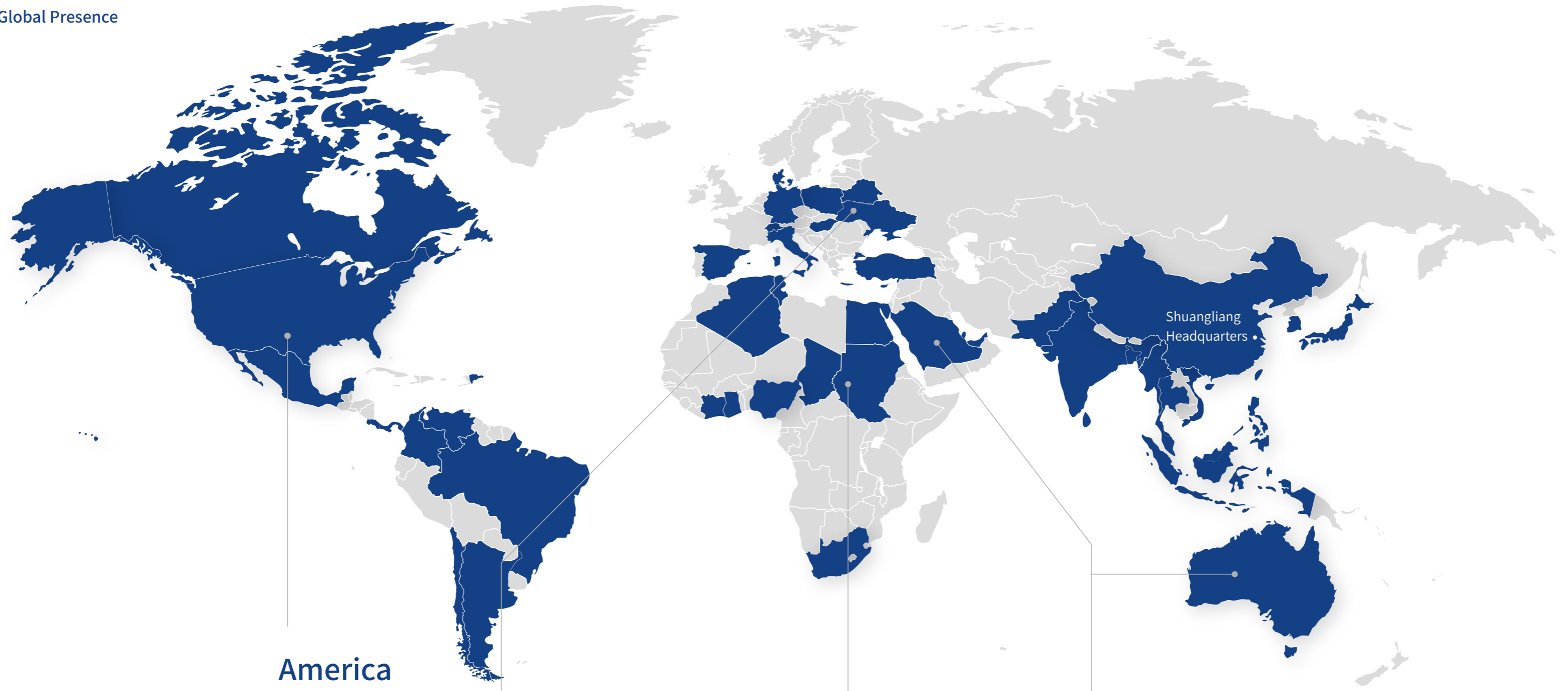
Adhering to promoting the clean energy revolution through digital and service-oriented intelligent manufacturing, the Company has formed a photovoltaic industry chain of polysilicon core equipment, monocrystalline silicon materials and battery modules, while accumulating great power in technology R&D and equipment production for clean energy such as geothermal energy, hydrogen energy, green electricity and energy storage, to help realize the "dual-carbon" goal with digital-driven carbon neutral comprehensive services.



Shuangliang Eco-energy Systems Co., Ltd.

Business Segments	Main Products	Main Uses
 Energy-saving and water-saving equipment	Lithium bromide chiller units and heat pumps, electric heating pumps, electric refrigeration systems, heat exchangers, air-cooled systems, etc.	They are used in thermal power, coal chemical industry, biochemical industry, brewing, metallurgy, water treatment, steel, petrochemical refining, textile, clean heat supply, air separation, polysilicon production, and other industrial fields
 New energy equipment	Polysilicon reduction furnaces and their modules, green electricity intelligent hydrogen production systems	They are used for the upstream of the photovoltaic industry and hydrogen energy industry
 Photovoltaic	Large-size monocrystalline silicon rods, silicon wafers, high-efficiency photovoltaic modules, etc.	They are used for the production of photovoltaic cells and the construction of downstream photovoltaic power stations in the photovoltaic industry

» Global Presence



America

North America

Trinidad and Tobago
Dominican Republic
Mexico
United States
Canada

South America

Venezuela Chile
Colombia Argentina
Brazil

Europe

Spain Denmark
Italy Belarus
Cyprus
Switzerland
Germany
Poland
Hungary
Türkiye
Ukraine

Africa

Egypt
Tunisia
Algeria
Cote d'Ivoire
Ghana
Nigeria
Sudan
South Africa
Chad

Asia-Pacific

China Myanmar Sri Lanka
South Korea Thailand India
Philippines Malaysia Dubai Qatar
Vietnam Singapore UAE
Pakistan Indonesia Saudi Arabia
Bengal Australia

» Milestones

1982

The Company's core team started the business.

1985

The Company established Jiangyin Lithium Bromide Chiller Factory and produced the first bromine chiller.

1992

The Company participated in drafting China National and Industry Standards for Lithium Bromide Chillers.

1994

Shuangliang's technology center was recognized as a China National Level Technology Center.

1995

The Company was formally established.

1998

On April 20, the then-current General Secretary visited Shuangliang Eco-energy.

The Company's product was honored as the "National Key New Product".

2000

The Company was recognized by the Ministry of Science and Technology of China as a "National High-tech Enterprise".

The Company was selected for "China's Top Ten Outstanding Enterprises for Machinery".

2001

"Shuangliang Eco-energy Postdoctoral Programme" was set up with the approval by the Ministry of Human Resources and Social Security of the PRC.

The Company was recognized as the "Most Satisfied Enterprise" in China.

2002

The trademark of the Company was recognized as the "China Well-known Trademark".

The Company was recognized as one of the "Top 100 Enterprises in China's Machinery Industry".

2003

The Company was listed on the Shanghai Stock Exchange

The Company was honored as "China's Top 100 Enterprises in Competitiveness of Independent Intellectual Property Rights".

The lithium bromide product won the title of "China Famous Brand".

2004

The Company was selected for "China's Best 10 Mechanical Enterprises".

The Company was awarded the title of "China Top Ten Enterprises in High-quality Products After-sales Service Industry".

2006

The Company was listed in "2006 China Top 50 Private Enterprises for Independent Innovation Capability".

2007

The Company was awarded the title of "Leader of China's Industrial Sector".

2008

The Company won the "Outstanding Contribution Award for Safeguard Olympics".

2009

The Company was listed in "China Influential Energy-Saving Renovation Enterprise".

The Company was listed in "China Top 100 Listed Private Enterprises".

2011

The Company was awarded the "Meritorious Enterprise for Equipment China".

2016

The Company was recognized as a "Chinese Industrial Demonstration Enterprise".

Shuangliang Eco-energy Systems Co., Ltd. won the "Enterprise Award of the 4th China Grand Awards for Industry".

2017

The Company was awarded as China's "Service-Oriented Manufacturing Demonstration Enterprise".

The lithium bromide unit was honored as the "Single Champion" product of China's manufacturing industry.

2018

The Company was selected for the First Batch of Industrial Internet Development Demonstration Enterprises in Jiangsu Province (Five-star Cloud Enterprises)

2019

The Company won the "2019 China Electric Power Science and Technology Progress Award".

2020

The "Intelligent All-steel Structure Indirect Air Cooling System" of the Company won the "Project Award of the 6th China Grand Awards for Industry".

2021

A new photovoltaic energy industrial park was built in Baotou to lay out an industry chain for large-size monocrystalline silicon wafers and high-efficiency photovoltaic modules, and a clean energy production base was built in Jiangyin to develop core equipment for polycrystalline silicon and green electricity intelligent hydrogen production system, creating a core advantage in photovoltaic energy and hydrogen storage.

2022

Shuangliang Shuanghui (Shanghai) Industrial Co., Ltd. was established to create an international sales platform.

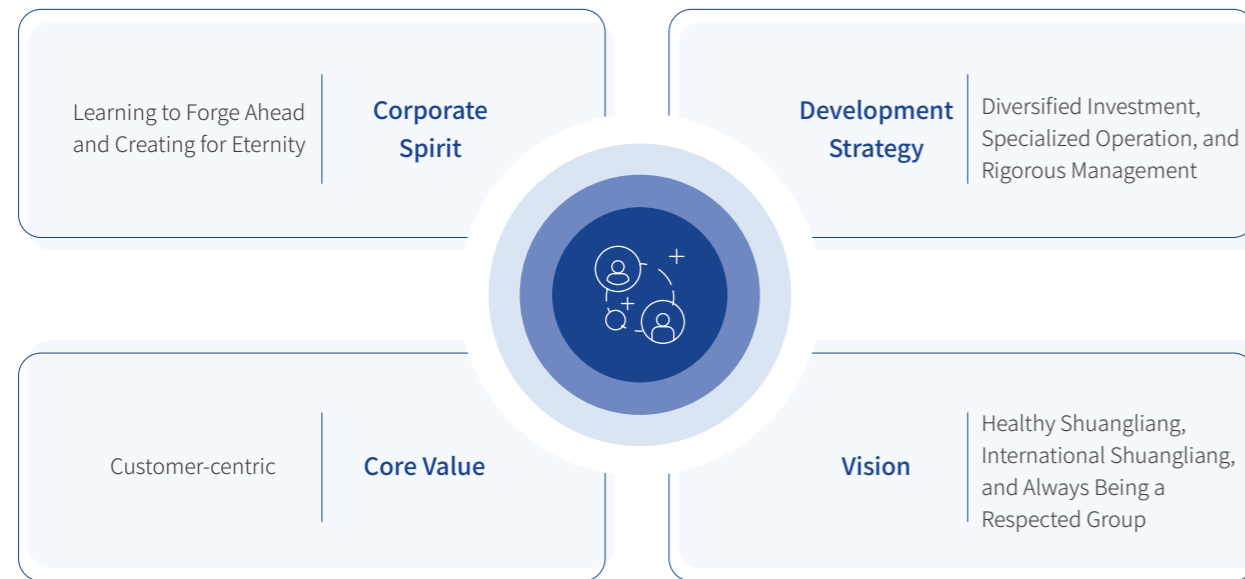
2023

The Company celebrated the 20th anniversary of its listing.

Shuangliang's new product for the JSDJ S1-Series alkaline water electrolyzer was released.

» Corporate Culture

With corporate spirit as its common belief and driving force, Shuangliang Eco-energy sticks to its "customer-centric" core value, continuously improving the quality of products and services under the support of technological innovation, towards a win-win result and development. Based on its development strategy and vision, the Company hammers away at becoming a leader in the industry, to create greater value for employees, customers, and society.



| 2023 Highlights

» Development in 2023

Shuangliang Eco-energy upholds the vision of "Healthy Shuangliang, International Shuangliang, and Always Being a Respected Group". To pursue a high-quality development goal, we have established strategic cooperation with multiple partners to achieve "a win-win future, a strong alliance, and a 3060 dual-carbon new ecology", for further eco-friendly growth.

Month	2023 Highlights
February	<ul style="list-style-type: none"> A strategic cooperation agreement was signed with Huaneng Renewables Corporation Limited Mengdong Branch to establish a strategic partnership in the fields of new energy wind power, photovoltaics and energy storage, etc.
April	<ul style="list-style-type: none"> The Company ushered in its 20th anniversary of listing on the Shanghai Stock Exchange.
May	<ul style="list-style-type: none"> A strategic cooperation agreement was signed with Baogang Group Energy Conservation and Environmental Protection Technology Industry Company.
July	<ul style="list-style-type: none"> Strategic cooperation was established with the Guangzhou Institute of Energy Conversion, and Chinese Academy of Sciences on liquid cooled energy storage, for joint development of high-power and efficient liquid cooled energy storage systems using both sides' respective advantages. A strategic cooperation agreement was reached with Wuhan Longking Environmental Protection Technology Co., Ltd. whereby to establish a long-term and stable strategic partnership in areas such as waste heat utilization and intelligent energy.
September	<ul style="list-style-type: none"> Strategic cooperation was reached with SINOPEC Nanjing Chemical Industries Corporation on innovative technology, product development, and application collaboration. The offering of convertible corporate bonds for RMB2.6 billion recorded a success.
October	<ul style="list-style-type: none"> The Company was awarded the "2023 Outstanding Supplier Honor" by Moutai Group. It is the only enterprise as an equipment chain supplier in the history of Moutai Group to be selected as a strategic supply partner of such group. Shuangliang's new product for the JSDJ S1-Series alkaline water electrolyzer was released.



» Honors and Awards in 2023

Shuangliang Eco-energy is committed to forming core competitiveness in the field of digital and service-oriented intelligent manufacturing for energy saving, water saving, and photovoltaic new energy. In 2023, the Company gained various honors and awards. In the future, it will continue to move forward on a "carbon" path with a positive outlook, injecting new impetus into promoting energy structure transformation and social green development.



Award/Honor Title	Granted By	Picture
JIANGSU FAMOUS EXPORT BRAND	Department of Commerce of Jiangsu Province	
Green Factory in Jiangsu Province (Batch 4)	Industry and Information Technology Department of Jiangsu	
Jiangsu Provincial Governor Quality Award	People's Government of Jiangsu Province	
Outstanding Listed Company for 2021-2023	People's Government of Jiangyin City	
Standards Drafting Unit of General Rules for Green Enterprises Evaluation (T/CIET237-2023)	Standardization Working Committee of China Association for Promoting International Economic & Technical Cooperation	

Award/Honor Title	Granted By	Picture
Director Member of the Hydrogen and Energy Storage Professional Committee	Wuxi Branch of China International Chamber of Commerce	
Outstanding Enterprise Award for Contribution to Carbon Neutrality	Carbon Neutrality Committee of China Energy Conservation Association	
Outstanding Brand of Listed Companies in 2023	China Times	
ESG Gold Jasmine Award	Xinhua Daily	



ESG Management

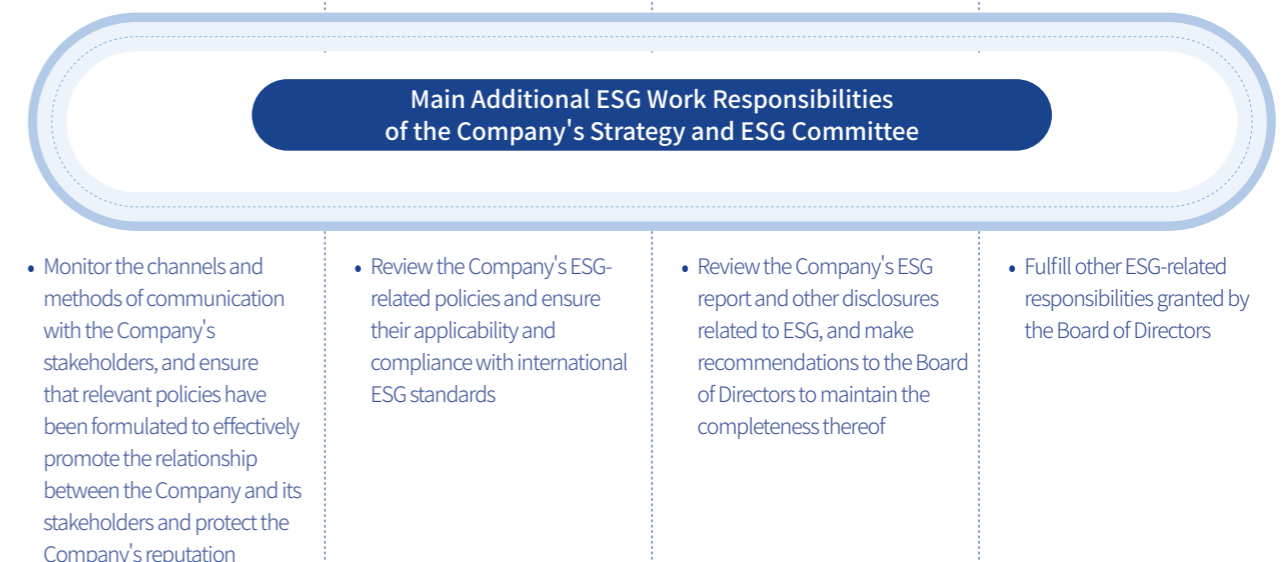
Shuangliang Eco-energy takes "saving energy, improving the environment of human beings, and enhancing the quality of human life" as its corporate mission, in line with the environmental, social and governance (ESG) concept. In recent years, the Company has optimized and upgraded its corporate social responsibility management, forming an effective ESG working mechanism in practice.



Company ESG Management Architecture

In order to further promote the Company's ESG management level, improve the ESG management system, and enhance the ESG management capabilities, upon deliberation and approval by the Company's Board of Directors, the "Strategy Committee of the Board of Directors" was renamed as the "Strategy and ESG Committee of the Board of Directors", with ESG work responsibilities added on the basis of the original responsibilities and the rules of procedure formulated accordingly.

- Guide and develop the Company's ESG vision, goal, strategy and architecture to ensure they meet the Company's needs and comply with applicable laws, regulations, regulatory requirements, and international standards
- Monitor the development and implementation of the Company's ESG vision, strategy and architecture, including setting ESG management performance goals for the Company and reviewing progress in implementing such goals, and providing recommendations for improving performance
- Identify and prioritize material ESG risk issues for the Company, and provide recommendations to the Board of Directors
- Study the main ESG trends, related risks and opportunities, and evaluate the adequacy and effectiveness of the Company's ESG architecture accordingly



| Material Issues

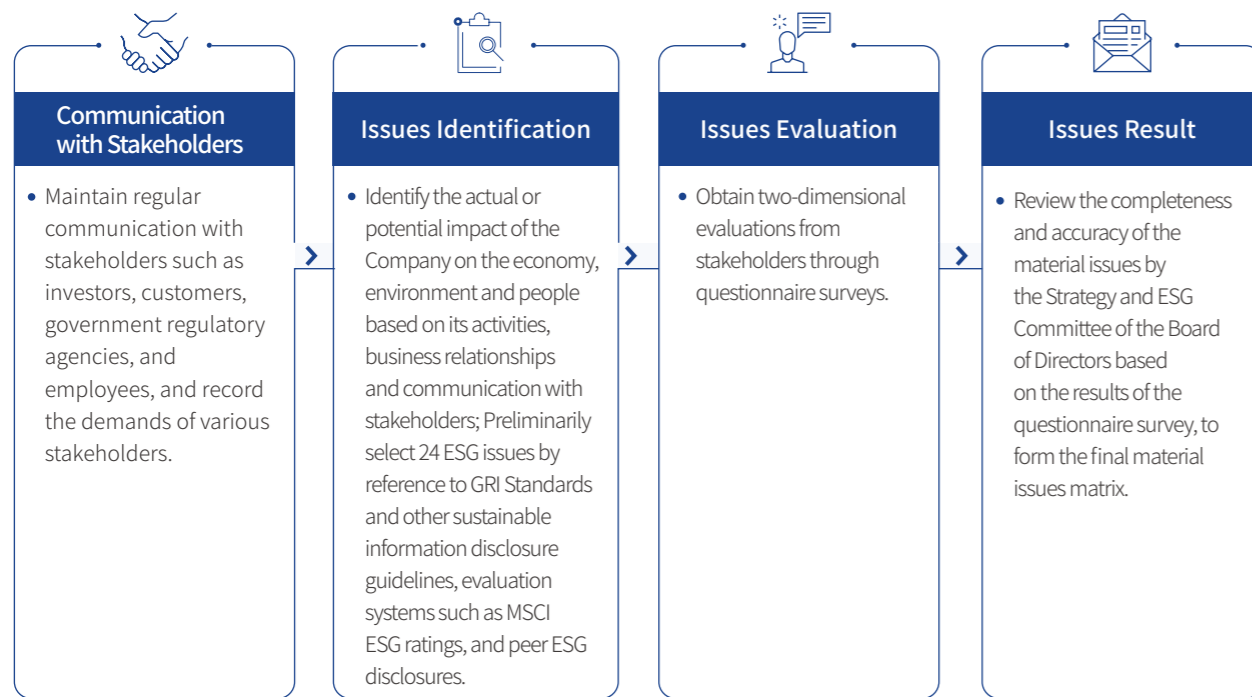
» Communication with Stakeholders

The participation of stakeholders plays an important part in promoting the Company's ESG management. Attaching great importance to communication with stakeholders, we have built a diversified communication mechanism, actively knowing the stakeholders' expectations and suggestions for our ESG work through various communication channels. In this connection, key stakeholders are identified based on our business characteristics, including employees, customers, investors, government and regulatory agencies, media, industry associations, partner organizations, and suppliers/service providers.



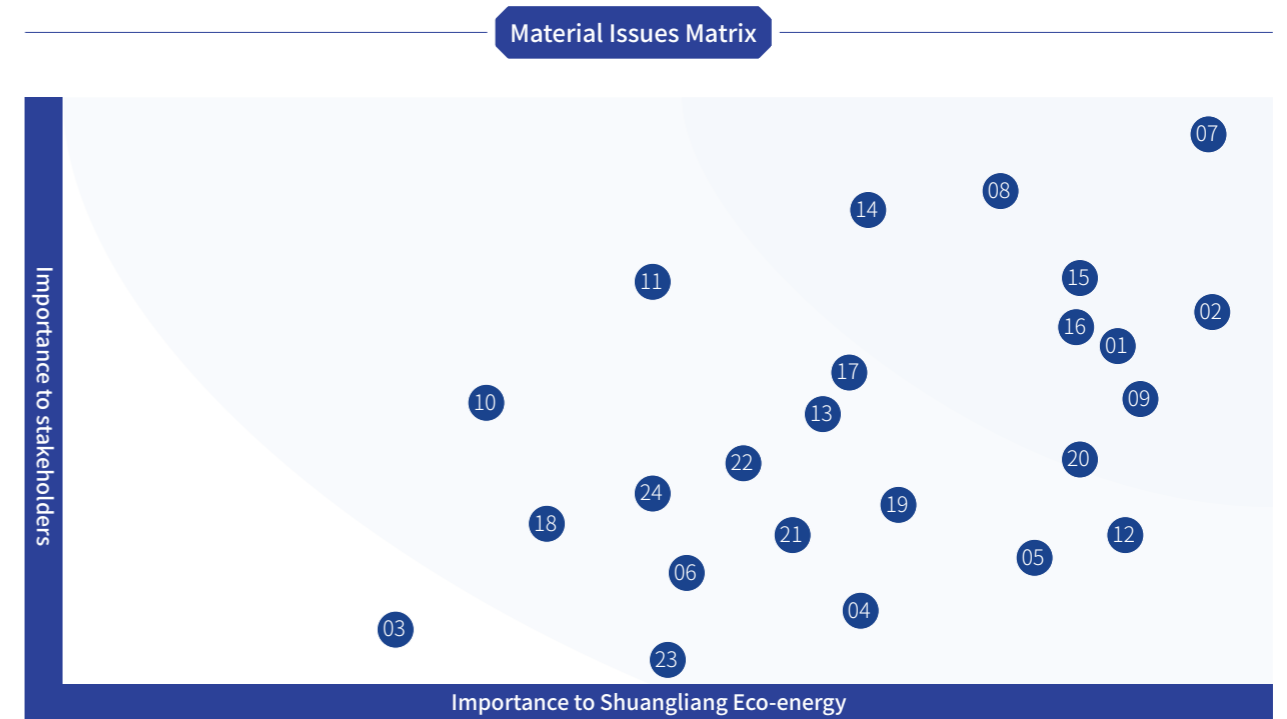
» Material Issues Analysis

To determine the focus of our ESG work, we have analyzed material ESG issues based on communication with various stakeholders. Referring to the ESG issues highlighted by MSCI in the mechanical industry, the GRI STANDARDS issued by the Global Sustainability Standards Board (GSSB), and the ESG disclosures made by peers, we had a preliminary screening for material issues, and identified those related to the Company's impact on the economy, environment, and society, as well as the impact on stakeholder evaluation and decision-making. After that, we sought two-dimensional evaluations from various stakeholders through questionnaires, and obtained the questionnaire results through the data from the material issue identification process. Then, by analyzing international and domestic social responsibility standards, national and local government policy requirements, and in light of the Company's development strategy and planning, we ranked the importance of material issues in two dimensions: "importance to stakeholders" and "importance to Shuangliang Eco-energy". Finally, a matrix of material ESG issues was formed, which provides a significant basis for our future ESG management.



Material issue identification process

Through the above process, we formed a material issues matrix, as follows:



Environment	Society	Corporate governance	Business operation
01 Renewable energy opportunities	07 Product quality	14 Business ethics	22 Profitability
02 Clean technology opportunities	08 R&D and Innovation	15 Compliance with laws and regulations	23 Leading industry development
03 Environmental management system	09 Customer service	16 Corporate governance	24 Modern industrial system construction
04 Environmental emergency response management	10 Data and privacy security	17 Risk management	
05 Environmental emergency Waste discharge management	11 Labor management	18 Information safety	
06 Integrated energy management	12 Employee development and training	19 Investor rights	
	13 Supply chain management	20 Party-building guidance	
		21 Digitalization and informatization construction Business operation	

Material issues



Consolidate the Foundation and Put Governance First

To consolidate its foundation for high-quality development, and continuously improve its governance level, Shuangliang Eco-energy has established a sound organizational structure, under which rights and responsibilities are well defined to enhance resource allocation capabilities; and the operation of the "Three Boards" is properly regulated to enhance governance capabilities. Besides, the Company has strengthened compliance management and business ethics supervision, to establish a law-abiding, responsible, and respected corporate image. Meanwhile, it has strictly performed the information disclosure obligations of listed companies, and stepped up communication and exchange with investors, to effectively protect their legitimate rights and interests.

- Standardize the Governance Structure and Consolidate the Foundation of Development
- Fulfill the Information Disclosure Obligations and Maintain Investor Relations
- Ensure Compliance with Laws and Regulations, and Observe Business Ethics

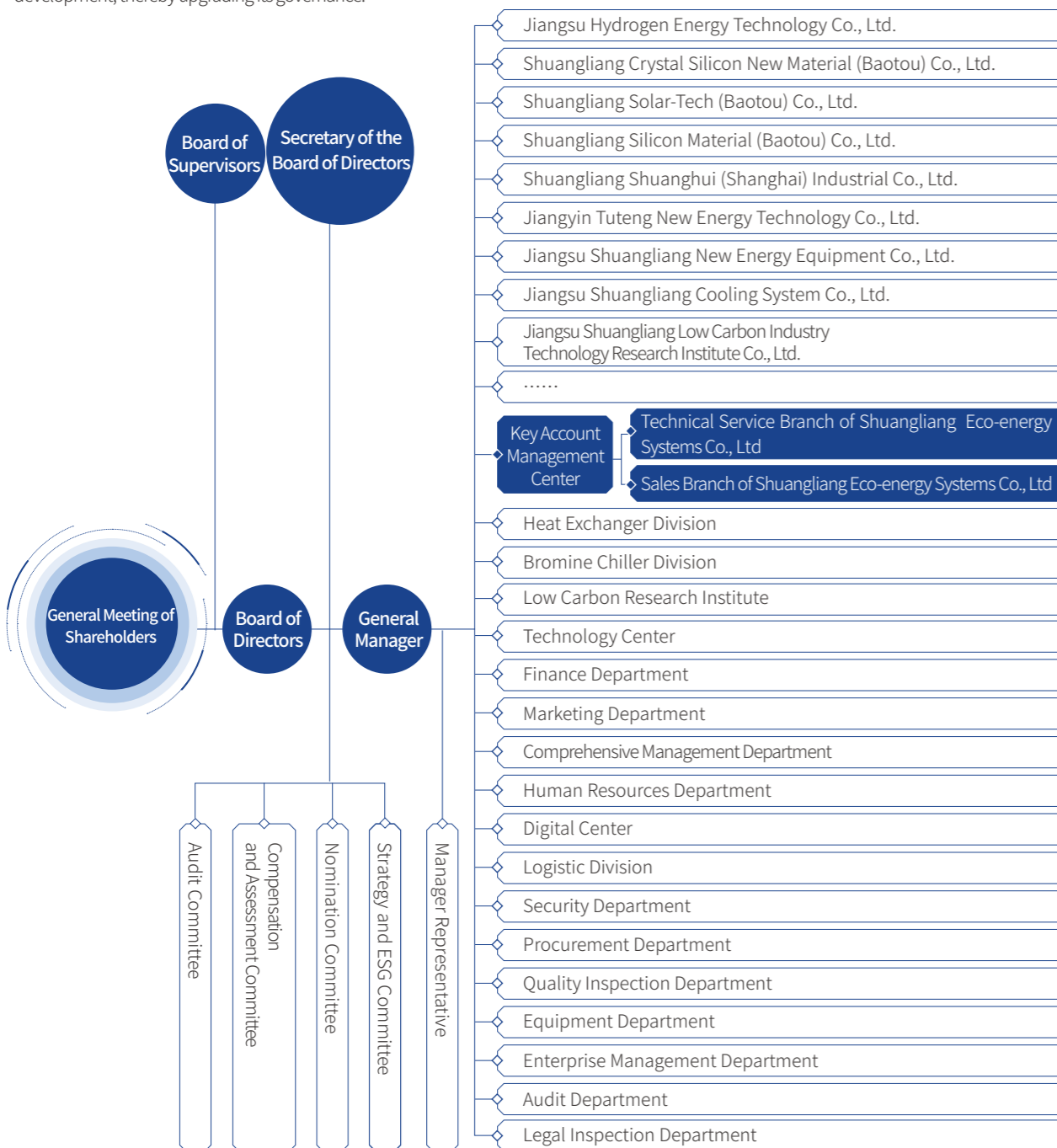


Standardize the Governance Structure and Consolidate the Foundation of Development

Shuangliang Eco-energy has established a sound internal organizational structure to enhance resource allocation and decision-making efficiency, while making efforts to ensure the standardized operation of the General Meeting of Shareholders, the Board of Directors and Board of Supervisors under the Three-Board system to promote governance efficiency of it as a listed company.

Organizational Structure

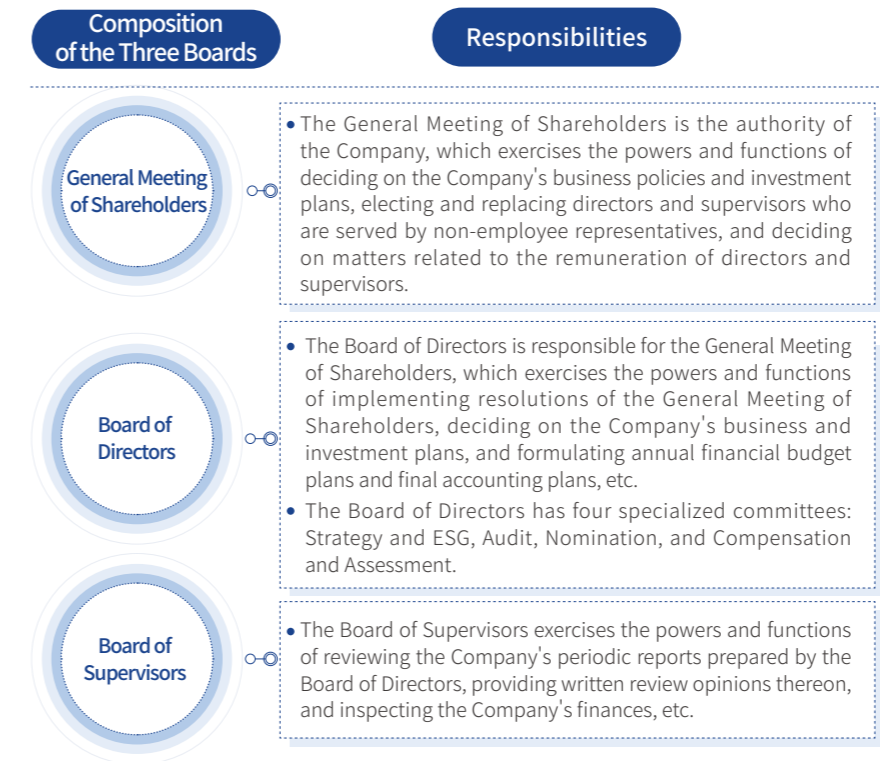
Bearing in mind a good organizational structure is conducive to promoting efficient governance, the Company has established and keeps improving its organizational structure, with functional departments, division of responsibilities, communication and collaboration, and power relationships, etc. well defined, to help it clarify goals, optimize resources, coordinate relationships and adapt to changes at different stages of development, thereby upgrading its governance.



Shuangliang Eco-energy Organizational Chart

Three-Board Operation

In accordance with the *Company Law of the People's Republic of China*, the *Code of Governance for Listed Companies*, the *Guidelines for the Bylaws of Listed Companies* and other relevant laws and regulations, Shuangliang Eco-energy has formulated the *Articles of Association*, established a Three-Board system comprising the General Meeting of Shareholders, the Board of Directors and the Board of Supervisors with well-defined responsibilities, and built various mechanisms for election, convening and voting, etc. as support. In 2023, the Three-Board system ran well, providing sufficient guarantees for the high-quality operation of the Company.



Professionalism, Independence and Diversity of the Board of Directors

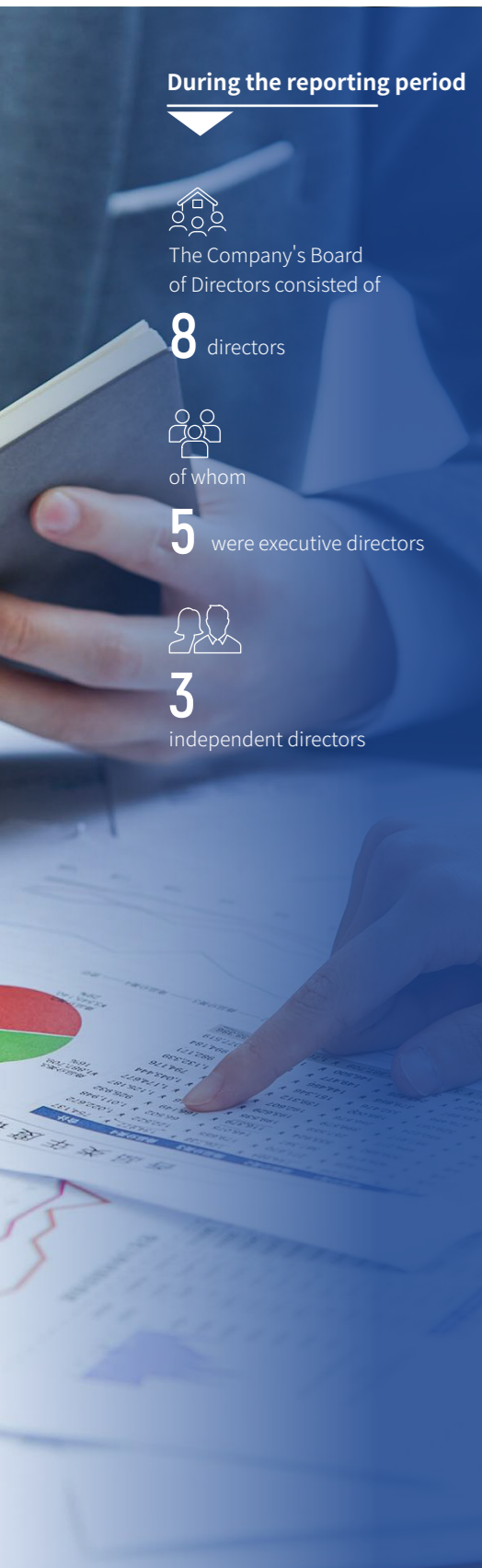
The Company attaches great importance to the professionalism, independence and diversity construction for the Board of Directors, with a view to continuously improving the decision-making quality and efficiency of the Board of Directors, enhancing its supervisory and innovative capabilities, and promoting the Company's governance level and competitiveness.



Current Status of the Professionalism, Independence and Diversity of the Board of Directors

During the reporting period

The Company has held	with
4 General Meetings of Shareholders	19 resolutions passed
and	with
15 meetings of the Board of Directors	71 resolutions passed
and	with
11 meetings of the Board of Supervisors	44 resolutions passed
The Company has held	
3 meetings of the Audit Committee	
3 meetings of the Nomination Committee	
1 meeting of the Compensation and Assessment Committee	



» Election and Appointment of Directors

The Company pursues building a Board of Directors with high governing capacity and efficiency, while laying emphasis on safeguarding the legitimate rights and interests of shareholders and the Company's reputation. To this end, a corresponding director nomination and election mechanism has been established whereby to elect directors in a scientific and regulated manner. During the reporting period, 1 executive director of the Company resigned for personal reasons, and 1 executive director was newly elected by the Company through legal procedures.

- The Nomination Committee shall propose to the Board of Directors the replacement and recommendation of new director candidates
- Director candidates should make a written commitment before the General Meeting of Shareholders, agreeing to accept the nomination, undertaking that the publicly disclosed information of the director candidates is true and complete, and guaranteeing that they will effectively fulfill their duties as directors after being elected

Nomination

Director nomination and election mechanism

Election

- Directors shall be elected or replaced by the General Meeting of Shareholders, with a term of three years. A director may serve a consecutive term upon re-election after the expiration of his/her term of office
- Before the expiration of a director's term of office, the General Meeting of Shareholders cannot dismiss him/her without cause
- If the term of office of a director expires and a new director is not elected in a timely manner, the original director shall still perform the duties of a director in accordance with laws, administrative regulations, departmental rules, and the provisions of the Articles of Association before the newly elected director takes office
- A director may be concurrently held by the general manager or other senior officer, provided that the total number of directors who concurrently hold the position of general manager or other senior officer and directors held by employee representatives shall not exceed half of the total number of directors of the Company

» Compensation Supervision

The Compensation and Assessment Committee under the Board of Directors of the Company evaluates the responsibilities, abilities, and work performances of directors and officers annually, and puts forward corresponding suggestions on compensation, which will be submitted to the Board of Directors and the General Meeting of Shareholders for deliberation. Valuing the transparency of compensation for directors and officers, the Company discloses the changes in shareholding and compensation of directors and officers every year in its annual report.

Fulfill the Information Disclosure Obligations and Maintain Investor Relations

Shuangliang Eco-energy places great emphasis on safeguarding the legitimate rights and interests of investors. In order to promote investors' understanding and recognition of the Company, and establish a good relationship with investors (and prospective investors), the Company has formulated a range of systems such as the *Measures for Investor Relations Management* and the *Rules for Investor Reception and Promotion*, empowering the Board of Directors to be the decision-making body for investor relations management, with the chairman being the first person responsible, and the secretary the main person in charge, while setting the board office as a dedicated department for this work.

Moreover, relevant documents including the *Information Disclosure Affairs Management Rules*, the *Rules on Accountability for Material Errors in Annual Report Information Disclosure*, the *Insider Information Management Rules*, and the *Sensitive Information Investigation Management Rules*, have been developed to enhance the authenticity, accuracy, completeness, and timeliness of information disclosure, thereby improving the quality and transparency of information disclosure.

Information Disclosure

- Disclosure Channels: *China Securities Journal, Securities Times, Shanghai Securities News*, official website of Shanghai Stock Exchange
- Disclosure Principles: Compliance, sufficiency, fairness, high efficiency and low cost, confidentiality (for trade secrets)

Investor Communication

- Communication Channels: SSE E-interactive, SSE performance briefing, performance exchange, telephone, email, message via official website, message via backstage of Shuangliang Eco-energy's official account, site visits by research company, etc.
- Communication Content: Company's development strategy, business philosophy, business purpose; significant information in business, management and operation; corporate culture, etc.

Communication with Securities Regulatory Authorities

- Disclosure of Regulatory Situation: Timely and complete disclosure to investors of the supervision conducted by regulatory authorities on the Company
- Proactively Solicit, Report and Communicate: Proactively solicit, report, and communicate with regulatory authorities after the preparation of new share issuance, changes in the use of funds raised, etc.

Information disclosure and investor communication mechanism

During the reporting period

The Company actively interacted with investors, responding to **105** investor questions through the "SSE E-interactive"

platform; holding **4** performance briefing sessions;

and **3** online performance exchange meetings; receiving multiple batches of domestic and foreign securities traders, funds and other investment institutions, as well as individual investors, with a total of over **200** people;

In terms of information disclosure, the Company disclosed a total of **140** announcements throughout the year;

getting an **A** as a result of the 2023 information disclosure assessment by the Shanghai Stock Exchange.

Ensure Compliance with Laws and Regulations, and Observe Business Ethics

Shuangliang Eco-energy strictly complies with laws and regulations, ensuring to maintain going-concern through systematic compliance management without breaking the law. Meanwhile, the Company is committed to establishing a respectable corporate image, continuing its efforts to improve business ethics supervision and management, whilst practicing the concepts of honesty, fairness and responsibility, to maintain a good cooperative relationship with suppliers, employees, customers and other stakeholders.

Compliance with Laws and Regulations

To ensure its lawful and compliant operation, the Company attaches great importance to compliance management with the *Compliance Management Rules of Shuangliang Eco-energy Systems Co., Ltd.* formulated to fully implement the compliance concept of viewing compliance as "the bottom line of operation, the source of value creation, and the responsibility of everyone".

Compliance Management Organization

The Board of Directors is the highest decision-making body for compliance management, responsible for deliberating and approving the Company's basic compliance management policies and supervising their implementation. The Board of Directors has a Risk Management Committee responsible for evaluating the effectiveness of the Company's compliance management. In addition, the Company has established a dedicated position of compliance director and a compliance management department, while setting up special compliance management positions in various department branches, to be responsible for the daily management of compliance risks.

Compliance Management Measures

Various measures, such as compliance risk identification and assessment, compliance consultation and review, compliance training, compliance supervision, inspection and monitoring, and compliance reporting and feedback, have been taken by the Company to ensure the orderly implementation and effective execution of compliance management.



Operation mechanism of compliance management



The Company had a legal lecture on anti-fraud and prevention of duty crimes

To strengthen the Company's publicity and education for anti-fraud and prevention of duties crimes, and create a strong rule of law climate, in April 2023, our Legal Supervision Department organized a lecture on the rule of law in anti-fraud and prevention of duties crimes, with the participants including the first-tier leaders and relevant employees from finance, bidding and procurement, and enterprise management divisions of the Company. The police officers from the Economic Investigation Brigade of Jiangyin Public Security Bureau were invited to provide systematic training in the lecture on, among others, telecommunications fraud, types of duty crimes, and prevention of such crimes, while giving warning education through actual cases analysis, effectively improving the awareness of leaders and employees in preventing telecommunications fraud as well as their understanding of duty crimes.



The site of the legal lecture on anti-fraud and prevention of duty crimes

Reporting, Accountability, and Performance Evaluation Mechanisms

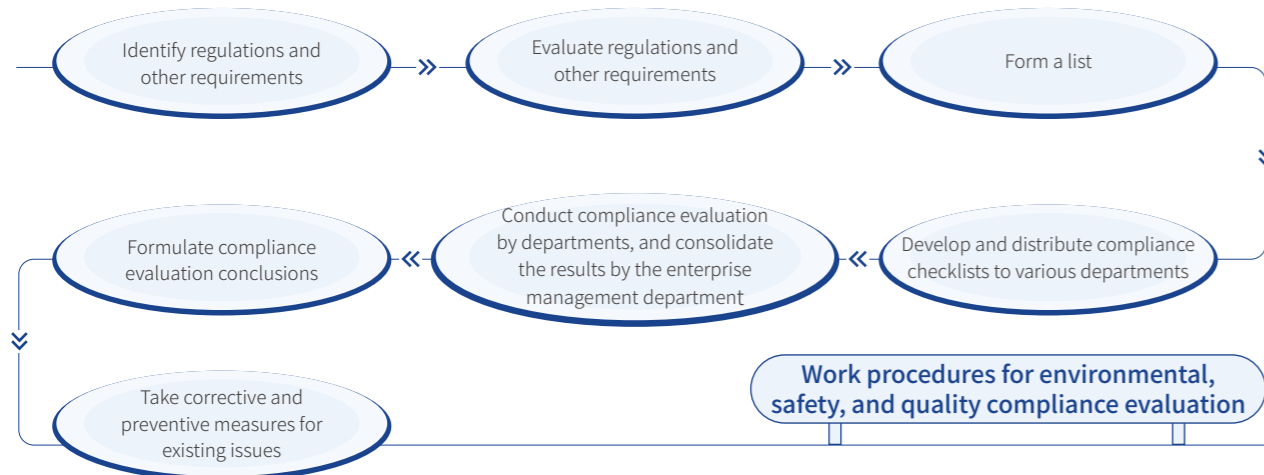
To enhance the attention of all employees to compliance management, the Company has formulated compliance-related reporting, accountability, and performance evaluation systems or mechanisms.



Reporting, accountability, and performance evaluation mechanisms for compliance management

» Environmental, Safety, and Quality Compliance Evaluation

In compliance management, the Company pays special attention to environmental, safety, and quality compliance. To ensure that the Company fulfills its commitment to comply with laws and regulations made in its environmental, safety, and quality policies, the Company has formulated the *Compliance Evaluation Measures*, which has delineated the scope of environmental, safety, and quality compliance risk identification and the work procedures for compliance evaluation.




| Business Ethics

The Company thinks highly of business ethics cultivation and supervision, always practicing the concepts of honesty, fairness and responsibility, to establish a favorable corporate image, and maintain good cooperation relationships with various stakeholders including employees, suppliers and customers.


» Business Ethics Supervision System

As a key to the Company's supervision over business ethics, anti-corruption and anti-bribery are subject to rules and regulations promulgated by Shuangliang Eco-energy, including the *Anti-Corruption Policy* and the *Employee Handbook*.



Anti-Corruption Policy

This document stipulates a code of conduct for procurement, sales, gifts and hospitality, business banquets, charitable donations, sponsorship, and other activities, as well as disciplinary measures. All employees are required to sign the *Acknowledgement of Anti-Corruption Policy*.




Employee Handbook

This document proposes a code of conduct for employees, which expressly requires, *inter alia*, "strictly following the Company's financial discipline, not engaging in corruption or bribery". All employees will receive training for the handbook provided by the Company.

» Supervision over High-Risk Positions


Much focus is put on implementing stricter supervision over high-risk positions. As a part of the *Anti-Corruption Policy*, sections titled "Anti-Corruption Policy for Procurement" and "Anti-Corruption Policy for Sales" are tailored for procurement and sales, two types of positions with a high risk of corruption or improper behavior.





Develop sales principles

- Include, specifically, the principles of clarity and truthful accounting, requiring accurate recording of contact with customers and truthful entry of accounting data



Conduct monitoring and prevention based on risks

- Cover Key Points: Clearly define the monitoring focus of key points in the sales process, including promotion, marketing, agent management, sales revenue, and management supervision, where there may be behaviors against laws and regulations such as corruption/bribery
- Clarify Preventive Measures: Develop multiple preventive measures from a systemic perspective for each key point to avoid corruption, bribery and other behaviors that violate business ethics

Anti-corruption policy for sales



Innovate Products and Develop Technology

Shuangliang Eco-energy values product quality, is committed to innovative development, and seeks to constantly raise customers' satisfaction. The Company has a well-established quality management system to strictly guarantee product quality, with high input on product innovation and effective intellectual property management to ensure the protection and commercialization of innovative achievements.

- Manage and Assure Quality
- Put Customer First, and Focus on Service
- Adhere to Scientific Research and Innovation for High-Quality Development



Manage and Assure Quality

Product quality management is always a focus of Shuangliang Eco-energy. Based on ISO 9001 and in light of its development and operation, the Company has developed relevant product and quality management rules, and practiced the concept of providing high-quality products and ensuring product quality in daily production, continuously improving its quality management system.

Quality Management System

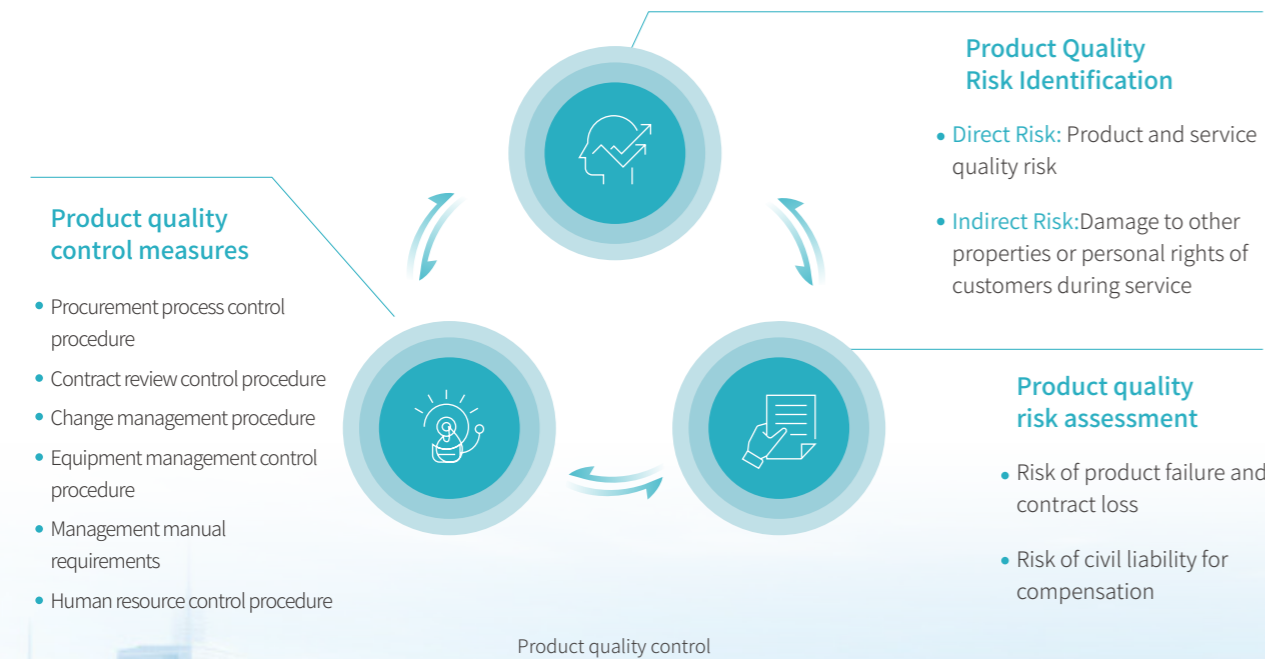
In order to implement the guiding ideology of "zero errors in quality management and zero defects in product quality", the Company has established a full process product quality control process from product quality risk analysis, risk evaluation to quality control measures in accordance with the requirements of the quality management system ISO 9001. A series of rules including the *Quality Assessment Management Rules*, the *Product Consistency Management Rules*, the *Identification and Traceability Management Rules* have been put in place whereby to enhance employees' awareness of quality responsibility, reduce losses on quality of products, services, processes, and other aspects caused by work errors; maintain consistency of certified products, control and manage change processes to meet product certification requirements, and improve the Company's quality assurance capabilities; identify and record the product, inspection, and testing status of raw materials and purchased parts throughout the entire process from entry to delivery, ensuring traceability of product quality processes.



ISO 9001 quality management system certification

<p>Consistency control requirements</p>	<p>Change control</p>	<p>Nonconformity correction</p>
<ul style="list-style-type: none"> The Company shall ensure that there are no differences between the manufactured products and the certified or energy efficiency registered products, with consistent raw and auxiliary materials, acceptance standards for raw and auxiliary materials, process quality requirements, production equipment and fixtures, production operation procedures, factory inspection control, and outer packaging, labels and nameplates. 	<ul style="list-style-type: none"> In case of changing (adding or replacing) the approved product name, nameplate, specification/model, controlled components and materials for procurement and on-site use, it is required for the Company to provide relevant information including product performance indicators, safety and reliability indicators, and environmental indicators, and then apply for change on the corresponding technical platform system. 	<ul style="list-style-type: none"> For various inconsistencies discovered, relevant departments of the Company shall take corrective measures to ensure that products applied for certification or labeling continue to meet the requirements of energy-saving certification and energy efficiency labeling.

Product consistency management control requirements



Once finding any material internal and external quality issue, quality complaint from large group customer, and quality problem that has been repeated three or more times, the Company will immediately organize a special quality analysis meeting to form corrective and preventive measures. At the meeting, a root cause analysis for each issue (including potential issue) or statistical trend shall be made, and corresponding measures, responsible departments, responsible persons, and schedules be defined.



Control process for quality analysis meeting

Management of Non-Conforming Products

All products returned from the market, voluntarily recalled by the Company, or unsuitable for the factory production process will be taken back by the Company as per the *Product Recycling Management Rules* for rework, repair, reprocessing and other utilization. Under the *Non-Conforming Product Management Rules*, the Company's production line manager or quality inspector shall complete the *Non-Conforming Product Report Form* in case of discovering non-conforming products, and all non-conforming products shall be classified and responded to within 24 hours after being reported.

Classification of Non-Conforming Products	Definition	Treatment or Control Process
Serious non-conforming products	<ul style="list-style-type: none"> Non-conforming products that fail to pass the product performance test (excluding new product test); Involve non-conformity on important safety features of the unit; Carry losses of not less than RMB10,000 on scrapping or repair. 	<ul style="list-style-type: none"> The Quality Inspection Department shall immediately report to the supervisor and organize a special quality analysis meeting, while also reporting to the Enterprise Management Department of the joint-stock company. The deputy general manager in charge (quality assurance engineer) shall sign the opinions on the disposal of serious non-conforming products based on the resolution of the quality analysis meeting. The Enterprise Management Department is responsible for reporting to relevant business units, and drawing inferences from the instance.
Main non-conforming products	<ul style="list-style-type: none"> Non-conforming products for repair or rework involving important and critical quality features (excluding safety features); Carry losses ranging from RMB2,000 to RMB10,000 on scrapping or repair. 	<ul style="list-style-type: none"> The manager of the Quality Inspection Department shall organize a review and propose suggestions on disposal. In case of a dispute over the review of disposal, or failure to determine the issue, the instance shall be reported to the deputy general manager (quality assurance engineer) in charge of the business unit for final disposal.
General non-conforming products	<ul style="list-style-type: none"> Non-conforming products that have problems with performance but can meet the requirements through general repair and rework measures, with losses of not more than RMB2,000 on repair or rework. 	

Classification and management measures for non-conforming products

Quality Improvement Training

Taking quality as its lifeline, the Company has been endeavoring to ensure product quality through equipment and technology, while putting emphasis on improving the quality awareness and skills of employees which is of great significance to the enterprise.

The Company held a quality management and operation meeting

In March 2023, to achieve the goal of "double ten billion" for the mechanical business, the Company and its subsidiaries, as well as various business units, met to provide organizational and institutional guarantees for "double ten billion", and clarify the responsibilities of "service, guidance, and supervision" around the work principles of "delivering products on time, ensuring product quality, and pursuing safe and green production". Through this meeting, department heads of the Company are enabled to have a better understanding of quality management.

The Company launched a "Quality Knowledge Contest"

To create a good atmosphere for all employees to "value quality management, participate in quality control, supervise the quality process, and enjoy quality benefits", further enhance their quality awareness, and continue to build the "Shuangliang" brand, in September 2023, the Company organized an online "Quality Knowledge Contest" for all employees, and presented awards to the winners of the first, second and third prize on site. The contest was actively participated by the employees covering various business units in the mechanical sector, with a satisfactory effect.



Activity site of the "Quality Knowledge Contest"



Put Customer First, and Focus on Service

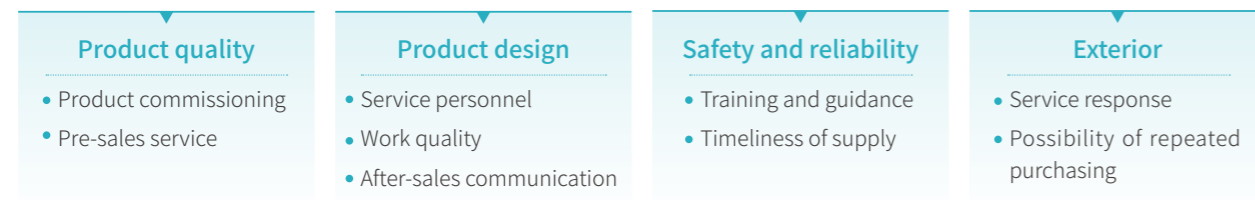
To ensure that the assembly of the Company's separately-shipped products (components) at the customer's site meets the specified quality requirements, and guarantees the quality of the products delivered, Shuangliang Eco-energy has formulated the *Management Rules for Product Assembly at Customer Site*, putting forward strict requirements for transportation, manufacturing, and inspection, etc. in terms of pre-shipment preparation, on-site assembly, and on-site debugging, so as to create high-quality products for customers. By virtue of the good product quality, the Company has been highly recognized by customers, and awarded the "National Standard Five-Star After-Sales Service Enterprise" and "Top 10 After-Sales Service Enterprises in China", as well as the honor of "2023 Excellent Supply Partner" by Maotai Group.



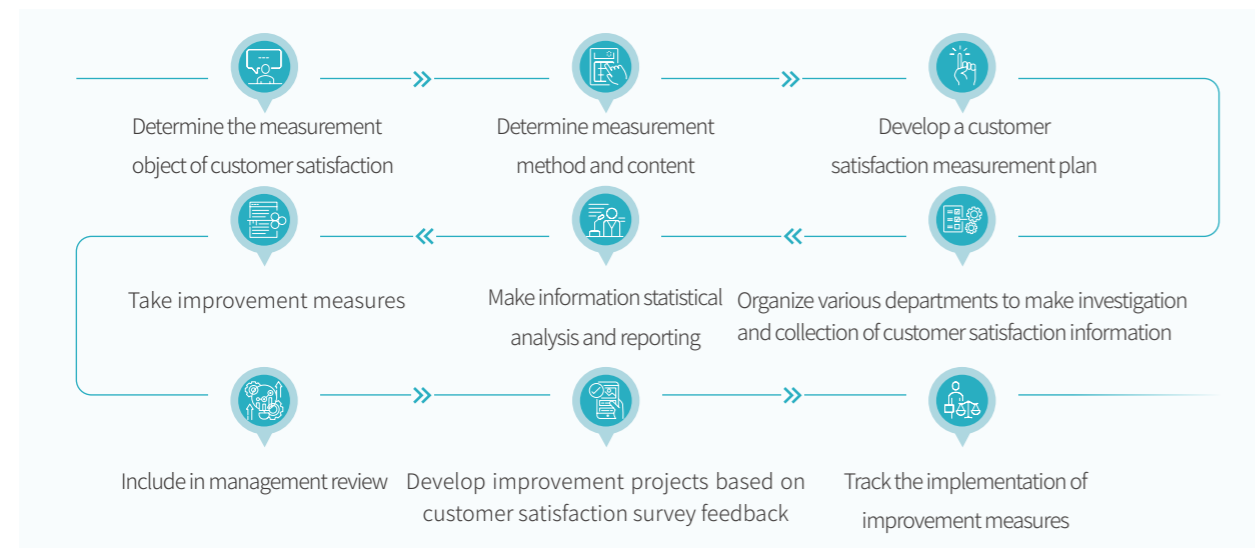
National Standard Five-Star After-Sales Service Enterprise | 2023 Excellent Supply Partner | Top 10 After-Sales Service Enterprises in China

Customer Satisfaction Survey

A *Customer Satisfaction Measurement System* has been developed by the Company, under which customer satisfaction will be monitored and regularly evaluated through *Customer Satisfaction Survey Form*, telephone communication, online and offline visits, and customer symposiums, etc., after which a customer satisfaction survey report will be issued, followed by measures to be taken for the purpose of improving the quality of the system, process, products, and services to ensure customer satisfaction.



Dimensions covered by a product satisfaction survey



Customer satisfaction measurement process

During the reporting period



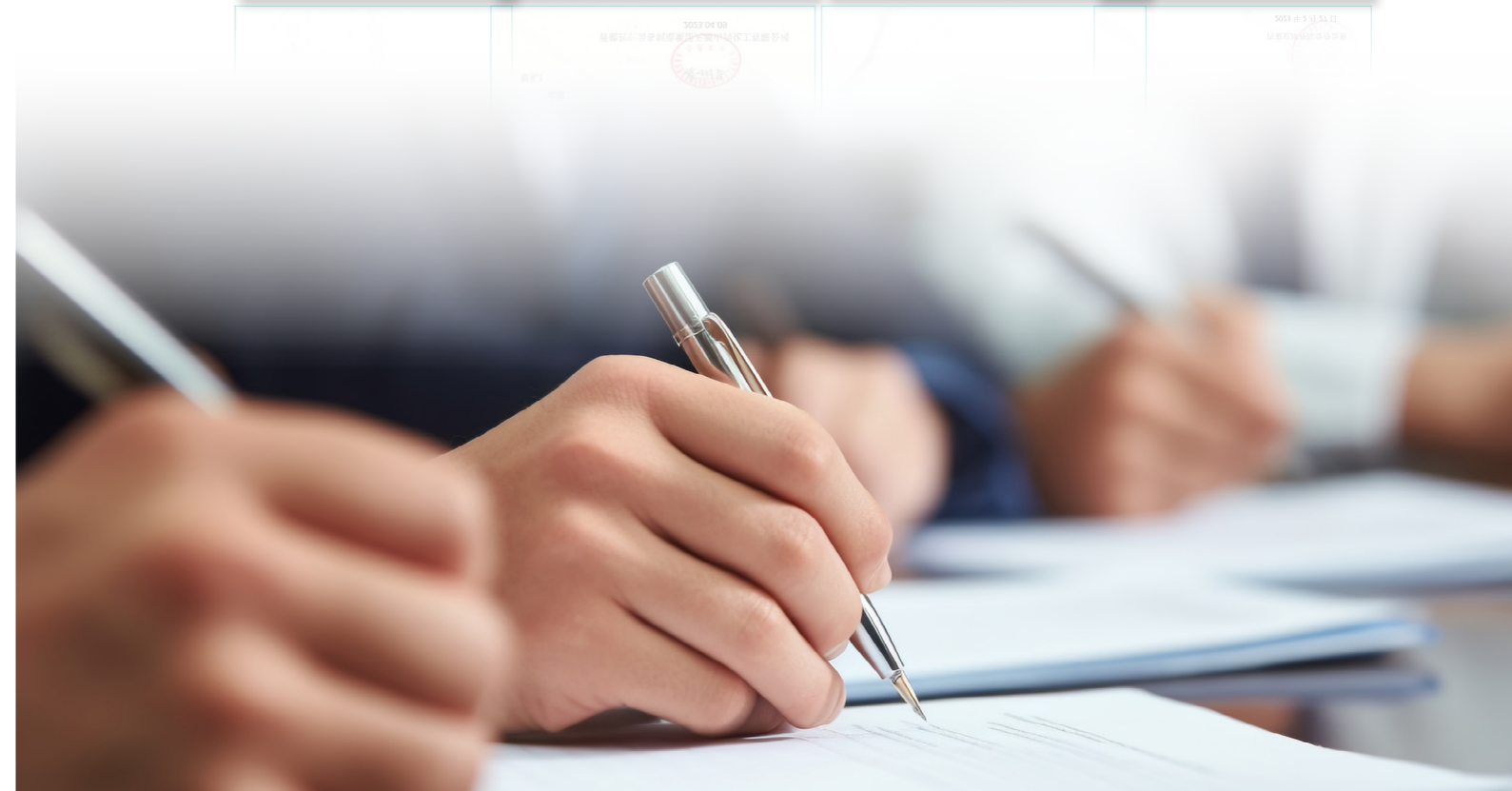
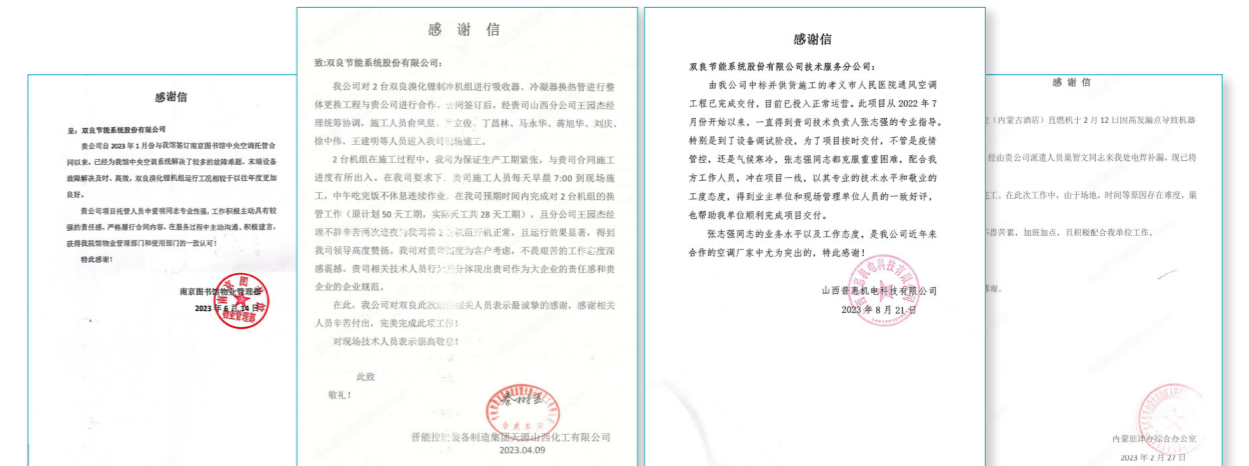
The Company recorded a customer satisfaction rate of

92.9%

Banners awarded by customers

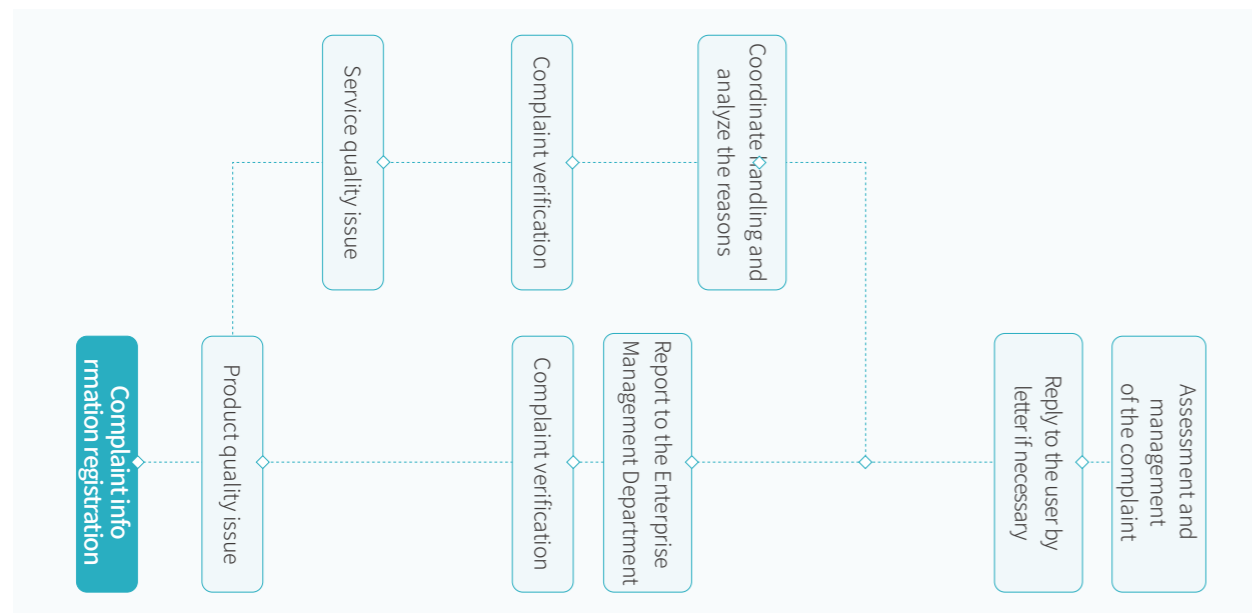
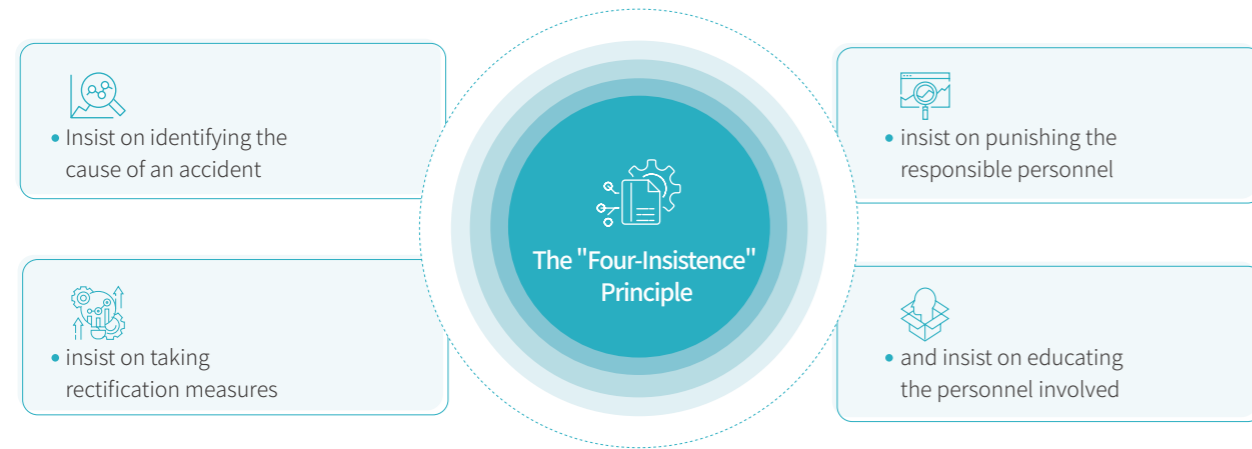


Letters of thanks from customers




Customer Complaint Management


According to the *Emergency Planning Rules for Customer Complaints*, the *Technical Service Management Rules*, and the *Rules for On-Site Service by Technical Service Personnel*, among others, and based on the "Four-Insistence" principle of quality complaint assessment, the Company has standardized the customer complaint handling process and technical service management process by developing a *Customer Complaint Registration Ledger* to record customer complaint details, and requiring a *Quality Information Feedback Form* to be completed upon analysis on product failures, etc., for sustainable optimization of customer complaint handling mechanism.



Customer complaint management process



Hotline: 0510-86632016



Email: : slservice@shuangliang.com

Customer Complaint Channels

Adhere to Scientific Research and Innovation for High-Quality Development

As a leading enterprise in the mechanical industry, Shuangliang Eco-energy has been qualified nationally as a "Postdoctoral Programme" and an "Enterprise Technology Center". In order to deeply implement the "High Quality Improvement Plan for R&D Institutions" and vigorously improve the construction level of R&D institutions, the Company has undertaken the construction project directed by Jiangsu Provincial Department of Science and Technology, namely (Shuangliang) Photovoltaic and Efficient Energy Equipment Engineering Technology Research Center in Jiangsu Province, actively carrying out R&D of energy saving and new energy technologies, to maintain its leading position in the industry.



During the reporting period

The Company invested up to RMB **541,698,068.39** in R&D with up to **1,050** R&D team members

Under the corporate spirit of "learning to forge ahead and creating for eternity", the Company has developed the Innovation Incentive Management Rules to encourage employees to actively engage in scientific research and innovation, jointly provide suggestions for the enterprise, create an innovative atmosphere, and enhance the sustainable development ability of the enterprise. Since its establishment, the Company has won multiple scientific research and innovation awards.



Certificate for New Technology and Product of Key Promotion and Application in Jiangsu Province

Science and Technology Progress Award in China's Machinery Industry

Science and Technology Award from Chinese Association of Refrigeration

Energy Innovation Award from China Energy Research Society

Awards of the company for scientific research and innovation

» Technological Innovation Application

In the context of a new round of technological revolution and rapid industrial transformation, the Company will, under the support of a three-level R&D system, focus on major customers and industries, deeply explore new customer needs, and further develop new products and directions, by delving into the "energy-saving and water-saving" industry, expanding the photovoltaic new energy equipment industry, and laying out new tracks for energy storage and hydrogen energy, in order to make breakthroughs in various sub-industry segments, further backing up the technological innovation construction of the enterprise.



The Company participated in the 2023 Hydrogen Energy Entrepreneurship Competition

Innovation is an important way to drive enterprises and society forward. In order to implement the "carbon peak, carbon neutrality" and "innovation-driven" development strategies, and to respond to the goals of the Medium and Long Term Plan for the Development of the Hydrogen Energy Industry (2021-2035), the Company participated in the 2023 Hydrogen Energy Entrepreneurship Competition for enterprises that use special and sophisticated technologies to produce novel and unique products. In this competition, the Company introduced a comprehensive energy-saving and water-saving solution of the green electricity intelligent hydrogen production system, which showcased its contribution to improving the level of hydrogen energy industrialization in the market and won the Excellent Project Award.



The site of the 2023 Hydrogen Energy Entrepreneurship Competition



Excellent Project Award in the 2023 Hydrogen Energy Entrepreneurship Competition



Breakthrough Areas

Lithium battery - lithium carbonate industry

- Recover the waste heat from the steam condensate and the flue gas from the calcination furnace in the factory area, and produce low-temperature cold water using the waste heat refrigeration technology of Shuangliang for the slurry mixing process.

C5 isoprene distillation column

- Initially apply thermal coupling in C5 isoprene distillation column, utilizing Category I heat pump for energy-saving transformation of the distillation column.

Low temperature unit - phenol industry

- Recycle steam condensate from the factory area to produce steam, and replace the electric refrigeration unit with low-temperature cold water.

Steel industry

- Recycle the waste heat from the final stage exhaust of the nitrogen compressor to heat up the polluted nitrogen gas, saving the energy consumption of the electric heater.

BDO industry

- Replace some electric refrigeration units with waste heat refrigeration.

Heating with flash-off steam from desulfurization slurry as waste heat

- Use the flash-off steam from desulfurization slurry as waste heat for heating, overcoming the problems of poor water quality and easy blockage of desulfurization slurry.

Rare earth industry

- Use metal smelting kiln flue gas in combination with vacuum water heaters to meet winter heating, which can satisfy the year-round demand for domestic hot water.

Expansion of "Three New" application processes



Innovative R&D of photovoltaic materials in the Company

Development of long-life graphite electrodes for electric arc furnaces: erosion rate of graphite electrodes, the Company has worked to develop long-life graphite electrodes for electric arc furnaces. So far, six R&D schemes have been verified for coating, particle size, arc surface optimization, high bulk density, low ash content, and forming method. Among them, the service life of graphite electrodes after arc surface optimization will increase by 17%, with the cost of graphite electrodes remaining unchanged and the cost of crucibles to be decreased by RMB59.5/piece.



Electric arc furnace developed using long-life graphite electrodes

Border innovation

No A-side Module: In order to maximize the owner's revenue from power generation, carrying forward the R&D spirit of ingenious conception, exquisite craftsmanship, and striving for excellence, process upgrade, and structure modification were conducted for the PV module to create the anti-dust accumulation and high-efficiency PV module. With an anti-dust accumulation border design and an optimized structure, this module has enabled an effective improvement of its discharge and sewage disposal capacity, a decrease in the power generation loss caused by water and dust accumulation, and a high gain without dust and water accumulation, which not only reduces the impact of dust accumulation, but also reduces the frequency of cleaning the module by the owner to a certain extent, thereby protecting the owner's benefits.



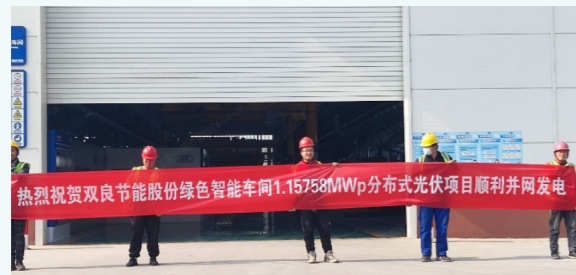
» Digital Development

To improve the production efficiency of enterprise, reduce waste and errors in production, better utilize resources and manage enterprise, and promote sustainable development, the Company values the implementation of digital work in photovoltaic power generation and carbon neutrality solutions.

The Company's digital platform supported intelligent operation and maintenance in the workshop, with the photovoltaic power generation project successfully combined with the grid

In January 2023, the green and intelligent workshop for distributed photovoltaic power generation project invested by the Company was successfully combined with the grid. This project carries a full-life-cycle photovoltaic intelligent operation and maintenance platform system independently developed by cooperative enterprises, having a total designed installed capacity of 1,157.58kWp, with an expected annual average photovoltaic power generation of 1,127,000KWH. It can reduce emissions of carbon dioxide by 937.7 tons, sulfur dioxide by 0.18 tons, and nitrogen compounds by 0.2 tons per year.

The Company's green and intelligent workshop contributes to the achievement of the "dual carbon" goal, helping to transform regional energy production and consumption patterns, optimize energy structure, and prevent air pollution, which is of great significance for regional green development.



Successful operation of the green and intelligent workshop



the Company's photovoltaic power station supervision platform

Digital-driven full lifecycle carbon neutrality solution

Zero carbon heating solution with complementarity of multiple energy sources: In August 2023, the Company, with the mission of "green, low-carbon, energy-saving and environmental protection", tailored a safe, reliable, energy-saving, environmentally friendly, and economically efficient digitally-driven full lifecycle carbon neutrality solution for cities

and various industries - zero carbon heating solution with complementarity of multiple energy sources. This solution is of great help to multiple customers of the Company in achieving carbon dioxide reduction during the heating period.

JSDJ S1 alkaline water electrolyzer suitable for new energy application scenarios: In response to the national policies related to green and low-carbon industries, accelerate the promotion and application of advanced green and low-carbon technologies, and support the sustainable development of Shuangliang's green and low-carbon business, the Company has created JSDJ S1 alkaline water electrolyzer, a digitally-driven full lifecycle carbon neutrality solution suitable for new energy application scenarios, which marks the progress of green electricity intelligent hydrogen production system from technological R&D to production, contributing to the green transformation of the energy structure. This solution has been certified by DEKRA and PCCC.



DEKRA certification



PCCC certification

» Intellectual Property Management

To regulate and effectively protect its intellectual property rights, the Company has developed the *Intellectual Property Management Rules*, greatly helping improve its technological innovation and market competitiveness.

During the reporting period

The Company held a total of **1,360** invention utility model patents

The Company has a total of **110** granted patents
(of which **18** are invention patents and **92** utility model patents).



Intellectual property management system

The Company won the first "Jiangsu Patent Excellence Award"

In June 2023, the People's Government of Jiangsu Province issued the Decision of the Provincial Government on Publishing the First Jiangsu Patent Award, in which the Company won the "Jiangsu Patent Excellence Award" for its "supplementary-fired lithium bromide absorption heat exchange system". The award represents the high recognition of the Company's patent achievements by the intellectual property authority of Jiangsu Province, and also fully affirms Shuangliang Eco-energy's continuous investment in R&D innovation, as well as implementation of intellectual property protection and application.



Supplementary-fired lithium bromide absorption heat exchange system



Jiangsu Patent Excellence Award

The Company's 2000Nm³/h electrolyzer with its independent intellectual property rights successfully went off the production line

In September 2023, the Company's 2000Nm³/h electrolyzer with its independent intellectual property rights successfully went off the production line from the Green Electricity Intelligent Hydrogen Production Equipment Workshop, which broke the previous record for the maximum hydrogen production of the same product, demonstrating the Company's strength in the design and manufacturing of large-scale electrolyzer systems, marking a solid step forward for Shuangliang's hydrogen energy undertaking.



The Company's 2000Nm³/h electrolyzer with its independent intellectual property rights successfully went off the production line

Work with Partners for Mutual Benefits and Win-win Results

Shuangliang Eco-energy has established strict standards for supplier screening, admission, and management, and emphasizes integrity in procurement. Meanwhile, the Company continuously strengthens strategic cooperation with universities and enterprises in the same industry to share innovative technologies and exchange with each other, for win-win results.

- Supply Chain Management
- Industry-Academia-Research Cooperation
- Joint Progress with Peers



Supply Chain Management

Shuangliang Eco-energy has formulated the *Procurement Management Rules* and the *Supplier Management Rules* to regulate procurement processes, ensure the quality of raw material products purchased, and strictly manage the screening, admission, assessment, and classification conditions of suppliers. Constant efforts are made to improve such documents as the *External Supplier Management Rules* for a strict admission mechanism, and to select supplies under a merit-based system through a strict shortlisting process of qualification assessment, sample trial production, batch trial, on-site check and supply performance evaluation of potential suppliers. During the cooperation, we have imposed various requirements including those for environment, security and occupational health and safety on suppliers to meet the Company's comprehensive needs for product quality, environmental protection and safety.

Supplier Admission

- Screen out qualified suppliers based on multiple verification processes such as sample validation and small batch validation;
- Focus on whether the supplier is a well-known domestic unit or one of the top three enterprises in the industry;
- Inspect the comprehensive strength guarantee in terms of product stability, product technical support and services, etc., provided by the supplier, with the supplier to be included in the list of qualified suppliers only after an on-site check.

Supplier Management

- Require raw materials necessary for production by the Company, such as steel, copper, aluminum, pipes, etc., to be subject to an application for procurement by various business departments based on customer needs, planning requirements, and warehouse requirements, etc;
- Convert the Purchase Requisition according to the "Procurement Products Importance Classification Schedule", during which, after receiving the Purchase Requisition, the Procurement Department will prepare a purchase order based on the supplier price list and signs an annual contract directly with the supplier for procurement;
- As to equipment accessories, adopt supplier bidding for the Procurement Department to determine the main material suppliers for the year and carry out procurement activities accordingly.

Supplier Assessment

- Conduct comprehensive, specific, objective, and dynamic evaluations of suppliers, and dynamically upgrade, downgrade, and eliminate them based on the evaluation results; Regularly organize review teams to conduct on-site reviews on quality control, field management, warehousing, and other aspects of the main original suppliers, helping them improve their technical and management levels.

Supplier management process

Class-A Suppliers

All design subcontractors, outsourced processing subcontractors, construction subcontractors, as well as manufacturers and agents providing Class-A procurement products

Class-B Suppliers

Subcontractors for maintenance services and manufacturers and agents who provide products other than Class-A procurement products

Class-C Suppliers

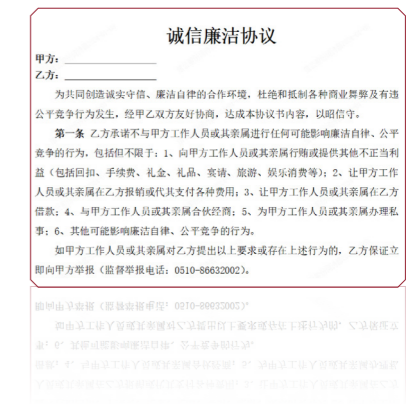
Outsourcers of non-core procurement products, as well as manufacturers and agents who provide standard component products with small quantities and low amounts involving no enterprise customization requirements for single item procurement

Supplier classification



On-site check items on suppliers

To jointly create a cooperative environment of honesty, integrity, and self-discipline between the Company and suppliers, and to prevent and resist various commercial fraud and unfair competition behaviors, every procurement contract will incorporate an *Integrity Agreement*.



Integrity Agreement

Industry-Academia-Research Cooperation

Shuangliang Eco-energy has established a good industry-academia-research cooperation relationship with universities and research institutes for long-term exchange, learning and research collaboration on scientific research projects, driving common development while helping cultivate academic and technological innovative talents for the industry.

The Company reached strategic cooperation with Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences on liquid cooled energy storage

In July 2023, a cooperation signing ceremony was held between the Company and Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences to open their cooperation on the liquid-cooled energy storage system, under which both sides will use their respective advantages to jointly develop high-power and efficient liquid-cooled energy storage systems. With this cooperation, the Company has formed its key equipment for liquid-cooled energy storage as well as efficient and safe intelligent liquid-cooled energy storage systems, driving the widespread of efficient and safe liquid cooling energy storage systems, and contributing to the national low-carbon development strategy of "renewable energy" and "energy storage".



Cooperation between the Company and Guangzhou Institute of Energy Conversion

Joint Progress with Peers

Closely following the development trend of industry, Shuangliang Eco-energy actively partners with other companies for common growth. The Company actively participated in industry conferences to enhance cooperation and exchanges with peers, and shared its latest innovations and experiences, towards industry progress.



Company reached a strategic cooperation agreement with LONGKING

In July 2023, to further open up and give play to the potential of the energy-saving business market, the Company established a long-term and stable strategic cooperation relationship with LONGKING in waste heat utilization and intelligent energy, etc., creating a win-win and sustainable strategic partnership, jointly promoting high-quality development, and making a contribution to the realization of the national goals of "3060" and "construction of a beautiful China".



Strategic cooperation signing ceremony



Shuangliang Eco-energy attended the 5th Future Energy Convention

In September 2023, the 5th Future Energy Convention was successfully held in Wujin District, Changzhou City, Jiangsu Province. The Company, along with numerous well-known enterprises and renowned experts and scholars from both domestic and international sources, gathered at the convention to jointly promote the sustainable development of the energy industry and move towards a green, sustainable, and symbiotic energy future. At this convention, the Company presented the theme of "Shuangliang Green, Low-Carbon and Clean Energy Solutions" to the peers, made a speech on "Energy Technology Innovation and Sustainable Development", and shared the wisdom achievements for the transition from "traditional energy" to "future energy", as well as the inspiration and experience of China's energy transformation from an international perspective.



The Company presented the theme of "Shuangliang Green, Low-Carbon and Clean Energy Solutions"



The Company presented on "Energy Technology Innovation and Sustainable Development" at the roundtable dialogue

To facilitate industry development and revolution, improve the competitiveness of the enterprise, shape brand image, and obtain greater opportunities to expand the market, the Company actively leads and participates in the drafting of industry standards.

Title of Standard	Standard Level	Standard No.	Involvement Method
Steam and Hot Water Type Lithium Bromide Absorption Uni	National	GB/T18431-2014	Principal drafter
Category I Lithium Bromide Absorption Heat Pump Unit	National	GB/T34620-2017	Principal drafter
Minimum Allowable Values of the Energy Efficiency and Energy Efficiency Grades for Lithium Bromide Absorption Chillers	National	GB29540-2013	Participant
Technical Specification for Steel Structure Indirect Air-Cooled Tower	Industrial	T/CEC332-2020	Principal drafter
Performance Test Code for Heat Transfer Element of Air-Cooled Condenser in Power Plant	Industrial	DL/T552-2015	Participant
Guidelines for the Operation of Direct Air-Cooled Systems in Thermal Power Plants	Industrial	DL/T1934-2018	Participant
Performance Test Code on Direct Air-Cooled System	Industrial	DL/T244-2012	Participant
Acceptance Guide for Direct Air-Cooled System	Industrial	DL/T1428-2015	Participant
Extra Large Air Separation Equipment for Coal Chemical Industry	Industrial	NB/T12006-2016	Participant
Test Code for Indirect Air-Cooled Tower	Industrial	T-CECS680-2020	Participant
Test Code for Heat Transfer Components of Indirect Air-Cooled Radiators	Industrial	T-CECS681-2020	Participant

Industrial standards drafting led and participated by the Company



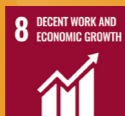
Shuangliang Eco-energy participated in the review meeting for four group standards, including the Non-Coated Rare Earth Low-Carbon Steel Wire

In August 2023, the Company participated in the review meeting jointly organized by Hebei Energy Conservation Association and China Steel Development Research Institute for four group standards, namely the *Non-Coated Rare Earth Low-Carbon Steel Wire*, the *Rare Earth Low-Carbon Hot Rolled Steel Wire Rod*, the *Rare Earth Carbon Steel and Low Alloy Structural Steel Hot Rolled Steel Plate and Strip*, and the *Technical Specification for Dry Selective Adsorption Desulfurization of Blast Furnace Gas*. Through this review meeting, the Company realized deeply the importance of "conscientiously drafting and promoting group standards, promoting the coordination and linkage of government, industry, academia, research, and application, and leading the industry and enterprises to steadily enter a new stage of high-quality development via standardization construction".

Join Hands with Employees for Mutual Growth and Progress

Taking employees as the core competitiveness of enterprise development, Shuangliang Eco-energy keeps improving the employee rights protection system and the occupational health and safety management system based on the employment criteria of open and fairness, the employment philosophy of "stressing ability and morality, and putting morality first", and the management policy of "being scientific and people-oriented". Besides, a series of talent training and management systems have been set up to create a team with strong business capabilities and enterprising spirit, for mutual growth and progress of the Company and employees.

- Employment
- Employee Health and Safety
- Employee Compensation and Welfare
- Employee Support Activities
- Employee Training



Employment

Shuangliang Eco-energy strictly abides by the national employment rules, labor protection rules and other relevant rules and regulations, adheres to legal and compliant employment, and continuously improves compensation and performance management to protect the legitimate rights and interests of employees. Meanwhile, the Company insists on providing employees with complete welfare guarantees and a comprehensive training system, committed to creating a happy workplace for employees and truly realizing the sustainable development of the relationship between employees and the Company.

Compliant Employment

In strict accordance with the *Labor Law of the People's Republic of China* and other relevant laws and regulations, Shuangliang Eco-energy has formulated and keeps improving its human resource management system, resolutely implements basic principles such as compliant and fair employment, signs labor contracts with employees according to law, continuously perfects the *Personnel Management Rules* and the *Labor Employment Management Regulations*, and advocates for fair opportunities and diverse workplaces, to standardize the Company's personnel management and strengthen the unified management of labor employment, meet the employment needs of the Company's production, operation and management from time to time, and safeguard the legitimate rights and interests of employees.

Recruitment and Employment

- Internal Recruitment:** Self-recommendation, job competition, etc.
- External Recruitment:** Online recruitment, on-site recruitment in talent markets, campus recruitment, television recruitment, and headhunting company recommendation, etc.

- Resignation, dismissal, voluntary turnover, retirement, etc. shall be handled in accordance with relevant national laws and regulations, or corporate rules and regulations

Resignation

- Personal income, job promotion, and year-end evaluation will be based on performance evaluation results
- Employee transfer must be processed through transfer procedures

Promotion and Transfer

Personnel management system of the Company

New Employee Registration

- Signing contract
- Handling employment and insurance procedures
- Onboarding training

- Those who pass the assessment at the end of the probationary term will be converted into formal employees

- Those with outstanding performance during the probationary term can be converted to formal employees ahead of schedule

Probation and Conversion

During the reporting period



The Company had **6,455** employees in total



including **2342** new employees



of whom **1951** are male



and **391** are female

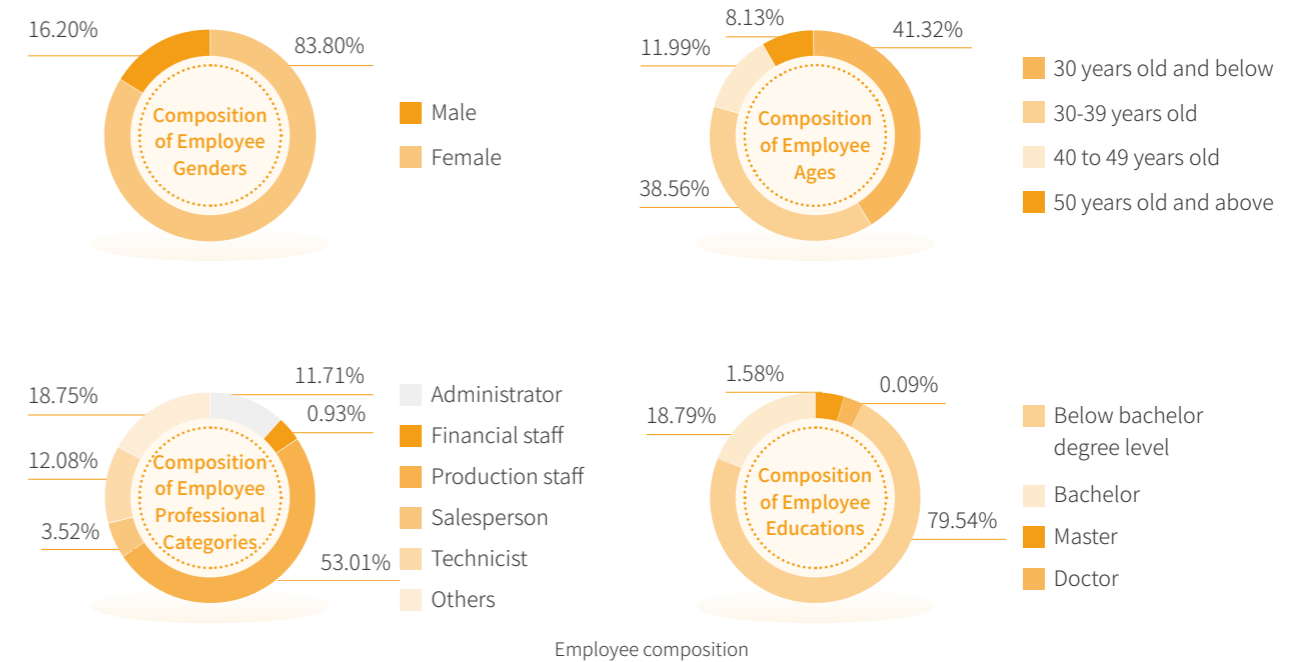


with a labor contract signing rate and a social insurance coverage rate of

100%

Employee Diversity

Adhering to the principle of equal opportunities, Shuangliang Eco-energy respects and equally treats every candidate, never incorporating their gender, age, ethnicity, religious belief, and native place into the application criteria, committed to creating a pluralistic and diverse workplace. Through absorbing employees of different genders, age groups, educational backgrounds, and professional categories as appropriate to their positions with different ways of thinking, experiences and skills, the Company manages to improve its overall innovation and problem-solving abilities, and enhance the understanding and cooperation among employees, thereby building a more inclusive and harmonious work environment.

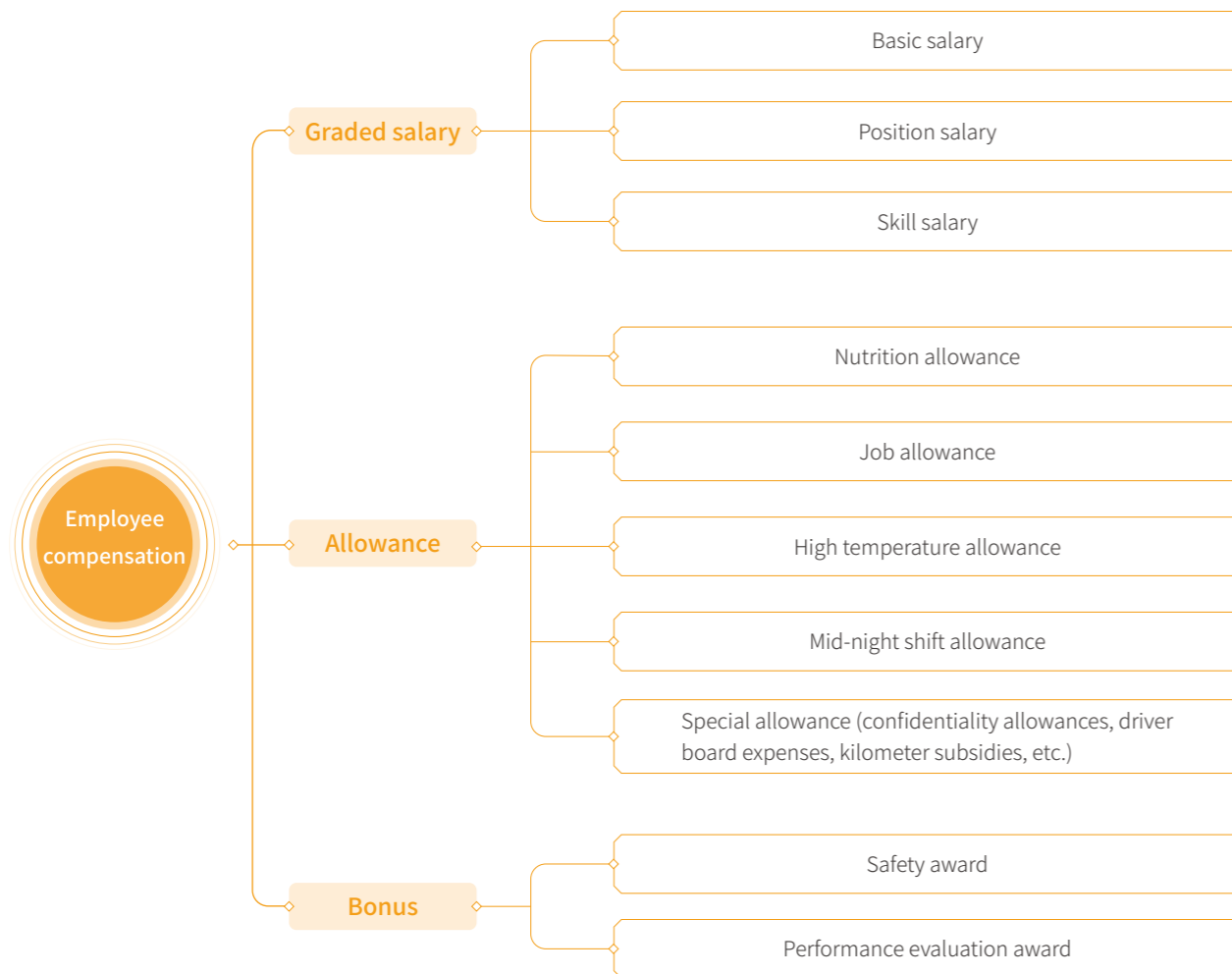


Employee Compensation and Welfare

Shuangliang Eco-energy always upholds the "people-oriented" management philosophy, takes a firm stand on safeguarding the legitimate rights and interests of employees, and strictly follows national laws and regulations including the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China*, and the *Trade Union Law of the People's Republic of China*. Meanwhile, the Company keeps an eye on the career development and workplace experience of employees, and seeks to optimize the compensation and welfare systems as well as care policies for them, in order to achieve employee growth in parallel with the targeted development of the Company.

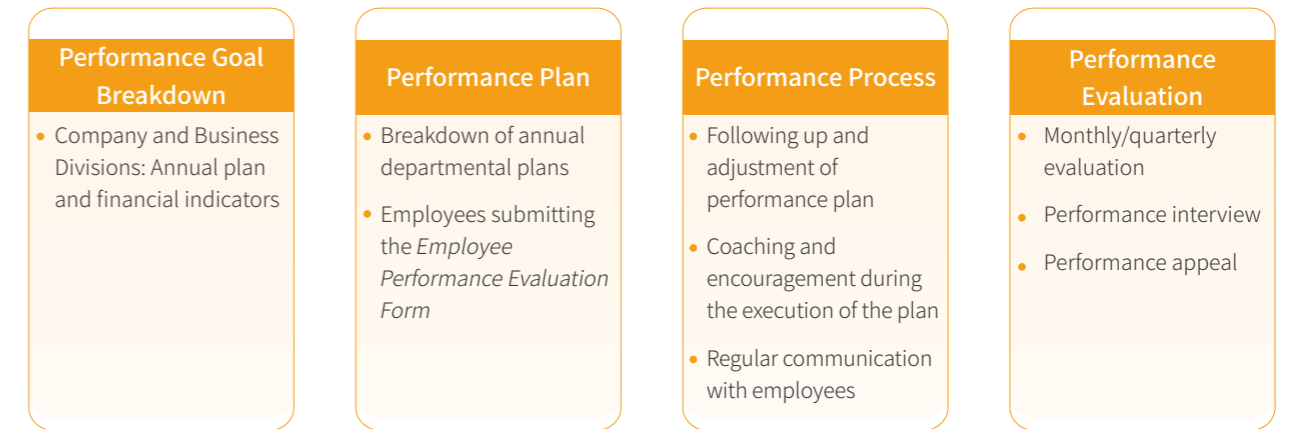
Compensation Management Measures

To ensure employee compensations are in line with the Company's development stage and overall benefits, and to achieve mutual progress, Shuangliang Eco-energy has formulated the *Salary Management Rules*, under which, the compensation structure shall be adjusted based on the differences, regions, and industrial salary levels of various employees, so that the Company can guarantee the rationality, feasibility and sustainability of the compensation level of employees, provide competitive compensation for employees and lay a solid foundation for attracting and retaining talents.



"Position - Skill" compensation system

For employees with different competencies and quality, the Company will provide different performance evaluations to fully mobilize their enthusiasm and initiative, improve organizational and operational capabilities and production efficiency, create a "capacity-based" atmosphere within the Company, and better help attract and retain valuable employees.



Performance management system of the Company

Welfare System

The Company offers various benefits to all employees to show attention and care for them, further enhancing their sense of belonging and cohesion, and improving their work enthusiasm and satisfaction.

Welfare Type	Institutional Guarantee	Measures
Housing Benefits	<ul style="list-style-type: none"> Regulations on the Administration of Housing Rental 	<ul style="list-style-type: none"> Provide accommodation Provide suites for married individuals in need (with central air conditioning and 24-hour hot water) Ensure convenient living in the community
Leave Benefits	<ul style="list-style-type: none"> Regulations on the Administration of Leave Interim Provisions on Posts and Compulsory Leave for Personnel in Key Positions 	<ul style="list-style-type: none"> Implement a weekend system Offer national statutory holidays Offer 11 days of paid leave for the Spring Festival
Care Benefits	<ul style="list-style-type: none"> Health Care Management Regulations for Special Posts Regulations on the Administration of Employee Casualty Compensation Regulations on the Administration of Work-related Injury Insurance Accident Potential Management Rules Regulations on the Administration of Overtime Work and Duty Provisions on Health Protection of Employees 	<ul style="list-style-type: none"> Five social insurance and one housing provident fund Pay nutrition, high-temperature and other allowances Clarify employee work-related injury benefits Protect employees' right to rest Regular annual physical examination Care for female employees
Incentive Benefits	<ul style="list-style-type: none"> Regulations on the Management of Employee Awards 	<ul style="list-style-type: none"> Advanced collective and individual selection
Other Benefits	<ul style="list-style-type: none"> Free shuttle bus Employee community New employee quality development Holiday benefits Employee birthday benefits, etc. 	

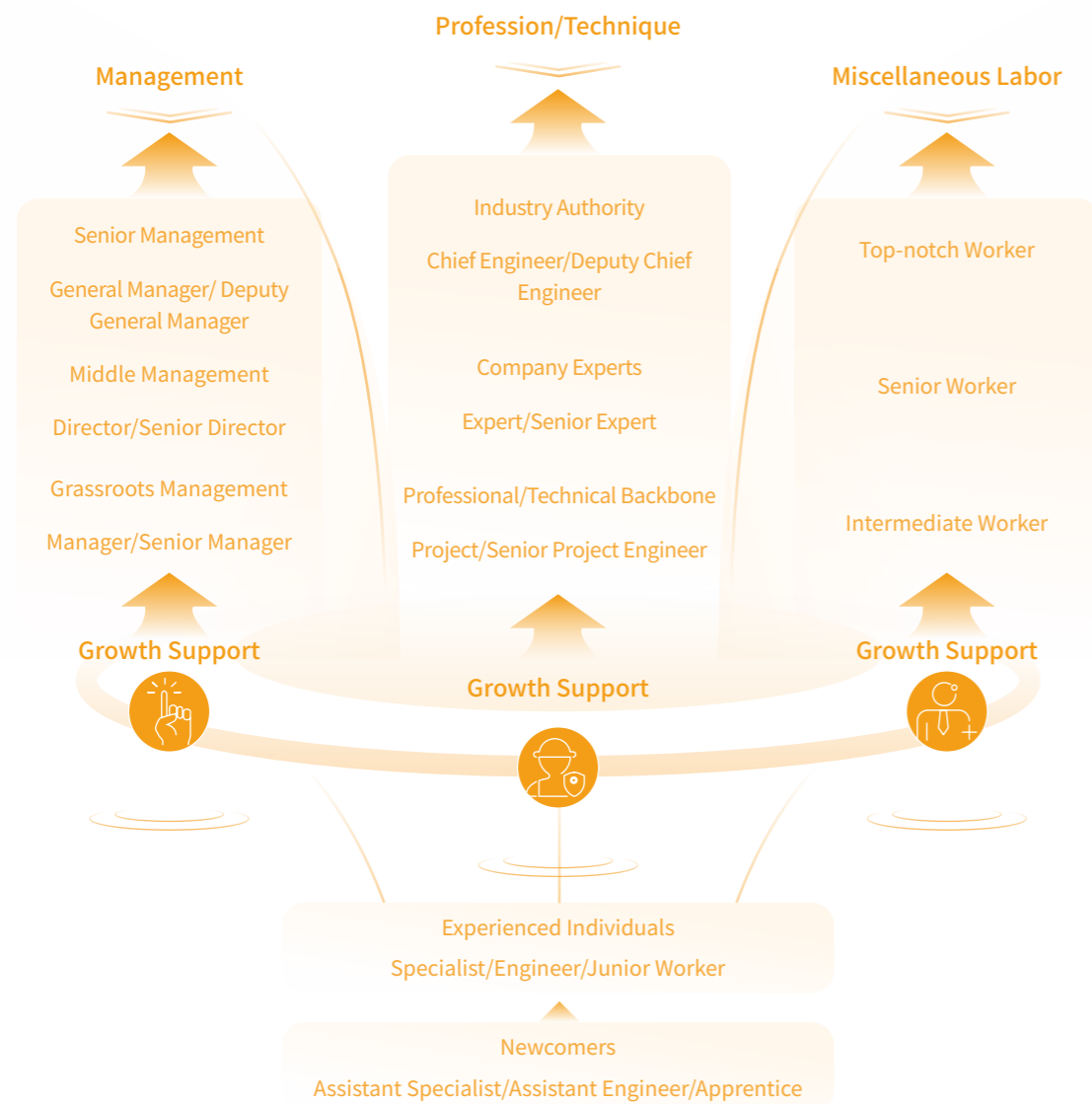
Employee welfare system

Employee Training

Talents are the primary resource for creating value. The Company always respects the personality and growth needs of employees, and insists on providing open and fair development opportunities for responsible, capable, and skilled employees, allowing them to fully utilize their strengths and closely link their personal development with the Company's career.

Promotion Management and Career Development

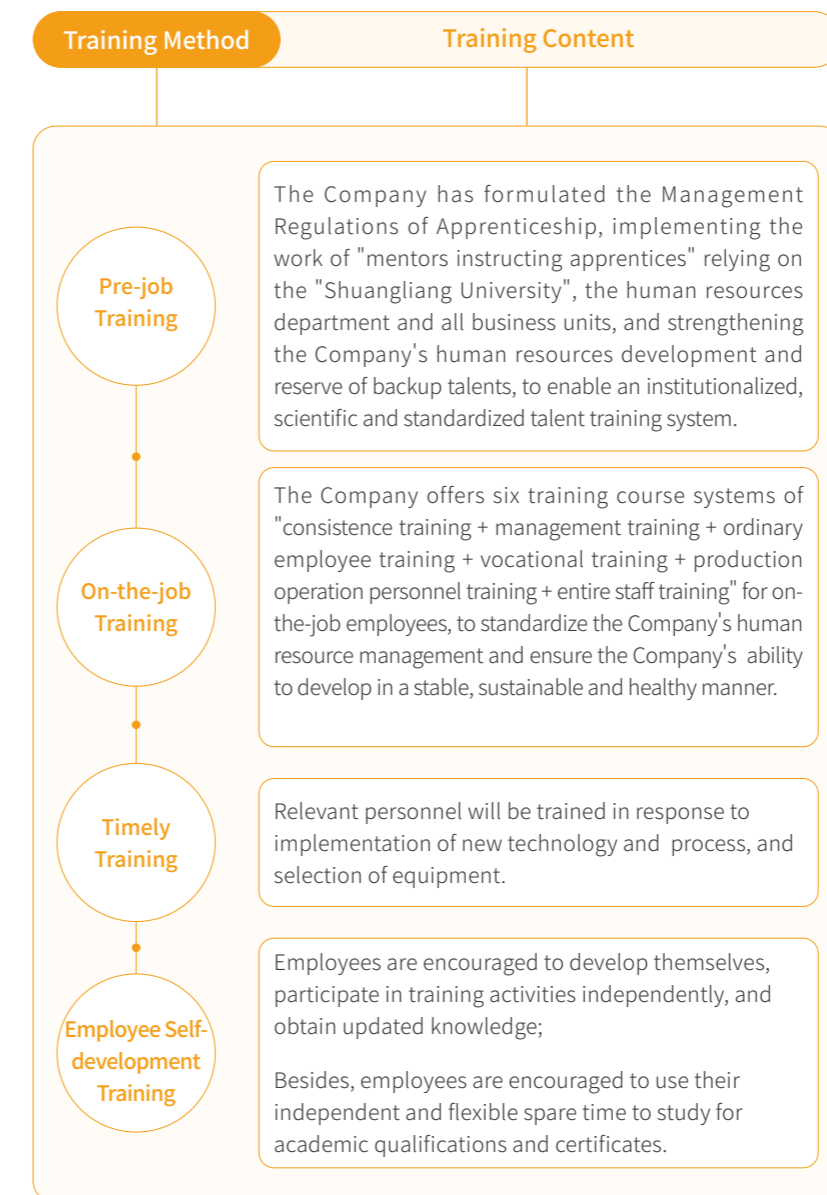
Under the guidance of the talent evaluation standards of "emphasis on virtue, ability, and performance", Shuangliang Eco-energy continues its efforts to improve and implement the *Promotion Management Regulations of the Company* and the *Employee Career Development Management Regulations*, etc., sets comprehensive promotion assessment factors, constructs a fair talent promotion mechanism, and offers differentiated career development paths for different levels and families to meet the long-term development needs of different groups.



Various career development paths for Employees

Talent Education and Training

Keeping in mind the corporate spirit of "learning to forge ahead and creating for eternity", the Company is devoted to building a comprehensive talent education and training system that is "hierarchical, categorical, multi-form and full participatory", constantly clarifying the growth paths of employees, and helping employees to further improve their ability and career value through creating a whole-process training system, thereby to enable the sustainable development of the Company's human resources. Meanwhile, pre-job training, on-the-job training, timely training and self-development training are offered by the Company regularly or irregularly for employees through internal training and external training, so as to ensure that employees can complete their work with high quality and improve their work ability.



Whole-process talent education and training system

During the reporting period

All employees of the Company received training, with a total training time of

32,214.8 hours

21,880 hours for male employees

and **10,334.8** hours for female employees

and an average training time of **23.44** hours per person



Training and quality development activities for new employees in the Company

The Company offered training for new employees, covering corporate culture, three-level safety education, exhibition hall and workshop visits, among others, and conducted corresponding tests for them. All new employees participated in the training, 100% of whom passed the tests. Additionally, a quality development session for new employees was included this year, during which a series of team activities were arranged for them to improve their sense of belonging, help them to rapidly finish role transformation, and enhance team cohesion.



New Employee Training



Quality development activities

The Company collaborated with the Clean Heating Industry Committee (CHIC) for a series of online classes

Using a digital marketing platform as a carrier, Shuangliang Eco-energy collaborated with CHIC to launch a series of live streaming activities for online classes. Experts and scholars were invited to communicate and interact with everyone online, showcasing the Company's development achievements and practical implementation in green, low-carbon, energy-saving and environmental protection, and jointly exploring the latest trends and development directions in the fields of energy saving, water saving, etc., to create a good atmosphere of energy conservation and carbon reduction. This opened up a new trend of green and zero carbon, and gave us a chance to contribute to the high-quality development of the national energy conservation and carbon reduction industry with our wisdom and strength.



Some previous lectures on the Company's online classroom

Employee Health and Safety

It is one of the top priorities for the Company to ensure the occupational health and safety of employees. Continuous efforts are made by the Company to improve the occupational health system, strengthen work safety management, and further enhance the rationality and effectiveness of the management system. Through the Work Safety Management Committee, the Company has organized various emergency drills, as well as work safety knowledge and other relevant training, constantly enhancing employees' awareness of health and work safety, and improving their work safety ability, to ensure their health and safety.

During the reporting period



The physical examination coverage rate of employees in the Company reached

100%



without work-related fatalities

The Company conducted an emergency firefighting drill

In June 2023, the Company organized the annual emergency firefighting training and drill, joined by a total of 23 volunteer firefighters, mainly focusing on strengthening safety and fire protection knowledge, learning and practicing the use of fire extinguishers, and popularizing self-rescue methods in case of fire. This training and drill enabled employees to further improve their awareness and skills in firefighting and rescue, providing a guarantee for the Company to create a safe, harmonious, and stable working environment.



Annual emergency firefighting training and drill

To further enhance the awareness of work safety and emergency response capabilities of all employees, Shuangliang Eco-energy has arranged various training activities and emergency drills related to work safety. Through these activities and drills, the Company has established a sound collaboration and linkage mechanism for emergency response among relevant departments, improved cooperation competences between departments, and made emergency response work more targeted. Meanwhile, employees have also enhanced their safety awareness and emergency response capabilities for safety accidents, sudden illnesses, and other situations as a result.

The Company conducted an emergency drill for low-temperature storage tank leakage

In May 2023, to implement the work safety policy of "safety first, emphasis on prevention, and holistic treatment", improve the accident prevention and emergency support capabilities, and ensure the safe and stable operation of the Company's energy system, the Company conducted an emergency drill for low-temperature storage tank leakage, improving the emergency response and self-protection abilities of employees.



The sire of the emergency drill for low-temperature storage tank leakage

The Company organized work safety training for winter

In November 2023, the Company organized a winter work safety training for all employees in the workshop, which mainly contained theoretical knowledge in dealing with adverse weather, preventing fire accidents, and complying with traffic safety, with a total of more than 600 participants, thereby enhancing the work safety awareness of employees.



The sire of the work safety training for winter

Employee Support Activities

To gain employees' recognition of the Company's values, and add value to their lives, the Company advocates a collaborative and enterprising team spirit, creates an inclusive and harmonious organizational atmosphere, and regularly provides support to vulnerable groups and difficult employees, forming an employment philosophy of being "careful in recruiting employees, sincere in using them, and thoughtful in keeping them" to increase employee stickiness from work, life, and emotions.

To inherit its employment philosophy, the Company regularly arranges activities during holidays to show care for female employees and renders assistance to employees in hardship. Various cares and concerns are provided for employees to constantly improve their sense of happiness in the workplace.

The Company held a sports meeting for employees

To enrich the work and life of employees and meet their spiritual needs, the Company conducted a sports meeting for employees, which not only enhanced the physical and mental health of employees, but also promoted communication among various departments, improved team-work spirit among employees, and energized employees to a great extent.



Opening ceremony of the sports meeting for employees

The Company organized a West Lake tour for the Women's Day

To show loving care for the daily work and life of female employees and improve communication among employees, the Company organized the "March 8th" themed activity - West Lake tour, which helped employees to relax, enhance employee communication, extend employee happiness and promote team cohesion.



West Lake tour

Environmental Protection and Sustainable Development

In order to protect the environment and promote sustainable development, Shuangliang Eco-energy has established a comprehensive environmental management system to regulate the energy used in its production and operation, as well as the wastewater, exhaust gas, solid waste, and noise generated, etc., with various measures taken for energy conservation, emission reduction and pollution control to minimize the adverse impact on the environment and safeguard our green earth.

- Environmental Management - Build a Green Enterprise
- Energy Management - Promote Energy Conservation and Carbon Reduction
- Pollution Control - Safeguard Our Green Earth



In 2023

the Company invested RMB

1.88 million in environmental protection

Environmental Management - Build a Green Enterprise

Shuangliang Eco-energy keeps a close eye on the impact of its production and operation on the environment, with a well-established QES management system of which environment management is made an important part. During the reporting period, the Company maintained an effective ISO14001 environmental management system certification, never engaging in any environmental violations or penalties.



Environmental Management System Certification

Conduct environmental impact assessment and reporting for the new green intelligent production service project according to law

During the reporting period, in accordance with the *Environmental Protection Law of the People's Republic of China* and other relevant laws and regulations of China and Jiangsu Province concerning environmental protection management of construction projects, the Company has conducted an environmental impact assessment on its newly built Shuangliang Digital-Driven Transformation - Green Intelligent Production Service Project, and submitted an environmental impact report to relevant authorities, which has been reviewed and approved. Strictly following the *Three Simultaneities Management Rules*, the Company proceeds with environmental management during the design and construction process of new projects to ensure that all types of pollutants are subject to up-to-standard discharge without any negative impact on the environment.

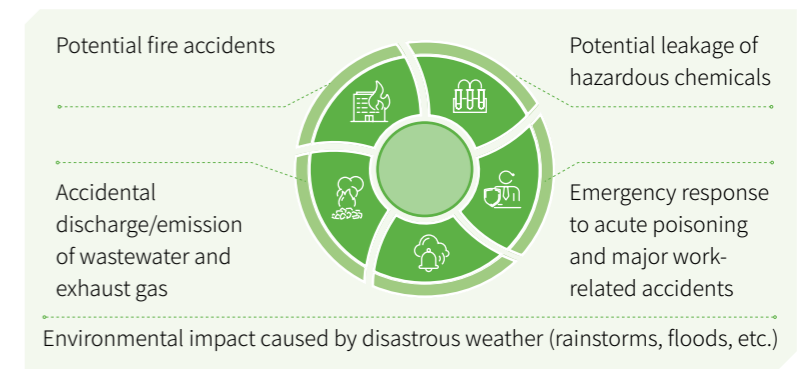
In 2023

Shuangliang Eco-energy was awarded the title of "Green Factory in Jiangsu Province" by the Industry and Information Technology Department of Jiangsu.



Emergency Management System

In order to respond to and manage potential major hazards, important environmental factors or material latent dangers, and to best prevent and reduce environmental pollution and safety accidents, the Company has formulated the *Emergency Preparedness and Response Management Rules*, based on which, an emergency command center is established, emergency response plans are prepared and filed with relevant government authorities, and emergency drills are conducted regularly every year.



Scope of emergency preparedness and response



The Company conducted an emergency drill for sudden safety and environment incidents in the paint room

Painting or brushing operations are carried out in the Company's paint room, which poses a high risk of safety and environment incidents. To further prevent accidents and improve the emergency response capabilities of relevant employees, the Company has equipped the paint room with fresh air systems and exhaust gas treatment facilities.

In July 2023, the Company conducted an emergency drill for sudden safety and environment incidents in the paint room. During the drill, it was simulated that a power outage in the workshop caused the fresh air systems and exhaust gas treatment facilities to stop operating, resulting in an increase in the concentration of exhaust gas in the paint room. The simulated accident took 20 minutes until the head of the emergency rescue team declared the end of the danger, marking the success of the drill.



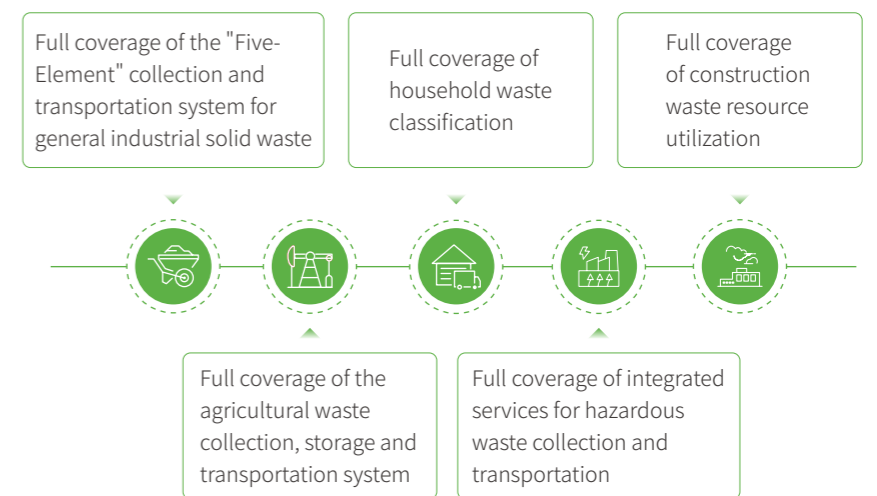
Summary and comment after the drill

Environmental Promotion

In order to build a resource-saving society, achieve sustainable development, enhance employee awareness of environmental protection, and gradually regulate employee behavior, the Company launched a knowledge campaign on "Jointly Building a Waste-Free City".



Promotion Bar for "Waste-Free City"



"Waste-Free City" Building Content

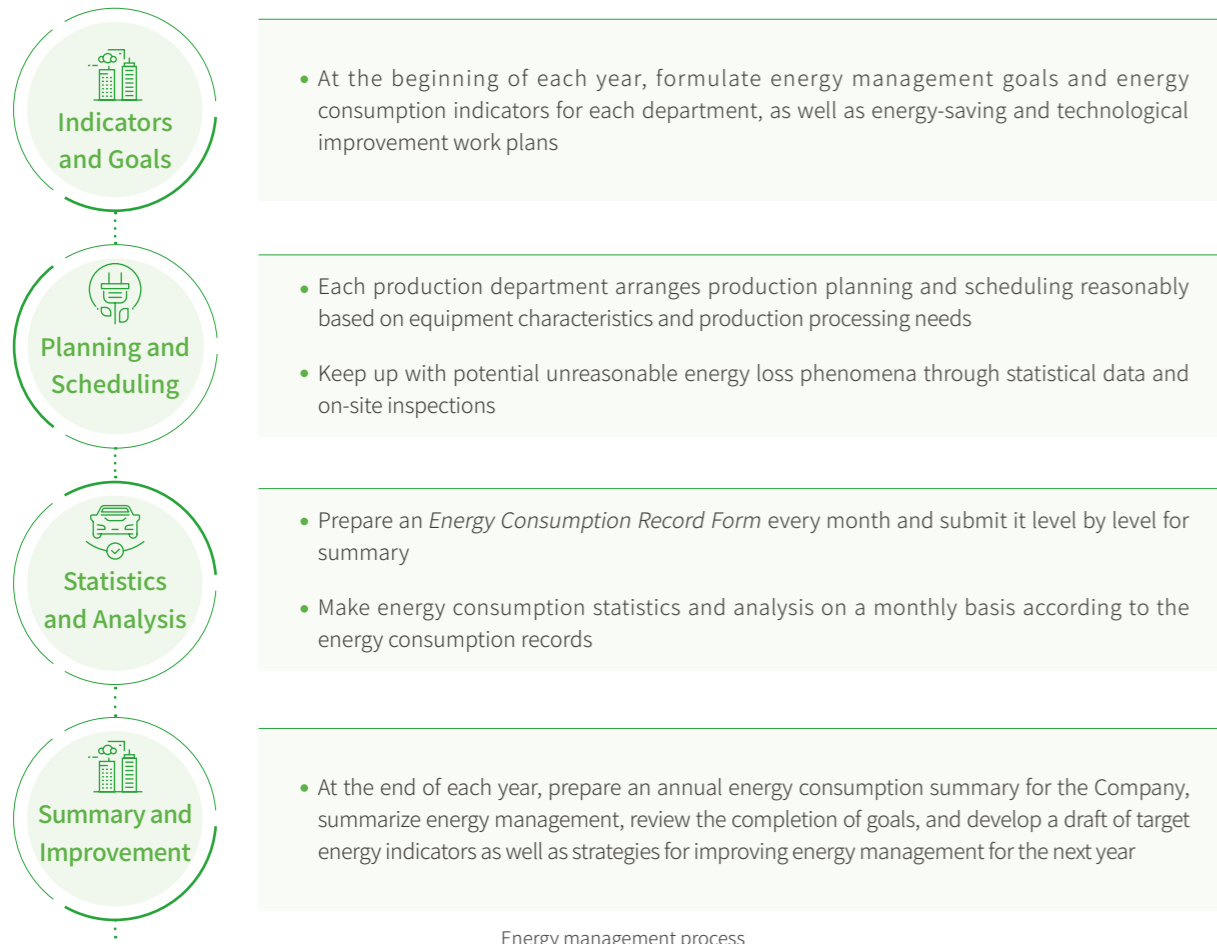
Energy Management - Promote Energy Conservation and Carbon Reduction

To further reduce energy consumption and improve energy efficiency, the Company attaches great importance to energy management, having developed the Energy Management Rules, and established an energy management system according to the ISO50001 standard under which an *Energy Management System Manual* has been prepared and implemented. The Company has been awarded an energy management system certification which remained in effect during the reporting period.



Energy Management System Certification

Electricity and steam are the main energies used by the Company, for which regular management is carried out through the process of setting indicators and goals, planning and scheduling, statistics and analysis, and summary and improvement.



Energy management process

Low-Carbon Energy Transformation

To support energy structure transformation, the Company gradually increases the proportion of clean energy usage. A green intelligent workshop for the distributed photovoltaic project has been established in the factory area, with a photovoltaic installed capacity of 1,157.58KWp and an additional photovoltaic rooftop installed capacity of 669.35KW, covering office buildings, workshops, and exhibition halls, etc. Operated under a mode of "generation for its own use, with surplus electricity combined to the grid", it facilitates green production capacity in the workshop through digital means with a full lifecycle photovoltaic intelligent operation and maintenance platform system independently developed by the Company. During the reporting period, the electricity used by the Company came from solar power plants, involving a total scale of approximately 1,193MWh, equivalent to reducing carbon dioxide emissions by around 1,189 tons. At present, the green electricity in the electricity used by Shuangliang Silicon Material (Baotou) Co., Ltd. accounts for nearly 42%, while this proportion for Shuangliang Solar-Tech (Baotou) Co., Ltd. is close to 50%.



PV roof of the Company's factory

Energy Type	Unit	2023
Comprehensive energy consumption	10,000 tons of standard coal	0.15

The Company was selected as a pilot case for the "Zero Carbon Action by Thousand Enterprises in Hundred Cities"

In December 2023, the "Green and Low-Carbon Integrated Innovation Forum" jointly hosted by Xinhua News, Quanzhou Municipal People's Government, and International Cooperation & China Urban Planning Institute, etc., was held in Jinjiang, Fujian. The forum released a list of pilot promotion cases (second batch) for the 2023 "Zero Carbon Action by Thousand Enterprises in Hundred Cities" on-site, into which the Company, as recognized by the industry and the society, has been selected after evaluation for its outstanding contributions in the field of energy conservation and environmental protection, as well as its low-carbon concept. Subsequently, the Company will create a zero-carbon enterprise under the ongoing guidance of the International Cooperation & China Urban Planning Institute.

The Company worked with ecological partners to create a zero carbon digital factory

In the journey of more than 40 years of deeply involving in the green and environmental protection industry, the Company has been committed to providing customers with low-carbon and zero-carbon solutions. Meanwhile, the Company also actively endeavors to achieve its low-carbon transformation. In August 2023, an opening ceremony was held by the Company for the Zero Carbon Digital Factory in the Equipment Manufacturing Industrial Park, with the chairman, directors and general manager of Shuangliang, the general managers and representatives of various business sectors in Shuangliang Equipment Manufacturing Industrial Park, the general managers of various functional departments of the Company, and ecological partners such as Huawei and UFIDA participating in the event. The construction of the Zero Carbon Digital Factory in Shuangliang Equipment Manufacturing Industrial Park aims for zero carbon digital operation. Through measures such as the construction of an energy carbon digital platform, a photovoltaic system in the park, an immersive liquid cooling energy storage system and an efficient computer room system, the development of intelligent and efficient equipment, the efficient upgrading of the air compression system, and the promotion of low-carbon travel for employees and electric vehicles, the park will achieve a development deeply integrating digitalization and zero carbon, unleashing development potential through zero carbon intelligent manufacturing. Starting from the Equipment Manufacturing Industrial Park as the first stop for the construction of a zero-carbon digital factory, the Company will gradually extend this effort to other industrial parks based on actual situations and construction plans for carbon-neutral development.



Opening ceremony of the Zero Carbon Digital Factory in the Equipment Manufacturing Industrial Park

| Development of Clean Technology

As an active response to the huge heating market demand in Northern China, the Company delves into the clean heating field, makes overall planning for the layout of the large temperature difference market, and widely recovers waste heat from power plants to solve urban heating sources and extend the large temperature difference heat supply in the heating network. In 2023, with strong technological innovation capabilities and excellent operational capabilities for clean and intelligent heating projects, the Company was awarded a 5A for the "Clean Heating Service Certification" and a 5A for the "Clean Heating Enterprise Rating".



Clean heating service certification



clean heating enterprise rating certification



The Company assisted Shijiazhuang Huanwang Heating Co., Ltd. in providing clean heating services

The Company made available 16 sets of 60MW lithium bromide heat exchange units to assist Shijiazhuang Huanwang Heating Co., Ltd. in providing clean heating services by reducing the backwater temperature of the zero-side heating network in the long-distance transmission network and increasing the heat transfer capacity of the zero-side network. This is of great significance for raising heating efficiency, improving air quality, and reducing pollution emissions.



16 sets of 60MW lithium bromide heat exchange units



The Company launched a "Training Course on Quantitative Management and Energy-Saving Operation Control Technology for Heating Systems"

In December 2023, the Company successfully held a "Training Course on Quantitative Management and Energy-Saving Operation Control Technology for Heating Systems" in Shijiazhuang City. During this training course, experts and professors from well-known universities such as Harbin Institute of Technology, Harbin Engineering University, and Beijing University of Civil Engineering and Architecture were invited to visit projects including a large temperature difference relay energy station and waste heat recovery, who had academic and technical exchanges and communication with the personnel of the Company, providing new ideas for Shuangliang's energy-saving and carbon reduction solutions with clean energy heating in terms of technical routes, system characteristics, economic benefits, and applications, with a focus on low-carbon development to lead clean heating together.



Training course on Quantitative Management and Energy-Saving Operation Control Technology for Heating Systems

» Hydrogen Production with Green Electricity

Under the global energy transition, the position of hydrogen energy in the strategic layout of countries around the world is increasingly prominent. Against the backdrop of the vast space in the electrolyzer equipment market, the Company seized the opportunity and laid out its hydrogen energy business in advance, achieving success in the green electricity intelligent hydrogen production system from technical R&D to production implementation, and creating a new growth for the clean energy industry.

Featuring low energy consumption, fast electrolyzer response rate, wide adjustable load range, and short hot and cold start-up time, the Shuangliang Green Electricity Intelligent Hydrogen Production System independently developed by the Company is able to maximize the efficiency of green electricity usage while achieving water-saving operation.



New generation alkaline water electrolytic hydrogen production system of Shuangliang

The new generation alkaline water electrolytic hydrogen production system of Shuangliang brings a high-performance alkaline water electrolyzer. Starting from the research of core components such as diaphragms, gaskets, catalysts, etc. in the electrolyzer, combined with a new nickel plating process and high electrode frame plate parallelism requirements, and under the support of special control methods, this system witnesses a high performance, with a DC energy consumption of 3.992 KW h/m³H₂@2,500A/m², a minimum operating load of 20%, a response rate of 10%/s, a hot start time of less than 10S, a adjustable load range of 20-200%, and a gas production capacity of up to 2000 Nm³/h. Carrying a high standard gas-liquid separation device and gas purification device with a processing capacity of 2,000 Nm³/h, the Company has taken a solid step forward in the development of a safe and stable operation of high-performance hydrogen production system with green electricity.



» The Belt and Road

Taking advantage of the "Belt and Road" initiative, the Company gathers industrial strength, and devotes itself to overseas industry and public construction construction relying on its high-end equipment manufacturing power in the field of energy saving, water saving and clean energy. With the "Pillars of a Great Power" made in China, the Company has won high recognition from customers in countries along the "Belt and Road", successfully promoting China's energy-saving, eco-friendly and clean energy to the international market.

Shuangliang Eco-energy, as one of the earlier "going global" enterprises in China's machinery manufacturing industry, has firmly grasped the strategic opportunity from the "Belt and Road" initiative to help move the global energy saving, environmental protection and clean energy forward with Shuangliang features.





Expanding Overseas Markets

- As a model in the overseas energy-saving markets, the Company held a top spot for the local bromine chiller in Pakistan, with a market share of over 50%. Owing to its strength in waste heat utilization technology, it further expanded into the international market.

Maintaining Brand Image

- The Company has established a good brand image with the heavy-weight class power plant project in Saudi Arabia and Dubai, set an overseas model with the world's largest combined-cycle power plant air cooling project in Egypt, achieved market expansion demonstration for the non-thermal power generation project in Singapore, and accumulated intercooled steel tower technology and experience in the field of thermal power construction through international union of powers in Hungary.

Witnessing Efficient Service

- As a witness to the comprehensive strength of Chinese enterprises, the Company has broken through the monopoly of the condenser market in Türkiye to achieve large-scale equipment manufacturing, demonstrated its ability to manage and deliver large projects through PTA cooperation in India, and provided meticulous after-sales support for customers through overseas service stations in Indonesia.

The Company participated in the "Belt and Road" CEO Conference

In October 2023, the Third "Belt and Road" Forum for International Cooperation was convened in Beijing around the theme of "High-quality Belt and Road Cooperation: Together for Common Development and Prosperity", attended by representatives from more than 130 countries and more than 30 international organizations. The chairman of the Company participated in the "Belt and Road" CEO Conference, working to expand international cooperation, deepen exchanges and mutual benefits, and promote the "Belt and Road" construction and enterprise development.



Chairman of the Company attended the Belt and Road CEO Conference

Pollution Control - Safeguard Our Green Earth

Shuangliang Eco-energy pays particular attention to factors that may have adverse effects on the environment, such as wastewater, exhaust gas, noise, and solid waste generated during production and operation, with great efforts made to manage them under the framework of the ISO14001 environmental management system standard. Meanwhile, the Company has formulated and implemented multiple rules and regulations, including the *Three Simultaneities Management Rules*, the *Environmental Protection Management Rules*, the *Emergency Plan for Accidental Discharge of Wastewater and Exhaust Gas*, and the *Solid Waste Management Rules*, in this regard. Every year, qualified third-party organizations are hired to monitor the Company's wastewater, exhaust gas, noise, dust, and other emissions, and the results are reported to relevant units, with strict pollution control measures taken to safeguard our green earth.

| Wastewater Management

In terms of its wastewater which can be divided into industrial one and domestic one, the Company has planned and constructed sewage pipelines and sewage treatment facilities in the factory area with dedicated persons assigned for their daily use and maintenance, properly organizing the discharge of wastewater. During the reporting period, the Company's wastewater discharge can be seen as follows:

Indicator	Unit	Standard	Reference Value	2023
Total wastewater discharge	ton	-		840,477
PH	-	Class III Standard in Schedule 4 to the <i>Integrated Wastewater Discharge Standard</i> (GB8978-1996)	6—9	7.3
COD	mg/l		500	184.83
Suspended solids	mg/l		400	64.33
Petroleum	mg/l		20	2.33
Ammonia nitrogen	mg/l	Class B Standard in Schedule 1 to the <i>Wastewater Quality Standards for Discharge to Municipal Sewers</i> (GB/T 31962-2015)	45	5.86
Total nitrogen	mg/l		70	13.04
Total phosphorus	mg/l		8	1.84

Wastewater with Nitrogen and Phosphorus



Wastewater Treatment Methods

Wastewater without Nitrogen and Phosphorus

After neutralization and regulation tank, inclined-tube tube settling, and activated carbon filtration, 70% of it will be reused in the phosphating process, and the remaining 30% will be evaporated by an evaporator.



After neutralization pretreatment, it will be connected to the Xili Sewage Treatment Plant of Guangda Water Treatment (Jiangyin) Co., Ltd. along with the domestic sewage pre-treated by septic tanks.

| Exhaust Gas Management

During painting, sandblasting, phosphating and other processes in the Company, exhaust gases and dust may be generated, for which, the Company has equipped corresponding exhaust gas treatment facilities, and designated personnel to be responsible for their daily use and maintenance, to properly organize the relevant emissions. During the reporting period, the Company's exhaust gas emissions can be seen as follows:

Indicator	Unit	Standard	Reference Value	2023
PM	mg/m ³	Integrated Emission Standard of Air Pollutants (DB32/4041-2021)	20	12.6
HCL	mg/m ³		10	4.55
VOC	mg/m ³		60	6.23

Classified Treatment

Different exhaust gases will be treated differently as appropriate to their properties. HCL will be emitted at high altitudes after being treated with a secondary alkali spray. PM and NMHC will be subject to high-altitude emission after being treated with "dry filtration + zeolite rotor + catalytic combustion" or "dry filtration + zeolite molecular sieve + catalytic combustion".

Exhaust Gas Treatment Methods

Regular Inspection and Facility Maintenance/Optimization

The Enterprise Management Department is responsible for regular inspection of exhaust gas emissions, while the Equipment Department for daily maintenance, upgrading, and optimization of equipment.

| Solid Waste Management

Solid waste generated by the Company mainly includes general waste such as iron filing and household waste, as well as hazardous waste such as waste oil paint barrels and phosphating sludge, with respect to which designated storage sites have been set up by the Company for the proper management. As to hazardous waste, the Company signs agreements with qualified third-party agencies for unified disposal.

Solid Waste Treatment Methods



Resource Conservation and Comprehensive Utilization



In order to save resources and protect the ecological environment, the Company regularly carries out waste recycling and utilization. For various types of waste materials such as leftover materials, waste parts, scrap irons, iron filings, copper filings, and waste copper pipes generated during production and operation, storage sites are designated, and relevant agencies are arranged under agreement on recovery to promote resource recycling. During the reporting period, the Company processed a total of 9,950 tons of waste materials through recycling.

| Noise Management

The noise of the Company mainly comes from equipment and hammering in various production workshops. During equipment procurement, production layout and equipment installation location selection, the Company considers the impact of factory noise and boundary noise, with constant efforts to improve production processes for reducing workshop noise, and equipment with excessive noise updated and replaced in a timely manner.

Show Love and Take Social Responsibility

As a responsible enterprise, Shuangliang Eco-energy actively engages in the work and activities of building a beautiful and harmonious society, assumes social responsibility, and supports community development and public charity.

- Blood Donation for Public Welfare
- Community Building and Service



Blood Donation for Public Welfare

With a sense of social responsibility, the Company organized a voluntary blood donation activity for public welfare. Through this activity, the Company can not only help patients with blood shortage, but also enhance the social responsibility awareness of employees, better spread positive social energy and show the good social image of the enterprise.



"Heart-warming Public Welfare" voluntary blood donation activity

To give love and gratitude to society, Shuangliang Eco-energy organized a voluntary blood donation activity in 2023. As mobilized by the Company, employees actively participated in the activity, who orderly lined up in front of the blood donation bus for detailed information registration, blood type testing, intravenous blood collection and other processes in sequence, to delicate their love. This activity helps widely publicize the significance of blood donation. Blood donors not only use their blood to save the lives of their compatriots, but also advocate for the social trend of giving a helping hand with their broad mindedness. Through this activities, employees have shown gratuitous dedication to society and others, while sublimating their thoughts and making contributions to building a harmonious society.



Voluntary blood donation activity in 2023

Community Building and Service

Shuangliang Eco-energy takes an active part in fulfilling its social responsibility, going deep into the community through a series of public welfare activities, participating in community construction, and showing concern for vulnerable groups, to contribute to society. The Company actively undertakes its social responsibility and has been involved in local construction, social welfare, environmental protection and ecology over the years by establishing charitable volunteer teams and youth volunteer service teams, participating in such events as tree planting, charity sales, student assistance and volunteer services, and regularly visiting Jiangyin Welfare House and other welfare institutions for activities. In economically underdeveloped areas such as Inner Mongolia, Shaanxi, and Xinjiang, the Company has invested in the construction of air cooling projects to support the stable operation of power enterprises there, drive local governments to develop industries of their features based on market demand, and help the unskilled poor to get jobs. Besides, the Company supported centralized heating projects in Shanxi, Inner Mongolia, Lanzhou, Henan and other regions with funds, equipment, and operation and maintenance services, making great contributions to ensuring heating services for people's livelihood in areas needing heat supply, and guaranteeing the safety and warmth of local people. Meanwhile, all of these conform to the characteristics of the circular economy for reduction, resource utilization and reuse, and are in line with the national green development strategy, which helps save natural resources, reduce pollution emissions, improve economic benefits, and drive employment and economic development, with good economic and social performances.

During the reporting period

The Company donated a sum of RMB

200,000 to the Education Development Fund of Nanjing University of Technology at Jiangyin

and a sum of RMB

50,000 to carbon-neutral green enterprises in Jiangyin City



Key Performance Table

Governance Performance	Unit	2023
Number of directors	person	8
Number of independent directors	person	3
Number of executive directors	person	5
Number of General Meetings of Shareholders held	time	4
Number of meetings of the Board of Directors held	time	15
Number of meetings of the Board of Supervisors held	time	11

Environmental Performance	Unit	2023
Comprehensive energy consumption per RMB10,000 of revenue	ton of standard coal/RMB10,000	0.15
Total wastewater discharge	ton	840,477
PM	mg/m ³	12.6
HCL	mg/m ³	4.55
VOC	mg/m ³	6.23
Environmental investment	RMB10,000	188

Employee Performance	Unit	2023
Total number of employees	person	6,455
Number of female employees	person	1,046
Number of male employees	person	5,409
Number of employees aged 30 and below	person	2,667
Number of employees aged 30 to 39	person	2,489
Number of employees aged 40 to 49	person	774
Number of employees aged 50 and above	person	525
Labor contract signing rate	%	100
Social insurance coverage rate	%	100
Employee physical examination coverage rate	%	100
Occupational health and safety investment	RMB10,000	1,040.06

Economic Performance	Unit	2023
Operating income	RMB100 million	231.49
Net profit attributable to the parent company	RMB100 million	15.02
Total assets	RMB100 million	300.91

GRI Index

» Global Sustainability Standards Board GRI Standards Index

GRI Indicators	Interpretation	Relevant Section
The Organization and its Reporting Practices		
G2-1	Organizational details	About This Report
G2-2	Entities included in the organization's sustainability reporting	About This Report
G2-3	Reporting period, frequency and contact point	About This Report
Activities and Workers		
G2-6	Activities, value chain and other business relationships	About This Report
G2-7	Employees	Join Hands with Employees for Mutual Growth and Progress
Governance		
G2-9	Regulatory structure and composition	Standardize the Governance Structure and Consolidate the Foundation of Development
G2-10	Nomination and selection of the highest governance body	Standardize the Governance Structure and Consolidate the Foundation of Development
G2-14	Role of the highest governance body in sustainability reporting	Standardize the Governance Structure and Consolidate the Foundation of Development
Strategy, Policies and Practices		
G2-22	Statement on sustainable development strategy	Message from the Chairman
G2-25	Processes to remediate negative impacts	Ensure Compliance with Laws and Regulations, and Observe Business Ethics Put Customer First, and Focus on Service
G2-26	Mechanisms for seeking advice and raising concerns	Fulfill the Information Disclosure Obligations and Maintain Investor Relations
G2-27	Compliance with laws and regulations	Ensure Compliance with Laws and Regulations, and Observe Business Ethics
Stakeholder Engagement		
G2-29	Approach to stakeholder engagement	About Shuangliang Eco-energy
Material Topics		
G3-1	Process to determine material topics	About Shuangliang Eco-energy
G3-2	List of material topics	About Shuangliang Eco-energy
G3-3	Management of material topics	About Shuangliang Eco-energy
Economic Performance		
G201-1	Direct economic value generated and distributed	Manage and Assure Quality Adhere to Scientific Research and Innovation for High-Quality Development Supply Chain Management
G201-3	Defined benefit plan obligations and other retirement plans	Employee Compensation and Welfare
Indirect Economic Impacts		
G203-2	Significant indirect economic impacts	Put Customer First, and Focus on Service Industry-Academia-Research Cooperation Joint Progress with Peers Blood Donation for Public Welfare
Anti-competitive Behavior		
G206-1	Legal actions for anti-competitive behavior, anti-trust, and anti-monopoly practices	Ensure Compliance with Laws and Regulations, and Observe Business Ethics
Materials		
G301-2	Recycled input materials used	Manage and Assure Quality

GRI Indicators	Interpretation	Relevant Section
G301-3	Reclaimed products and their packaging materials	Manage and Assure Quality Pollution Control - Safeguard Our Green Earth
G302-1	Energy consumption within the organization	Energy Management - Promote Energy Conservation and Carbon Reduction
G302-4	Reduction of energy consumption	Energy Management - Promote Energy Conservation and Carbon Reduction
G302-5	Reductions in energy requirements of products and services	Energy Management - Promote Energy Conservation and Carbon Reduction
Water		
G303-2	Management of water discharge-related impacts	Pollution Control - Safeguard Our Green Earth
Waste		
G306-1	Significant impacts from waste generation and related to waste	Environmental Management - Build a Green Enterprise Pollution Control - Safeguard Our Green Earth
G306-2	Management of significant impacts related to waste	Environmental Management - Build a Green Enterprise Pollution Control - Safeguard Our Green Earth
G306-3	Waste generated	Pollution Control - Safeguard Our Green Earth
G306-4	Waste transferred from disposal	Environmental Management - Build a Green Enterprise Pollution Control - Safeguard Our Green Earth
G306-5	Waste for disposal	Environmental Management - Build a Green Enterprise Pollution Control - Safeguard Our Green Earth
Supplier Environmental Assessment		
G308-1	New suppliers that were screened using environmental criteria	Supply Chain Management
Employment		
G401-1	New employee hires and employee turnover	Employment
G401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Employee Compensation and Welfare
Occupational Health and Safety		
G403-1	Occupational health and safety management system	Employee Health and Safety
G403-3	Occupational health services	Employee Health and Safety
G403-4	Worker participation, consultation, and communication on occupational health and safety	Employee Health and Safety
G403-5	Worker training on occupational health and safety	Employee Health and Safety
G403-6	Promotion of worker health	Employee Health and Safety
Training and Education		
G404-1	Average hours of training per year per employee	Employee Training
G404-2	Programs for upgrading employee skills and transition assistance programs	Employee Training
Supplier Social Assessment		
G414-1	New suppliers that were screened using social criteria	Supplier Management
Public Policy		
G415-1	Political contributions	Community Building and Service
Marketing and Labeling		
G417-1	Requirements for product and service information and labeling	Manage and Assure Quality
Customer Privacy		
G418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Put Customer First, and Focus on Service

Reader Feedback Form

Dear readers,

Greetings !

Thank you very much for taking the time to read the 2023 Environmental, Social and Governance (ESG) Report of Shuangliang Eco-energy Systems Co., Ltd.. In order to provide you and other stakeholders with more valuable information and effectively promote our ability and level of performing social responsibilities, we sincerely look forward to your comments and suggestions.

Multiple Choice Questions (Please tick ✓ as appropriate)

1.How do you think of this Report generally?

Very good Good Medium Poor Very poor

2.How do you think of the response to and disclosure of issues concerned by stakeholders in this Report?

Very good Good Medium Poor Very poor

3.How do you think Shuangliang Eco-energy has done in terms of economic responsibility?

Very good Good Medium Poor Very poor

4.How do you think Shuangliang Eco-energy has done in terms of environmental responsibility?

Very good Good Medium Poor Very poor

5.How do you think Shuangliang Eco-energy has done in terms of safety management?

Very good Good Medium Poor Very poor

6.How do you think Shuangliang Eco-energy has done in terms of employee responsibility?

Very good Good Medium Poor Very poor

7.How do you think Shuangliang Eco-energy has done in terms of community responsibility?

Very good Good Medium Poor Very poor

8.How do you think of the clarity, accuracy and completeness of the information, indicators and data disclosed in this Report?

Very good Good Medium Poor Very poor

9.Do you think the content arrangement and design of this Report are easy for reference?

Yes No

Open Questions

Do you have any comments or suggestions on the performance of social responsibilities by Shuangliang Eco-energy and this Report?