China Northern Rare Earth (Group) High-Tech Co., Ltd.

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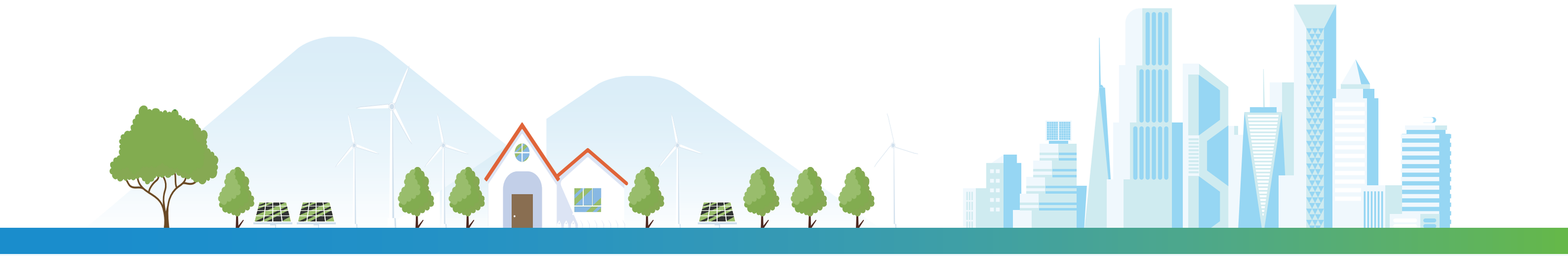
2024

Environmental, Social and Governance Report



About this Report

Introduction

This Report is the third environmental, social and governance report (this "Report") released by China Northern Rare Earth (Group) High-Tech Co., Ltd. to disclose and exhibit Company's performance in environmental, social and governance aspects to the stakeholders. This Report has been reviewed by the Company, which will be responsible for the authenticity and validity of the information contained herein.

Reporting Period

The reporting period is from January 1, 2024, to December 31, 2024, unless stated otherwise. To ensure the Report's completeness, some information extends beyond this specified period.

Reporting Scope

Unless stated otherwise, this Report is about the China Northern Rare Earth (Group) High-Tech Co., Ltd., covering its headquarters, branches and subsidiaries, with the scope of data disclosure that is identical to the scope of the consolidated financial statements. Any deviation from the scope will be specified in the Report.

Data Source

All information and data presented in this Report are from publicly available materials provided by governmental agencies, as well as the Company's formal documents, public disclosures and internal statistics. Financial data referenced herein is sourced from the audited financial statements in the 2024 Annual Report. Unless stated otherwise, all monetary amounts are denominated in Chinese yuan.

Basis of Preparation

- Guidelines No.14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies— Sustainability Report (Trial)
- Reference of ESG Indicators System for ESG Reports of Listed Companies Controlled by Central State-owned Enterprises published by the State-owned Assets Supervision and Administration Commission of the State Council
- IFRS Sustainability Disclosure Standards S1 — General Requirements for Disclosure of Sustainability-related Financial Information and IFRS Sustainability Disclosure Standards S2 — Climate-related Disclosures issued by the International Sustainability Standards Board (ISSB)
- Sustainability Reporting Standards published by Global Reporting Initiative (GRI)

Abbreviations and Glossary

Unless otherwise indicated in the context, the terms used shall have the following meanings in this report:

Definitions of frequently used terms		
Northern Rare Earth, the Company, We	refers to	China Northern Rare Earth (Group) High-Tech Co., Ltd.
Baogang, Baogang Group	refers to	Baotou Iron and Steel (Group) Co., Ltd.
Smelting Branch	refers to	Smelting Branch of Northern Rare Earth
Huamei	refers to	Baotou Huamei Rare-Earth High-Tech Co., Ltd.
Northern Magnetic Materials	refers to	Inner Mongolia Northern Rare Earth Magnetic Materials Co., Ltd.
Huaxing Rare Earth	refers to	Baotou Huaxing Rare Earth Technology Co., Ltd.
Hefa	refers to	Baogang Steel Hefa Rare Earth Co., Ltd.
Zibo Lingzhi	refers to	Zibo Baogang Lingzhi Rare Earth Hi-tech Co., Ltd.
Gansu Rare Earth	refers to	Gansu Rare Earth New Materials Co., Ltd.
Energy Conservation & Environmental Protection	refers to	Baogang Group Energy Conservation & Environmental Protection Technology Industry Co., Ltd.
BRIRE	refers to	Baotou Research Institute of Rare Earths
Xi'aoke	refers to	Inner Mongolia Xi'aoke Hydrogen Storage Alloy Co, Ltd.
International Trading	refers to	Inner Mongolia Baotou Rare Earth International Trading Co., Ltd.
Tianjiao Seimi	refers to	Baotou Tianjiao Seimi Rare Earth Polishing Powder Co., Ltd.
Ruixin	refers to	Baotou Ruixin Rare Earth Metal Materials Co., Ltd.
Jingrui	refers to	Baotou Jingrui Advanced Materials Co., Ltd.
Xinfeng Xinli	refers to	Xinfeng County Baogang Xinli Rare Earths Co., Ltd.
Jinmeng	refers to	Baotou Jinmeng Rare Earth Co., Ltd.
ZXAT	refers to	ZXAT New Materials (Inner Mongolia) Co., Ltd.
Northern Jiaxuan	refers to	Inner Mongolia Northern Jiaxuan Technology Co., Ltd.
Northern Zhaobao	refers to	Northern Zhaobao Magnetic Industry (Inner Mongolia) Co., Ltd.

Definitions of frequently used terms		
Ningbo Zhaobao	refers to	Ningbo Zhaobao Magnet Co., Ltd.
Suzhou Torin	refers to	Suzhou Torin Drive Equipment Co., Ltd.
Souwest Magnetech	refers to	Ningbo Souwest Magnetech Development Co., Ltd.
Recycling Resources	refers to	Northern Rare Earth Recycling Resources (Darhan-Muminggan Joint Banner) Co., Ltd.
Company Law	refers to	The Company Law of the People's Republic of China
Securities Law	refers to	The Securities Law of the People's Republic of China
SSE	refers to	Shanghai Stock Exchange
Two Rare Earth Bases	refers to	The largest base for rare earth new materials in China and a leading base for rare earth applications across the world
Yuan, 10,000 yuan, 100 million yuan	refers to	RMB 1 yuan, RMB 10,000 yuan, RMB 100 million yuan, the legal currency of China
Reporting Period	refers to	From January 1, 2024 to December 31, 2024
ESG	refers to	Environmental, Social and Governance

Board Statement

This report has received thorough review and approval during the second session of the ninth Board of Directors Northern Rare Earth. The Board and Directors affirm that the information contained in this report accurately reflects Northern Rare Earth's status, containing no false information, misleading statements, or significant omissions, and assume legal responsibility for the authenticity, accuracy, and completeness of the information presented herein.

Report Release

This Report is released in the form of electronic version and can be obtained from the website of the Shanghai Stock Exchange (www.sse.com.cn) and the official website of the Company (www.reht.com).

Readers Feedback

To continuously improve the Company's ESG management, enhance the quality of ESG information disclosure and drive the Company to effectively implement the ESG development strategy, we would like to solicit opinions from readers for this Report (as detailed in Appendix II "Reader Feedback Form"). We welcome your opinions and comments submitted to the following email address: cnrezqb@126.com.

Message from the Chairman

In 2024, the People's Republic of China celebrated its 75th anniversary, marking a pivotal year for Northern Rare Earth. During this time, we effectively implemented the directives of General Secretary Xi Jinping during his inspection of Inner Mongolia by assuming primary responsibility for the development of the Two Rare Earth Bases. This year was also critical for executing our 14th Five-Year Plan. Throughout the past year, Northern Rare Earth has steadfastly pursued its founding mission, diligently embracing the new development concept by complete and accurate application. We have accelerated the establishment of a new development framework, prioritizing innovation-led growth while committing to environmentally sustainable practices. Furthermore, we have enhanced our corporate governance and deepened internal reform as a state-owned enterprise, ensuring a robust framework for social responsibility. Notably, we have achieved further advancements in our ESG management performance, heading steadily high-quality and sustainable development. Our concerted efforts have laid a strong foundation for future success and resilience in a rapidly evolving economic landscape.

Liu Peixun

Secretary of the Party Committee
and Chairman of the Board

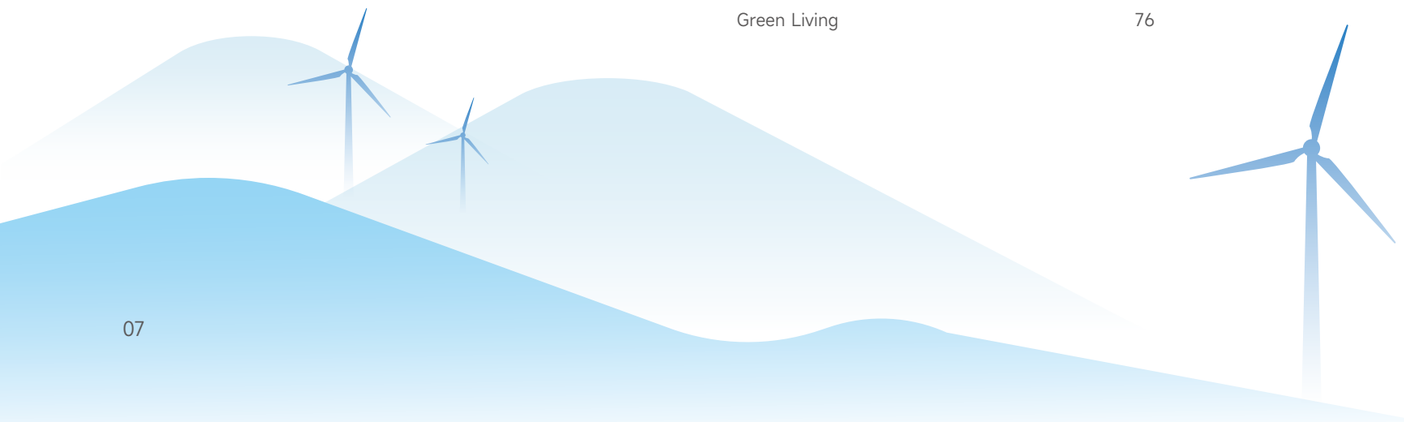
Over the past year, we have made new achievements in leading the low-carbon and green development. Underpinned by sustainable principles, we have completed and operationalized the first phase of our next-generation green mining, beneficiation, and smelting upgrade project for rare earths. As a frontrunner in the industry, we conducted the first comprehensive self-examination for greenhouse gas emissions of industrial-chain, and built the inaugural carbon accounting platform in the rare earth sector. This initiative has enhanced our precise carbon management capabilities. Additionally, we released four Environmental Product Declaration (EPD) reports for rare earth products. In a further demonstration of leadership, we played a pivotal role in formulating the industry standard, titled Green Factory Evaluation Requirements for Rare Earth Polishing Powder. Advancing our digital-intelligent transformation, we have established a high-standard green manufacturing system, with subsidiaries such as Hefa, Huaxing Rare Earth, and Xi'aoke receiving Green Factory certification in the Inner Mongolia Autonomous Region. We have strengthened environmental protection infrastructure development, significantly enhancing pollution reduction and treatment capabilities and resource recycling efficiency.

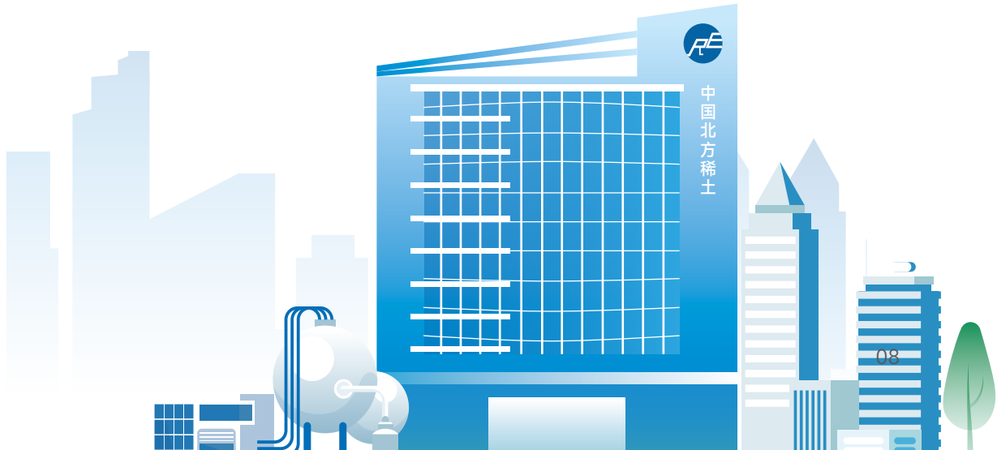
Over the past year, we have seen new advancements in shared development of a harmonious enterprise. We unequivocally demonstrated our commitment to national priorities while fulfilling our foundational mission. Operating under the guiding principles of innovation-driven growth, collaborative engagement, and people-centered development, we have made substantial progress across supply and industrial chains while proactively addressing our social responsibilities. In strict accordance with national rare earth industry strategies, we have rigorously implemented state-mandated production quotas. This approach has ensured a stable supply of high-quality products and services, thereby reinforcing market price stability and operational reliability. Through strategic mergers, including the acquisition of ZXAT and the establishment of a joint venture, Northern Zhaobao, we have significantly enhanced and diversified our industrial frameworks. These initiatives have facilitated upstream and downstream synergies, and optimized value creation. As a pivotal national force in rare earth science, Northern Rare Earth has undertaken a multitude of state-level research and development projects, achieving significant breakthroughs. We have created China's inaugural National Technical Standard Innovation Base for rare earth elements. We have also spearheaded the formulation of the first international standard for the global rare earth industry to facilitate technological advancement. In addition to our business endeavors, we have taken social welfare initiatives that promote energy-saving and low-carbon technologies, and provided support for rural revitalization. Central to our mission is a steadfast focus on employee wellbeing. By initiating multiple types of staff care, cultivating family-friendly workplaces, and fostering inclusive cultures, we have significantly enhanced staff satisfaction.

Over the past year, we have made progress in lawful, compliant, and honest operations. We remained committed to advancing our State-Owned Enterprise (SOE) reform. We have optimized our corporate governance and enhanced standardized practices, thereby modernizing our management efficiency. By prioritizing efficiency, profitability, and compliance, we have successfully implemented institutional reforms through management innovation, lean practices, and comprehensive performance evaluations. By means of the refinement of our governance structures and institutional mechanisms, we have significantly heightened the effectiveness and performance of all governing entities. In our commitment to compliance management, we have proactively aligned with high-standard international frameworks. Notably, Northern Rare Earth and its affiliates—including the Smelting Branch and International Trading—attained dual certifications for ISO 37301:2021 and GB/T 35770-2022, marking it as the first SOE in Inner Mongolia with such achievement and underscoring our unwavering dedication to compliance operations. Furthermore, we enhanced our environmental, social, and governance (ESG) practices and market capitalization management by establishing robust ESG frameworks and promoting awareness. More ESG information reporting helped Company's governance and recognition of improved ratings as well as multiple accolades in the capital markets. By strategically integrating market capitalization initiatives with long-term planning, we executed a series of mergers and acquisitions, strengthened our disclosures and investor relations, optimized cash dividends, and efficiently managed our capital operations. As a result of these focused efforts, we have solidified our standing as the highest-valued listed company in the rare earth permanent magnet industry.

Where the heart desires, one can indeed advance. By pursuing our ambitions with unwavering resolve, we are poised to transform our aspirations into reality. Looking ahead, we will steadfastly adhere to the principles of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era. We will ground our initiatives in a comprehensive understanding of the broader socio-economic landscape while systematically planning the evolution of our industry. Our strategic focus entails accelerating the development of new quality productive forces while continuously enhancing our performance in ESG management and fulfilment of duties. We shoulder critical responsibility for the establishment of the Two Rare Earth Bases, and we are committed to expediting our progress toward becoming a world-class leader in the rare earth sector. Collaborating closely with all stakeholders, we will embody our corporate responsibilities as we embark on this new journey. Together, we will contribute to the comprehensive advancement of a modern socialist country and co-author a transformative chapter in building the nation with robust rare earth industry.

Contents





About Northern Rare Earth

Company Profile

China Northern Rare Earth (Group) High-Tech Co., Ltd. was established in 1961 and operates as a subsidiary of Baogang (Group) Co., Ltd. Notably, in 1997, it was listed on the Shanghai Stock Exchange (SSE), recognized as China's Premier Rare Earth Stock. In 2015, Northern Rare Earth took the lead in establising the nation's first rare earth group, successfully instituting centralized and unified management of light rare earth resources in northern China. Today, Northern Rare Earth has a robust infrastructure comprising 42 affiliates including branches and subsidiaries, employing more than 9,000 individuals across 11 provinces, municipalities, and autonomous regions within the country. As a globally recognized leader in the rare earth industry, the Company has achieved remarkable cross-regional, cross-ownership, and multi-sector synergy, positioning itself as the largest, highest-output, and most profitable integrated rare earth enterprise in the world. Its excellence spans production, research and development, and trade, affirming its dominant role in the global rare earth market.

Utilizing the distinct resource advantages inherent to the Baiyun Obo Mine, Northern Rare Earth has successfully established the world's largest production base for raw materials and rare earth functional materials. The Company possesses the capacity to manufacture 11 major categories of rare earth products, encompassing over 100 varieties and nearly 1,000 specifications. With an annual smelting and separation capacity of over 200,000 tons and a rare earth metal production capacity of 42,000 tons, Northern Rare Earth ranks as the world's top supplier of rare earth raw materials. In the realm of rare earth functional materials, it achieved an annual production capacity of 100,000 tons in magnetic alloys, making it the largest producer in the world; the polishing materials of 36,000 tons per year, claiming over 50 percent of the domestic market share; and the hydrogen storage alloys of 8,300 tons per year. It also produces catalysts, generating 20,000 units each year. Furthermore, the Company produces 1,270 rare earth permanent magnet motors annually.

Key Performance

Number of Branches and Subsidiaries

42

Employees over

9,000

Distribution

11

Provinces (municipalities and autonomous regions)

Currently, the Company possesses nine state-level scientific and technological innovation platforms, including the State Key Laboratory for Research and Comprehensive Utilization of Baiyun Obo Rare Earth Resources, the National Innovation Center for Rare Earth Functional Materials, the National Technical Standard Innovation Base (Rare Earth), and the Rare Earth New Material Testing and Evaluation Platform (Rare Earth Industry Center). Notably, the Rare Earth New Material Testing and Evaluation Platform is the sole platform sanctioned by the Ministry of Industry and Information Technology in the rare earth sector, underscoring its unique significance. In addition to these platforms, the Company is home to two national-level enterprise technology centers: the Technology Center of China Northern Rare Earth (Group) High-Tech Co., Ltd. and the Technology Center of Gansu Rare Earth New Materials Co., Ltd. Furthermore, it operates two national-level post-doctoral research workstations—the Post-doctoral Workstation of Baotou Research Institute of Rare Earths and the Post-doctoral Workstation of China Northern Rare Earth. The Company also has an impressive array of 16 provincial (autonomous region-level) technological innovation platforms, which include the Inner Mongolia Autonomous Region Engineering Technology Research Center for Rare Earth Abrasive Materials, the Inner Mongolia Autonomous Region Key Laboratory of Rare Earth Functional Materials, and the Technology Innovation Center for Rare Earth New Materials.

9
State-Level Scientific and Technological Innovation Platforms

2
National-Level Post-Doctoral Research Workstations

16
Provincial (autonomous region-level) Technological Innovation Platforms

2
National-Level Enterprise Technology Centers

Corporate Culture

Corporate Mascot

Bao Xiaoxi is a winged divine horse, symbolically portrayed as a white Mongolian steed. The choice of white represents rarity, hope, and unwavering determination. The horse's wings are depicted in a technology-inspired blue. Encircling its neck is a collar embellished with the 17 rare earth elements, which signifies the strategic importance of the resource industry. Collectively, these elements illustrate how technological advancement and the development of new quality productive forces empower Northern Rare Earth to ascend to new heights. In this context, rare earth materials and other emerging industries can be viewed as the wings of progress.

Overview of Products

Category and Name		Applications
Raw materials	Lanthanum oxide	Used in manufacturing special alloys, precision optical glass, high-refractive-index optical fiber panels, ceramic capacitors and others.
	Cerium oxide	Used in producing among others, special alloys, rare earth catalytic materials, rare earth colorants, and rare earth thermal stabilizers.
	Lanthanum-cerium carbonate	Rare earth polishing materials, agricultural fertilizers, and water treatment systems.
	Praseodymium-neodymium	Rare earth metals, electronic industry and others.
	Praseodymium-neodymium metal	Magnetic materials
	Neodymium Metal	Magnetic materials
	Lanthanum-Cerium Metal	Hydrogen storage materials, flint (for lighters) and others.
	Lanthanum metal	Hydrogen storage materials, fuel cells, and rare earth alloys.
	Cerium metal	Hydrogen storage materials, magnetic materials, fuel cells, and rare earth alloys.
Materials	Magnetic materials	Drive motors, servo motors, micro/special motors. Among these, samarium-cobalt (SmCo) permanent magnets serve as critical materials for China's Shenzhou spacecraft series.
	Hydrogen storage materials	Nickel-Metal Hydride (Ni-MH) batteries, and hydrogen storage & transportation.
	Polishing materials	LCD/hard disk glass substrates, smartphone cover glass, crystal rhinestone jewelry, conventional & precision optical components, semiconductor photomasks and integrated circuits.
	Catalytic materials	Automotive exhaust purification, and industrial waste gas treatment.
	Rare earth alloys	Steel production, construction materials, and automotive manufacturing.
Products	Permanent magnet motors	Wind power, new energy vehicles, electronic communication, and high-end healthcare.
Medium-heavy rare earths	Samarium oxide	Magnetic materials, ceramics, glass, electronic components and others.
	Europium oxide	Phosphors, optical materials, etc.
	Gadolinium oxide	Electronic components, medical and healthcare, etc.
	Terbium oxide	Alloys, magnetic materials, phosphors, etc.
	Dysprosium oxide	Alloys, magnetic materials, phosphors, etc.
	Holmium oxide	Optical communication devices, medical and healthcare, etc.
	Erbium oxide	Ceramics, optical materials, laser applications, etc.
	Lutetium oxide	Optical materials, laser applications, semiconductors, and so on.

Awards and Honors

★ ★ ★

Included in 2024 China Corporate ESG 100 Index

People's Daily

★ ★ ★

Golden Quality ESG Award

Shanghai Securities News

★ ★ ★

Top 100 A-share Listed Companies

Phoenix Television

★ ★ ★

Best Listed Companies

New Fortune magazine

★ ★ ★

2023-2024 Information Disclosure A-Rating (Outstanding)

Shanghai Stock Exchange

★ ★ ★

Huamei Tunnel Kiln Automation Project in smelting sector, recognized as the 2024 Best Practices of Digital Transformation in China's Listed Companies

China Association for Public Companies

★ ★ ★

Best Cases for 2023 Earnings Briefing

China Association for Public Companies

★ ★ ★

Top 100 Companies at the Second Guoxin Cup ESG Golden Bull Award

China Securities Journal

★ ★ ★

Top 100 A-share Listed Companies

Securities Times

★ ★ ★

Outstanding ESG Practice Award

Hong Kong ESG Reporting Awards

★ ★ ★

2024 Capital Market Value Awards - Enterprise of the Year (Impact Category)

Yi Cai Media Group

★ ★ ★

26th Golden Information Disclosure Award for Listed Companies

China Securities Journal

★ ★ ★

2024 Best Practice Cases in Sustainable Development by Listed Companies

China Association for Public Companies

★ ★ ★

2024 Outstanding Board Office Practice Case among Listed Companies

China Association for Public Companies

★ ★ ★

Benchmark Enterprise in the SASAC's Sci-Tech Reform Initiative

State-owned Assets Supervision and Administration Commission of the State Council

★ ★ ★

Flagship Enterprise under the National Quality Empowerment Strategy

State Administration for Market Regulation

★ ★ ★

Gansu Rare Earth's 11,000-ton per year solvent extraction production line, recognized as a Digital Workshop in Smart Manufacturing System Construction by Gansu Province

Department of Industry and Information Technology of Gansu Province

★ ★ ★

2024 Inner Mongolia Brand Development Benchmark Enterprise

Department of Agriculture and Animal Husbandry, Development and Reform Commission, and Department of Industry and Information, Federation of Industry and Commerce, and Brand Promotion Association in Inner Mongolia Autonomous Region

★ ★ ★

8th Batch National Manufacturing "Single Champion" Enterprise

Department of Industry and Information Technology of Inner Mongolia Autonomous Region

★ ★ ★

ZXAT and Xinfeng Xinli, recognized as SRDI (specialized, refinement, differential, innovation) Enterprises

Department of Industry and Information Technology of Inner Mongolia Autonomous Region, Department of Industry and Information Technology of Jiangxi Province

★ ★ ★

2023-2024 National Outstanding Ideological and Political Work Unit in Metallurgical Industry

The Metallurgical Enterprises Political Work Association of China

★ ★ ★

The End-to-End Rare Earth Digital-Intelligent Management Smart Factory, recognized as a 2024 Excellence-Level Smart Factory (First Batch)

Ministry of Industry and Information Technology

★ ★ ★

Baotou Rare Earth Products Exchange was recognized as a 2024 Outstanding Case of Real-Digital Integration in China's Commodity Sector

Commodity Trading Market Circulation Branch, China Federation of Logistics & Purchasing (CFLP)

★ ★ ★

Ningbo Baogang Zhanhao's 10,000-ton per year strip recognized as a 2023 Ningbo Digital Workshop in Ningbo

Ningbo, Zhejiang

★ ★ ★

Inner Mongolia Top 100 Most Recognized Brands

Department of Agriculture and Animal Husbandry, Development and Reform Commission, and Department of Industry and Information, Federation of Industry and Commerce, and Brand Promotion Association in Inner Mongolia Autonomous Region

★ ★ ★

Northern Rare Earth, Northern Magnetic Materials and Xinfeng Xinli, recognized as Provincial Manufacturing "Single Champion" Enterprises

Department of Industry and Information Technology of Inner Mongolia Autonomous Region, Department of Industry and Information Technology of Jiangxi Province

★ ★ ★

Tianjiao Qingmei, Huaxing Rare Earth, Jinmeng, ZXAT, and Xinfeng Xinli, recognized as Innovative Small/ Medium-Sized Enterprises

Department of Industry and Information Technology of Inner Mongolia Autonomous Region, Department of Industry and Information Technology of Jiangxi Province

★ ★ ★

Gansu Rare Earth received the Fifth Government Quality Award of Baiyin City

Baiyin Municipal People's Government

Technology Awards

Award	Technology	Issuing institution
1st Prize of Rare Earth Science and Technology Awards	Key Technology for Metallurgical Quality Control in High-Performance Rare Earth-Containing Magnesium Alloys and its Applications	The Chinese Society of Rare Earths Association of China Rare Earth Industry
1st Prize of the Science and Technology Awards of Chinese Non-ferrous Metal Industry	Development of the First Batch of Critical International Rare Earth Standards-Rare Earth Terminology Series	The Nonferrous Metals Society of China China Non-Ferrous Metals Industry Association
2nd Prize of Rare Earth Science and Technology Awards	Research and Development, and Industrialization of Key Technologies for the Reduction of Precious Metals and the Enhancement of Stability in Rare Earth-Based Catalysts	The Chinese Society of Rare Earths Association of China Rare Earth Industry
2nd Prize of Rare Earth Science and Technology Awards	Research on Key Technologies for Preparing High-Purity, Highly Dispersed Nano-Ceria via Spray Pyrolysis of Rare Earth Extraction Separation Liquors	The Chinese Society of Rare Earths Association of China Rare Earth Industry
2nd Prize of Rare Earth Science and Technology Awards	Development of Resource Recovery Process for High-Salinity Wastewater in Rare Earth Industry	The Chinese Society of Rare Earths Association of China Rare Earth Industry
2nd Prize of Rare Earth Science and Technology Awards	Applied Research on High-Efficiency Detection Technologies in Ultra-High Purity Rare Earth Analysis	The Chinese Society of Rare Earths Association of China Rare Earth Industry
2nd Prize of Metallurgy Science and Technology Awards	Development and Application of Key Technologies for High-Quality Rare Earth Master Alloy Production	China Iron & Steel Association The Chinese Society for Metals
3rd Prize of Metallurgy Science and Technology Awards	R&D of Low-Speed High-Torque Rare Earth Permanent Magnet Drive Motor Systems	China Iron & Steel Association The Chinese Society for Metals

Awards for Standards

Award	Technology	Issuing institution
1st Prize for Outstanding Technical Standards	National Standard - Technical Specification for Sintered Rare Earth Permanent Magnet Assemblies	SAC/TC229
2nd Prize for Outstanding Technical Standards	National Standard - Rare Earth-Based Hydrogen Storage Alloys for Solid-State Hydrogen Storage	SAC/TC229
2nd Prize for Outstanding Technical Standards	Industry Standard - High-Purity Ytterbium (Yb) Metal Targets	SAC/TC229
3rd Prize for Outstanding Technical Standards	National Standard - Chemical Analysis of Non-Rare Earth Impurities in Rare Earth Metals and Their Oxides - Part 21: Determination of Sulfate Content in Rare Earth Oxides - Barium Sulfate Turbidimetric Method	SAC/TC229
3rd Prize for Outstanding Technical Standards	Industry Standard - Rare Earth Polishing Powder for LCD Glass Substrates	SAC/TC229

2024 Milestones

Jan

- A new heavy rare earth mineral, Baiyun Yttrium-Barium Ore, was discovered in Baiyun Obo.
- The Rare Earth Heat Insulation Coating and Rare Earth Coated Glass, developed by the BRIRE Tianjin Branch, was included in the 2023 Recommended Catalogue of Technologies and Products for Ecological and Environmental Governance under the Belt and Road Initiative.

Feb

- Ningbo Baogang Zhanhao's 10,000-ton per year strip casting flakes production facility was recognized as a 2023 Ningbo Digital Workshop in Ningbo.

Mar

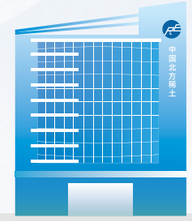
- The innovation base established by Northern Rare Earth received formal approval, signifying the establishment of the only national technical standard innovation base in China's rare earth sector at Northern Rare Earth.
- For the first time, Northern Rare Earth developed and published the Vocational Skill Standard of Northern Rare Earths in effectively addressing a critical gap in vocational skill standards within the country's rare earth industry.

Apr

- Northern Rare Earth was recognized as a high-skilled talent training base at the Inner Mongolia Autonomous Region level, marking a significant achievement as it became the first enterprise in the region's rare earth industry to receive this esteemed honor.

May

- Northern Rare Earth was positioned among the top ten entities in China's brand value within the metallurgy and nonferrous metals sector.

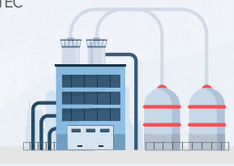


Jun

- The international standard titled Praseodymium-Neodymium Metal developed by the BRIRE was officially registered with the International Organization for Standardization (ISO). This milestone marks it as the first international standard for rare earth products to be approved and initiated by ISO/TC298.

Jul

- The Rare-Earth Infrared-Reflective Hollow Insulating Polyamide Fiber jointly developed by BRIRE Tianjin Branch and Tianjin Branch of China Textile Academy earned the distinction of being recognized as the Top Ten Scientific and Technological Achievements in 2024 by GENERTEC China Textile Academy.



Aug

- Northern Rare Earth entered into a tripartite agreement with Fudan University and Inner Mongolia University to establish the Northern Rare Earth - Fudan University - Inner Mongolia University Rare Earth Materials Research Joint Laboratory. This collaboration is poised to significantly advance research and development in several key areas, including precision polishing technologies, lanthanum-cerium material applications, novel materials for energy conversion and storage, and biomedical applications.
- The group standard titled Technical Requirements for Low-Pressure Solid-State Hydrogen Storage, developed under the main leadership of the BRIRE, was officially released on China's National Group Standards Information Platform. This standard establishes essential technical specifications that will play a pivotal role in advancing the commercialization of low-pressure solid-state hydrogen storage solutions.
- Northern Rare Earth was named a National Pioneering Enterprise in Rare Earth New Materials.

Sept

- Hefa, Huaxing Rare Earth, and Xi'aoke received Green Factory certification in the Inner Mongolia Autonomous Region.
- The Smelting Branch attained Level 3 (Integrated) Certification in the Smart Manufacturing Capability Maturity Assessment, positioning itself as the first rare earth enterprise in China to achieve this distinction in the production processes of rare earth carbonate and oxide.

Oct

- Northern Rare Earth initiated the Safety Specification for Rare Earth Smelting project, marking the establishment of the first safety standard for rare earth smelting in China.
- Two industry standards have been officially implemented: the Technical Specification for the Evaluation of Green Design Products - Rare Earth Polishing Powder (XB/T808-2023) and the Evaluation Requirements for Green Factories of Rare Earth Polishing Powder (XB/T812-2023), both led by Tianjiao Qingmei.
- Gansu Rare Earth's extraction and separation production line, with an annual capacity of 11,000 tons, has been recognized as one of the Digital Workshops in the latest cohort of Gansu Province's intelligent manufacturing system initiative.
- The first phase of the green smelting upgrading and transformation project at Northern Rare Earth has been put into operation.

Nov

- Northern Rare Earth and its affiliates— including the Smelting Branch and International Trading—achieved dual certifications for ISO 37301:2021 and GB/T 35770-2022, marking it as the first SOE with the accomplishment in Inner Mongolia.
- The first automatic batching line system in China's neodymium-iron-boron strip-casting alloy industry, jointly developed by Magnetic Materials, has been in full production.
- Baotou Rare Earth Products Exchange was recognized as a 2024 Outstanding Case of Real-Digital Integration in China's Commodity Sector.

Dec

- The Northern Rare Earth High-End Magnetic Materials Academician Workstation, collaboratively established with Academician Jiang Chengbao from the Chinese Academy of Sciences, received official registration from the following entities: the Inner Mongolia Department of Science and Technology, the Organization Department of the Party Committee, and the Inner Mongolia Association for Science and Technology.
- The End-to-End Rare Earth Digital-Intelligent Management Smart Factory from Northern Rare Earth was recognized as a Ministry of Industry and Information Technology 2024 Excellence-Level Smart Factory (First Batch) in China's national evaluation.

2024 Performance Highlights

Operation performance

Total assets
45.381 billion yuan

Net assets attributable to the parent company
22.432 billion yuan

Revenue
32.966 billion yuan

Total profit
1.837 billion yuan

Net income attributable to the parent company
1.004 billion yuan

Governance Performance

Party Committee meetings
34

General meetings
4

Board meetings
14

Supervisory Committee meetings
12

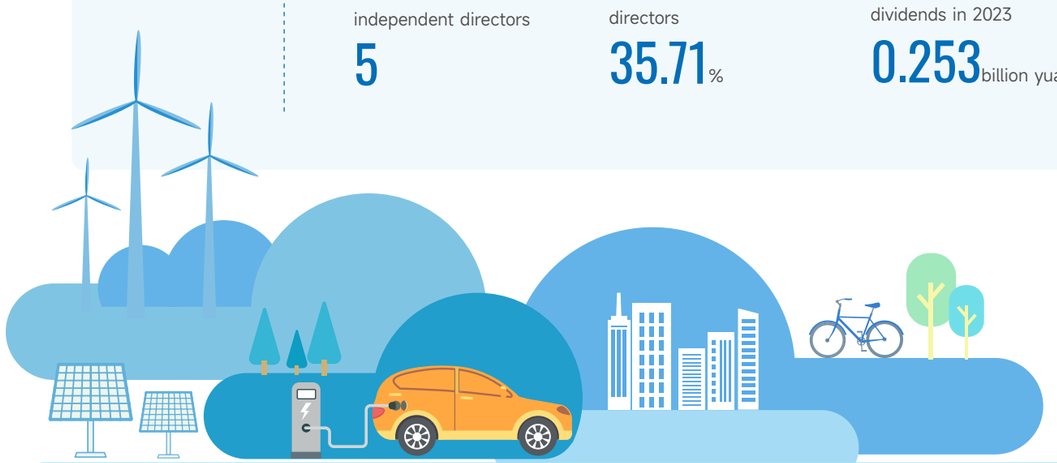
Management meetings at General Manager level
25

Meetings of special committees
21

Special meetings of independent directors
5

Percentage of independent directors
35.71%

Distribution of cash dividends in 2023
0.253 billion yuan



Environmental Performance

Special environmental protection expenditure
0.648 billion yuan

Percentage of the Company and its affiliates with environmental management certification
91.66%

Environmental protection training sessions
91

Comprehensive energy consumption per unit of output
919 kgce/tREO

Social Performance

R&D expenditure
16.04 100 million yuan

R&D expenditure to revenue ratio
5.11%

Product on-time delivery rate
100%

Safety inspections
878

Customer satisfaction
100%

Total employees
9,867

Total training expenditure
4.8511 million yua

Occupational health examination coverage
100%

Employee care and assistance
1.2584 million yuan

Rural revitalization expenditure
5.3941 million yuan

Public welfare expenditure
1.2245 million yuan

Volunteering duration
3,128 Hours

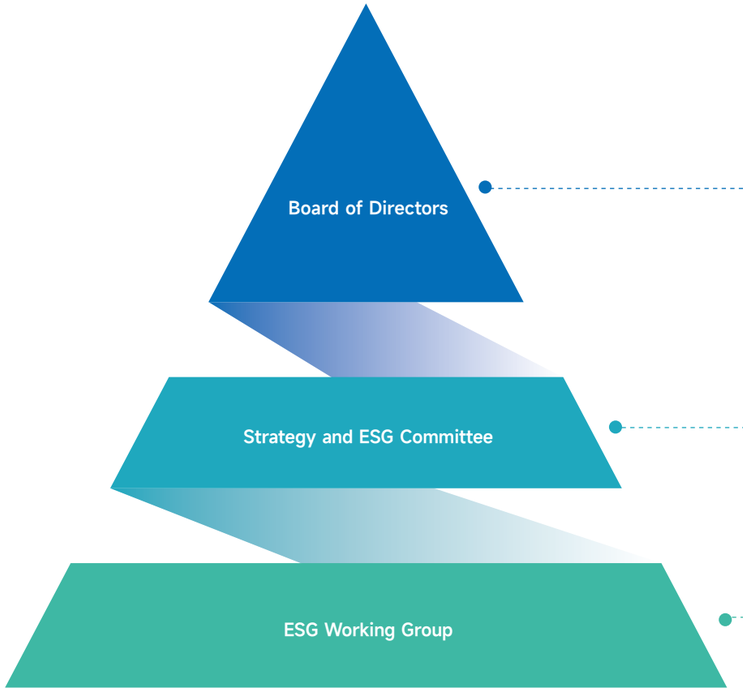
ESG Management

ESG Management System

The Company is committed to the continuous enhancement of its corporate governance and the elevation of its ESG management practices. It has established a robust ESG management framework, which comprises three integral levels: the Board of Directors, the Strategy and ESG Committee, and the ESG Working Groups. This structure provides a solid organizational foundation for advancing the Company's ESG governance, thereby facilitating the effective implementation of ESG considerations across all levels of the Company.

The Company has established comprehensive Guidelines on Environmental, Social, and Governance (ESG) Management that integrate ESG considerations into its strategic and operational frameworks. By incorporating ESG factors into its business development and operational management processes, the Company effectively fulfills its ESG responsibilities and meets the diverse expectations of its stakeholders.

The Company enhances its ESG management system by establishing a comprehensive ESG indicator management framework. It strengthens the integration and mutual reinforcement between conceptual implementation and operational management. Furthermore, the Company compiles and discloses high-quality annual reports on its ESG performance, effectively presenting its performances. As a result, the Company has improved its ESG ratings and was recognized as an Outstanding Practice Cases of Listed Companies in 2024 by China Association for Public Companies. Additionally, it has received several prestigious awards in the capital market, including the Top 100 of the Second Guoxin Cup ESG Golden Bull Award and the Golden Quality ESG Award, thereby providing robust ESG management support for its high-quality development.



Board of Directors

- Evaluate and approve the Company's ESG strategic planning, objectives, framework, and policies;
- Assess the relevant ESG-related risks and their materiality to the Company;
- Review and endorse the disclosure of pertinent information, including the Company's ESG report;
- Examine any major negative ESG events that may arise; and
- Oversee the effective implementation of the Company's ESG management operations.

Strategy and ESG Committee

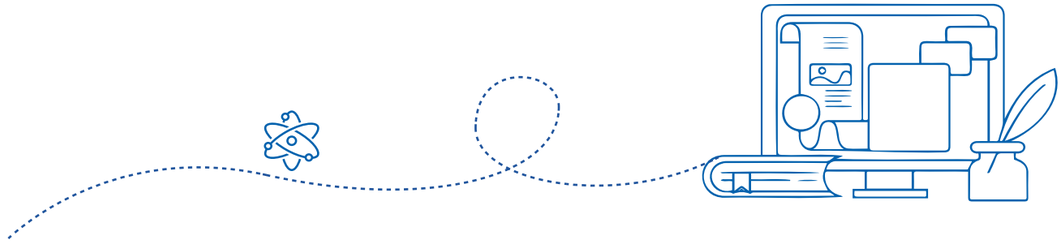
- Formulate and propose updates to the corporate ESG policies, encompassing key areas such as climate change, health and safety, environmental stewardship, human rights, and anti-corruption. It is imperative to ensure that the Company's position and performance on global ESG issues align with the times and international standards;
- Advise on climate change response initiatives, greenhouse gas (GHG) reduction targets, green product development, clean energy technology adoption, and operational safety and stability protocols;
- Conduct studies, analysis, and risk assessments on ESG matters, and propose ESG strategies, targets, and policy enhancements;
- Coordinate and monitor ESG policy implementation, management performance, and goal attainment progress, and provide corrective action recommendations;
- Review and submit ESG reports to the Board of Directors;
- Evaluate material ESG-related matters requiring board-level attention; and
- Exercise other ESG-related authorization granted by the Board of Directors.

ESG Working Group

- Research and formulate ESG policies and action plans aligned with the Company's strategy and ESG objectives;
- Oversee day-to-day ESG-related risks and matters, which include compliance monitoring and incident response protocols;
- Liaise with relevant functions, subsidiaries and branches to ensure effective ESG implementation and resolve any execution bottlenecks;
- Collect, consolidate, and draft ESG disclosure documents for ESG information disclosure; and
- Other ESG tasks.

Communication with Stakeholders

The Company has set regular and efficient communication channels with stakeholders given the industry's characteristics and operational dynamics. We identify stakeholder expectations and address their needs to enhance our ESG performance.



Stakeholders	Stakeholder expectations	Our actions and responses
Board of Directors Supervisory Committee Management Level	• Strategic response • Modern corporate governance • Risk and compliance management • Brand and image management	• Developing strategies and management framework • Holding formal meetings in accordance with laws • Improving risk control and internal control framework • Obtaining compliance certifications • Monitoring the public opinion
Employees	• Equal opportunities in employment • Protection of interests and rights • Occupational health and safety • Development and promotion	• Improving staff management system • Organizing comprehensive safety inspections • Hosting cultural and sports activities • Improving promotion mechanism
Customers	• Product quality and safety • Communication mechanisms and channels	• Enhancing after-sale management procedure • Creating complaint channels
External investors Shareholders	• Modern corporate governance • Investor relations management • Risk and compliance management • Performance growth	• Holding general meetings • Improving risk control and internal control framework • Obtaining compliance certifications • Coordinating investor visits and research • Holding earnings briefings • Attending brokerage investment conferences
Industry associations	• Industry contribution • Green transformation • Digital transformation	• Taking part in industrial activities • Developing relevant standards • Enhancing technology research and development
Partners	• Supply chain management • Green transformation • Technological innovation	• Optimizing supplier management procedures • Enhancing technology research and development • Performing Industry-University-Research Institute (IUR) cooperation
Media	• Industry contribution • Ecological governance	• Taking part in industrial activities • Hosting environmental protection awareness campaigns
Governmental bodies and regulators	• Strategic response • Modern corporate governance • Business ethics	• Respond to national strategies. • Improving management system • Building the compliance system
NGOs Communities	• Community relationship • Rural revitalization • Activities for the public interests	• Engaging with communities around our project sites • Contributing to rural revitalization • Organizing public welfare activities

Double Materiality Analysis

The Company applied the Double Materiality principle (impact materiality and financial materiality) to conduct an online questionnaire distributed to senior management and stakeholders. This approach enables a comprehensive analysis of stakeholder perspectives and expectations and facilitates the establishment of the 2024 Double Materiality Matrix, which represents priority of ESG issues.

Determination of Double Materiality Issues

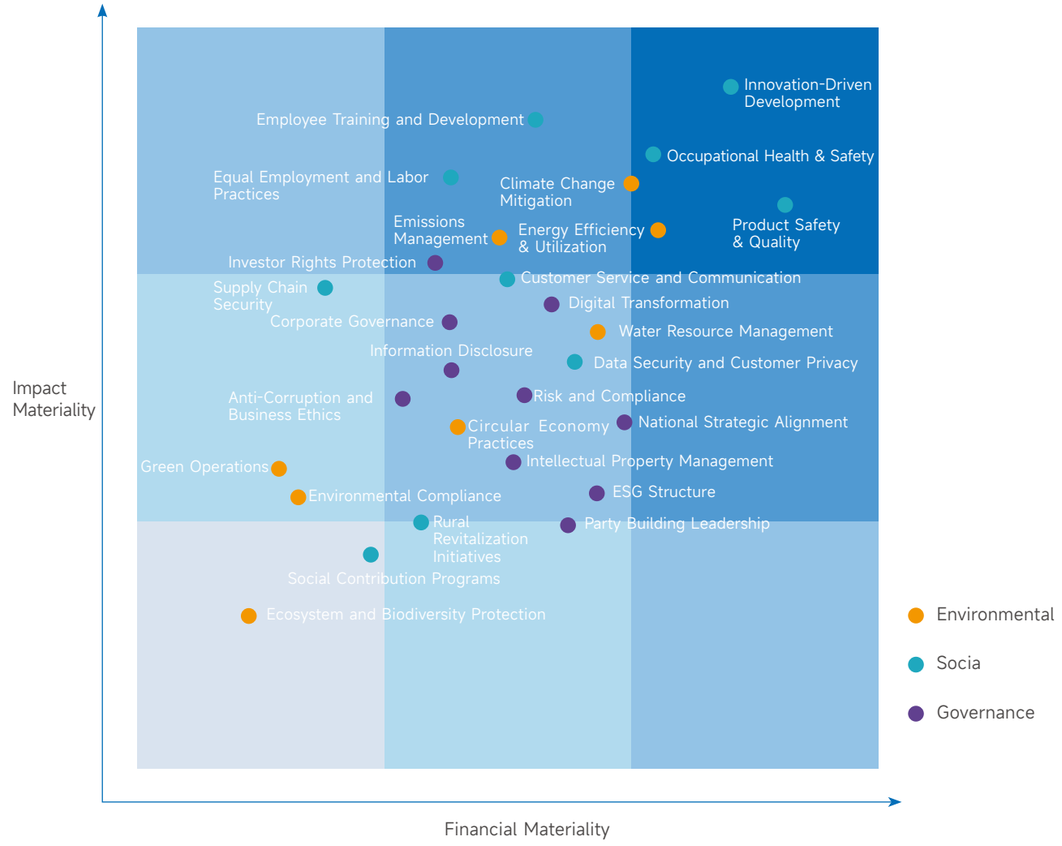
Identify

By referencing core indicators from domestic and international ESG reporting guidelines, such as the Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report (Trial), and the Global Reporting Initiative (GRI) Sustainability Reporting Standards, and aligning with national policies and industry characteristics, the Company has systematically identified and organized key ESG issues.

Assess

Conducting stakeholder issue surveys through online questionnaires, we analyzed the results in a quantitative manner to prioritize issues based on their level of concern. This approach helped determine the impact materiality and financial materiality of each issue.

Matrix of Material Issues



Highly Material

Innovation-Driven Development, Product Safety & Quality, Occupational Health & Safety, Climate Change Responses, and Energy Efficiency & Utilization

Moderately Material

Employee Training and Development, Equal Employment and Labor Management, Emissions Management, Customer Service and Communication, Supply Chain Security, Investor Rights Protection, Digital Transformation, Corporate Governance, Water Resource Management, Information Disclosure, Data Security and Customer Privacy, Risk and Compliance, Anti-Corruption and Business Conduct, Circular Economy, National Strategic Alignment, IPR Management, ESG Governance Structure, and Party Building Leadership

Material

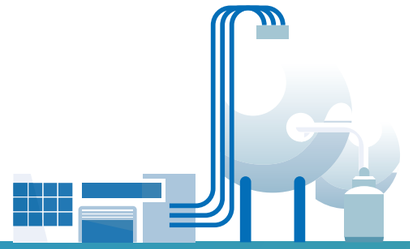
Environmental Compliance, Rural Revitalization, Social Contribution Programs, Green Operations, and Ecosystem and Biodiversity Protection

Topic

The Innovation and Intelligence Engine is steering the development of the Two Rare Earth Bases and poised to outline a transformative blueprint for the green industry

General Secretary Xi Jinping, during his inspection of Inner Mongolia, underscored the necessity of leveraging the region's strategic resources. He advocated for the protective development, high-quality utilization, and standardized management of these resources, emphasizing the importance of enhancing local deep processing of energy resources to advance the strategic resource industry effectively. In alignment with this vision, the State Council's Opinions on Promoting the High-quality Development of Inner Mongolia and Striving to Write a New Chapter in Chinese-style Modernization delineates a clear objective: Baotou is to be developed into China's largest base for rare earth new materials and a globally leading hub for rare earth applications. The Company is committed to fully embodying the principles established at the 20th National Congress of the Communist Party of China, as well as the directives and important addresses delivered by General Secretary Xi Jinping during the Second and Third Plenary Sessions of the 20th Central Committee that pertain to Inner Mongolia and the development of the rare earth industry. By aligning with these strategic frameworks, the Company effectively navigates the new phase of development and implements the new development concepts in a manner that is thorough, precise, and comprehensive. The Company acknowledges its pivotal role in fulfilling the national strategic mission and commits to advancing the healthy and stable development of the rare earth industry as a core responsibility. It actively engages in the foundational work of establishing the Two Rare Earth Bases, leveraging its capabilities as a key player in this initiative. By prioritizing new-quality productivity, the Company is dedicated to achieving significant advancements in high-end transformation, intelligent upgrading, and green development. The Company is poised to accelerate its efforts in becoming a world-class leader in the rare earth sector, contributing meaningfully to the resilience and security of China's rare earth industry chain and supply chain. Through these strategic initiatives, it aims to reinforce the construction of the Two Rare Earth Bases, ensuring that it not only meets but exceeds national expectations in this critical industry.

In 2024, the Company successfully completed the merger and restructuring of Baotou ZXAT Magnetic Materials Co., Ltd., effectively addressing a critical gap in its production capabilities for lanthanum and cerium metal products. The Company has collaborated with Ningbo Zhaobao, Suzhou Torin, and Souwest Magnetech to jointly establish Northern Zhaobao. This partnership aims to develop a state-of-the-art production line for high-performance neodymium-iron-boron magnetic materials, with an ambitious annual output target of 3,000 tons. This initiative further extends the Company's magnetic materials industry chain.



Strategic Navigation: New Chapter in High-Quality Development

The Company is steadfastly committed to a new trajectory of high-quality development characterized by ecological priority and green development principles. It aims to position itself as a high-tech enterprise at the forefront of the global green and low-carbon transformation, and provide comprehensive services tailored to the rare earth industry ecosystem.

The Company is strategically advancing towards a transformation characterized by high-end, intelligent, and environmentally sustainable development. It is scaling up the production of premium products, including high-purity rare earth oxides, compounds, metals, and target materials. In addition, the Company is actively engaged in research and development of advanced permanent magnetic materials, polishing materials, and hydrogen storage solutions, targeting critical sectors such as national defense, military applications, and precision equipment. This strategic focus positions the Company to accelerate its evolution into a world-class leader within the rare earth industry. By effectively harmonizing resource utilization with innovation-driven development, the Company is demonstrating its commitment to high-quality growth.

The Company proactively aligns with national strategies and has pioneered the formulation of the first international standard in the rare earth industry. By enhancing the global presence of its products, brands, and standards across the entire industrial chain, the Company significantly bolsters the influence and competitiveness of China's rare earth sector on the world stage.

Innovation-Driven: New Engine for Industrial Advancement

Rare earths are China's advantageous strategic resources and play an important role in promoting the development of global strategic emerging industries such as new energy, new materials, advanced manufacturing, and electronic information. The Company is committed to technological innovation by integrating scientific and technological innovation resources to accelerate the development of new quality productive forces, construct a new development pattern, and promote the high-quality development of China's rare earth industry.

Intelligent Manufacturing Upgrade

The Company is strategically advancing its industrial upgrade featuring high-end, intelligent and green transformation through several key initiatives. We promote the layout and achievements transformation of major projects such as large-scale molten salt electrolyzers, continuous intelligent production equipment for NdFeB alloys, as well as rare earth permanent magnet motors. Our robust infrastructure includes a dedicated hydrometallurgy pilot base and specialized pilot lines for the development of rare earth flame retardants and modified PLA products. Additionally, we have started constructing the incubation bases for high-purity rare earth metals and specialty alloys. These efforts help bridge the "last mile" of tech commercialization to ensure R&D breakthroughs reach industrial scale.

Case Study **Reconstruction and Expansion Project of Tianjiao Qingmei's 9,000-Ton Rare Earth Polishing Powder Production Facility**

The Commission of the main equipment in the newly constructed production workshop for the Tianjiao Qingmei project has been successfully completed. The new production line establishes a benchmark within the industry for both environmental sustainability and technological intelligence. Upon commencing production, Tianjiao Qingmei will be positioned to manufacture polishing powder products across five distinct series, encompassing over 40 specifications and models. This comprehensive product range will effectively address various market segments, including low, medium, and high-end rare earth polishing materials, significantly bolstering the company's core competitiveness. Moreover, this development signifies that Tianjiao Qingmei's production capacity is on the verge of reaching the 10,000-ton threshold, heralding a new era of growth and innovation for the company.

Case Study **Second-Phase Expansion Project of Huaxing Rare Earth's Facility with an Annual Capacity of 8,000 Tons of Rare Earth Metals**

The second-phase expansion project at Huaxing Rare Earth is a pivotal initiative aimed at significantly enhancing production capacity and achieving high-quality development within the sector. This project incorporates the 18KA electrolytic cell, recognized as the largest single-unit production capacity available in China, while leveraging advanced domestic processing technologies and state-of-the-art environmental protection systems. Notably, the innovative approach of electrolyzing rare earth oxides within a fluoride system ensures 100% utilization of rare earth elements alongside the recycling of fluorine resources. This process not only yields superior quality rare earth metals but also reduces production costs.

Efficiency Enhanced by Permanent Magnet Motors

The Company is dedicated to advancing the application of permanent magnet motors and intelligent production lines, thereby facilitating the rapid evolution of equipment. By seamlessly integrating the industrial supply chain of rare earth magnetic materials with rare earth permanent magnet motors, the Company is driving the end-use of rare earth resources and the progression of permanent magnet motor technology. It is committed to establishing a leading R&D center and production facility for permanent magnet drive systems in northern China. This initiative will significantly contribute to the expedited development of the Two Rare Earth Bases.

Case Study **The Permanent Magnet Motor Project of Northern Jiaxuan**

The flexible production line for permanent magnet motors, along with a comprehensive motor testing platform and an open laboratory at Northern Jiaxuan is completed. This project uniquely addresses the need for permanent magnet motor products with voltage ratings of 3.15 megawatts and below, effectively filling a critical gap in the Inner Mongolia Autonomous Region's permanent magnet motor sector. By eliminating traditional components such as speed reducers and couplings, and by optimizing system design, the permanent magnet drum motor substantially enhances system reliability and transmission efficiency, thereby achieving notable energy savings.

Green Technologies: New Benchmarks for Ecological Transition

In alignment with China's vision of ecological civilization, green development has become essential to achieving high-quality economic growth in the contemporary era. The emergence of new quality productive forces signifies an inherent shift towards sustainable industrial transformation. The Company is at the forefront of this green transformation through several strategic initiatives.

The Company consistently aligns itself with the latest advancements in the industry, leveraging its substantial advantages in rare earth resources to strengthen its resource utilization and maintain its leading position. It is committed to rigorous research, development, and application of energy-saving and low-carbon technologies within rare earth production, continuously exploring innovative solutions. Furthermore, the Company actively promotes the implementation of established process technologies and products, such as solid-state hydrogen storage devices and rare earth permanent magnet motors. By guiding the industry towards specialization and sustainability, the Company is determined to establish itself as a benchmark for green and low-carbon practices in the rare earth sector.

Case Study Green Smelting Upgrading and Transformation Project

The first phase of the green smelting upgrading and transformation project at the Company has been put into operation. This project represents the largest and most comprehensive rare earth smelting and separation initiative globally. It replaces the previous production line and exemplifies a significant advancement in new quality productive forces. The innovative process technology, state-of-the-art equipment, and robust environmental protection measures not only set industry standards but also maximize the supply of various raw material products to meet the diverse needs of downstream enterprises effectively. This project marks a groundbreaking advancement in the rare earth industry, achieving continuous automated production across multiple stages for the first time. By integrating a suite of cutting-edge equipment, it ensures that the control rates of key processes and the digitalization of production equipment are among the highest in the industry.

The transformation and extraction workshop C serves as the cornerstone of the first phase of the project. The state-of-art magnesium bicarbonate process for smelting and separating Baiyun Obo rare earth ore alongside the hyperlinks solvent extraction and transformation technology for rare earth sulphate are employed. This innovative approach effectively integrates transformation and separation processes, streamlining the overall technological workflow. As a result, it significantly reduces costs associated with raw and auxiliary materials and decreases the unit consumption of acid and alkali by over 30%. Additionally, it facilitates the recycling of resources, including magnesium, carbon dioxide, and water.

Case Study Development and Application of the Process for Efficient Decomposition of Rare Earth Compounds in the Rotary Kiln undertaken by Gansu Rare Earth

Gansu Rare Earth is committed to enhancing its scientific and technological innovation capabilities and expediting the research and development of effective methodologies. This initiative has not only generated valuable insights into the calcination of rare earth carbonates but has also significantly improved the level of automation within the production processes. The fully automated rotary kiln boasts several advantages, including low energy consumption, substantial production capacity, and a high level of automation. This advanced system effectively recycles high-temperature waste heat, enhances production capacity and product quality, improves the production environment, and reduces labor intensity. Furthermore, the production line has successfully conducted trial runs for praseodymium-neodymium carbonate, achieving stable product quality and a notable decrease in the unit consumption of natural gas.

The Company is firmly committed to a pathway of high-quality development that prioritizes ecological sustainability and green practices. It plays a pivotal role in advancing the Rare Earth Environmental Product Declaration (EPD) platform . This initiative significantly contributes to the promotion of green product design, as well as the establishment of environmentally friendly factories and sustainable supply chains within the rare earth industry. The Company has successfully integrated a life cycle assessment (LCA) for rare earth products across its operational framework. In response to the unique characteristics of the rare earth industry, it has refined the calculation model for resource depletion potential and significantly enhanced the background database utilized for LCA evaluations. Furthermore, the Company actively engages in the development of product category rules (PCR) and group standards within the rare earth EPD platform, thereby reinforcing its commitment to the platform's high-quality operation and advancing sustainability in the sector.

Case Study The First Release of EPD Reports

In April 2024, the Rare Earth Environmental Product Declaration (EPD) Platform was officially launched in Beijing, a collaborative initiative spearheaded by the Chinese Society of Rare Earths, Association of China Rare Earth Industry, the China Quality Certification Center, and various other key stakeholders in the rare earth sector, including authoritative certification bodies and both upstream and downstream enterprises. The EPD serves as a scientifically grounded, comparable, and internationally recognized mechanism for disclosing the environmental impact of products and services throughout their entire life cycle—from raw material extraction to final disposal. It undergoes rigorous third-party verification and is rooted in life cycle assessment (LCA), thus providing a credible "green identity card" that enhances transparency and accountability in the rare earth industry. The Company has taken the lead in releasing four EPD reports for rare earth products on the EPD platform. This initiative positions the rare earth EPD platform as a pivotal resource for Chinese enterprises within the rare earth industrial chain, facilitating their proactive engagement in green international trade. The platform aims to establish international recognition of the environmental performance of Chinese rare earth products, significantly enhancing their green competitiveness. Moreover, it contributes to the value creation for sustainable low-carbon development and promotes the green transformation and upgrading of China's rare earth industry.

01 Governance Optimization for Solid Foundation

The Company is committed to fostering robust Party leadership while advancing the standardization and modernization of its governance framework. By prioritizing compliant operations and enhancing risk prevention and control measures, the Company safeguards the rights and interests of its investors. Furthermore, it has improved its information disclosure mechanisms and accelerated its digital transformation efforts. These initiatives establish a strong defense for information security, thereby laying a solid foundation for high-quality development and ensuring the achievement of long-term objectives.

Performance Highlights in 2024

Party Committee meetings
34

General meetings
4

Board meetings
14

Supervisory Committee meetings
12

General Manager Office meetings
25

Meetings of specialized committees
21

Special meetings of independent directors
5

Percentage of independent directors
35.71%

Distribution of 2023 annual cash dividends
0.253 billion yuan

Contribution to UN SDGs

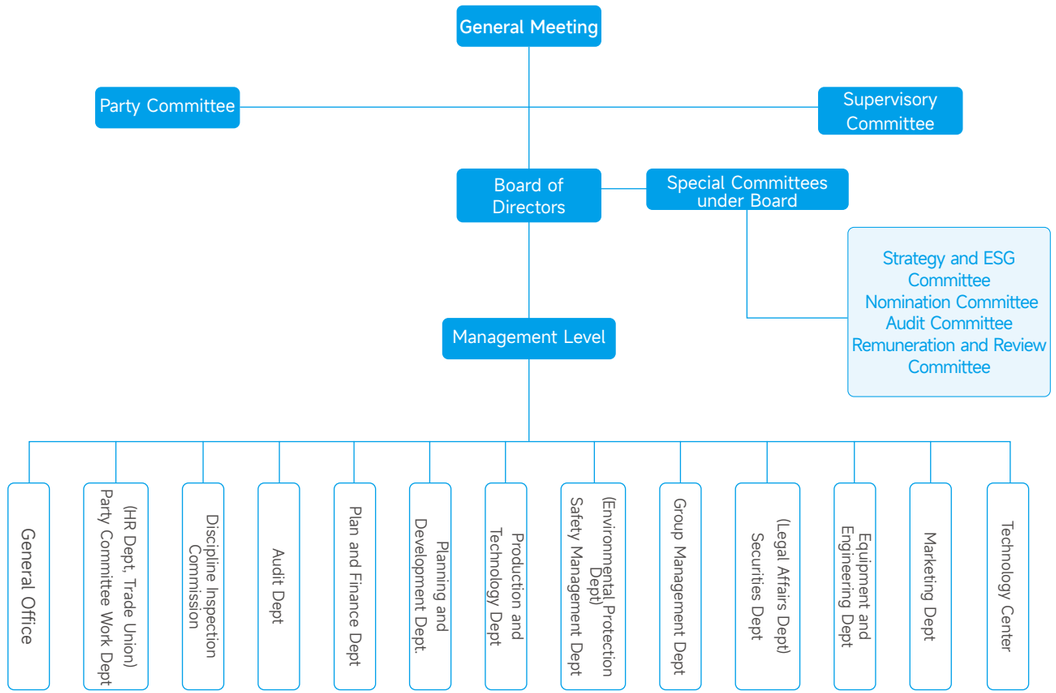
Governance Effectiveness

The Company rigorously adheres to the Company Law, the Corporate Governance Guidelines for Listed Companies, and other relevant laws and regulations. We are committed to establishing a governance system that is standardized, transparent, and efficient. This commitment is achieved through a continuous enhancement of governance effectiveness, a clear delineation of rights and responsibilities among all governance entities, and the strengthening of foundational governance structures. By prioritizing these principles, we ensure a robust framework that supports our operational integrity and promotes stakeholder trust.

Governance Structure

In alignment with the objectives of establishing a modern state-owned enterprise system with Chinese characteristics, the Company is committed to the ongoing modernization of its corporate governance framework and capabilities. This commitment involves the systematic development of a governance structure characterized by clearly defined roles and responsibilities. Each department is empowered to fulfill its specific tasks effectively, fostering operational efficiency and informed decision-making, thereby significantly enhancing overall governance effectiveness.

Management Structure of Northern Rare Earth



Three Bodies

By prioritizing the enhancement of governance through the Three Bodies, i.e., the Board, the Supervisory Committee and the general meeting. The Company has significantly refined the delineation of responsibilities and operational mechanisms for the three bodies. This strategic approach fully leverages the capabilities of the Board of Directors, the various specialized committees, independent directors' meetings, and the Supervisory Committee. As a result, the Company has markedly improved the standardization of its decision-making processes, reinforcing its commitment to effective corporate governance.

General Meeting of Shareholders

The Company strictly adheres to the Rules of Procedure for General Meetings in executing convening procedures, proposal mechanisms, and voting processes to safeguard shareholder rights, with particular attention to minority shareholder protections, and guaranteed exercise of fundamental rights including the right of information, participation right, right to raise inquiries, and voting right.

General Meeting Performance

General meetings	Proposals approved at general meetings
4	19

Board of Directors

The Board of Directors plays a pivotal role in formulating strategies, making informed decisions, and mitigating risks. It effectively leverages the capabilities of its four specialized committees: the Strategy and ESG Committee, the Nomination Committee, the Audit Committee, and the Remuneration and Review Committee. This structure enables the Board to enhance the quality and efficiency of its decision-making processes continuously. In 2024, the Board engaged in critical discussions regarding the Company's ESG report.

Comprising 14 members, with independent directors representing 35.71% and female directors also accounting for 35.71%, the Board benefits from a diverse array of professional expertise in rare earths, finance, and law. This diverse composition not only enriches the board's structure but also establishes a robust foundation for informed and scientific decision-making within the Company.

Board Performance

Board meetings	Proposals approved by the Board
14	63
Meetings of specialized committees	Special meetings of independent directors
21	5

Supervisory Committee

The Supervisory Committee diligently fulfills its oversight responsibilities by regularly assessing the Company's financial status, discussing key issues, and monitoring the performance of both directors and senior management. Comprising seven members, the Supervisory Committee includes three employee representative supervisors. Non-employee supervisors are elected during the general meeting of shareholders, while employee representatives are democratically selected by the employee representative congress and other relevant bodies. This structure ensures comprehensive oversight and demonstrates a commitment to accountability and transparency within the Company.

Supervisory Committee Performance

Supervisory Committee meetings	Proposals approved by the Supervisory Committee
12	38

Compliant Operations

The Company adheres rigorously to applicable laws and regulations while continuously enhancing its internal control and audit systems. By ensuring legal compliance in its financial and operational practices, it effectively mitigates legal and tax risks. The Company prioritizes robust legal and tax management, fosters a strong ethical business culture, and elevates compliance awareness among all employees. Furthermore, it has established a comprehensive risk management framework that serves as a formidable defense against potential threats, thereby ensuring the enterprise's sustainable and high-quality development.

In 2024, the Company enhanced its management framework by introducing 25 new management policies and revising 37 existing ones. This initiative effectively strengthened, enriched, and refined the overall management structure, thereby establishing a robust institutional foundation for standardized operations.

In November 2024, the Company, along with its affiliates—the Smelting Branch and the International Trading—successfully completed the certification review for both international and domestic standards, specifically ISO 37301:2021 and GB/T 35770-2022. This achievement marks a pivotal moment, as the Company became the first state-owned enterprise in the Inner Mongolia to obtain dual certification of its compliance management system, setting a new industry benchmark for compliant operations.

Compliance Management System Certificates of the Company

Business Ethics

The Company unequivocally upholds the highest standards of business ethics, prioritizing integrity and fair competition as foundational principles in its corporate development. To this end, we have established the Northern Rare Earth Compliance Management Guidelines, encompassing 18 essential areas, including anti-monopoly regulations, anti-unfair competition, anti-bribery compliance, and trade secret protection. These guidelines are meticulously compiled into a comprehensive Compliance Handbook, which serves as the operational standard across all critical business functions, ensuring effective compliance management.

The Company rigorously adheres to the Anti-Monopoly Law of the People's Republic of China, actively fostering fair market competition, safeguarding small and medium enterprises, and promoting a robust competitive ecosystem. In 2024, we successfully completed the Northern Zhaobao concentration of undertakings filing.

Overview of Business Ethics Management

Ethical Business Conduct	Improper Conduct Types	Response
Anti-monopoly	• Monopoly agreement • Abuse of market dominance • Suspected monopolistic conduct	• Avoid entering into any agreements with competitors that may be deemed monopolistic; • Implement comprehensive training programs focused on anti-monopoly compliance for all employees; • Monitor the activities of trade associations, ensuring that our involvement does not lead to participation in any form of monopolistic behavior; • Promptly report any suspected monopolistic conduct; File concentration of undertakings declarations.
Fair competition	• False advertising • Misleading commercial practices • Commercial defamation • Bid rigging	• Build brand equity and protect intellectual property rights; • Take prompt legal action against unfair competition practices; • Strict enforcement of bidding and tender laws.
Anti-commercial bribery	• Give bribes to transaction counterparts; • Accept bribes from transaction counterparts.	• Promote a culture of integrity and strictly enforce laws and regulations; • Maintain accurate accounting records for all business activities; • Establish specialized management protocols, and implement robust anti-bribery safeguards; • Conduct regular system evaluations, and keep immediate reporting of bribery incidents.
Business secrets protection	• Obtain trade secrets through improper means; • Disclose, use or permit others to use trade secrets.	• Implement a comprehensive framework that categorizes commercial secrets to facilitate tailored protection measures for each type of sensitive information; • Oversee individuals with access to classified information by enforcing stringent access controls and requiring the signing of confidentiality agreements to ensure accountability; • Establish uniform protocols for the handling, storage, and transmission of sensitive information across all platforms and locations to bolster information security; • Develop robust emergency response strategies to address potential leaks and infringements promptly.

Whistleblowing Channels

The Company has established efficient channels for reporting incidents via letters and visits, utilizing various methods such as mail, telephone, email, and in-person submissions. It rigorously follows established acceptance procedures to ensure that all reporting activities are conducted in a standardized and orderly manner, thereby safeguarding the rights and interests of all parties involved.

Furthermore, the Company is committed to adhering to national laws and regulations regarding whistleblower protection. We have enhanced our internal confidentiality mechanisms and strengthened protective measures for whistleblowers. The Company prioritizes the protection of anonymous reporting by explicitly prohibiting the unauthorized verification of details such as handwriting, network IP addresses, and other identifying information of anonymous whistleblowers. In instances where tracing the identity of a whistleblower is deemed necessary, particularly in cases involving potential disciplinary violations or false accusations, a stringent approval protocol must be adhered to. Furthermore, any deliberate disclosure of whistleblower information or retaliatory actions against whistleblowers will be met with rigorous consequences upon verification.

Bottom Line of Compliance

The Company effectively integrates compliance management into every facet of its operations, ensuring that adherence to legal and regulatory requirements is not merely an obligation, but a foundational principle guiding our business practices. Key measures taken to strengthen this commitment include the formulation of essential regulatory documents, such as the Northern Rare Earth Compliance Management Measures and the Working Rules of the Northern Rare Earth Compliance Management Committee. These documents serve as critical frameworks for compliance adherence. In addition, we have significantly strengthened our legal and compliance frameworks, which are designed to navigate the complex regulatory landscape with confidence and clarity. Our refined tax management system focuses on mitigating tax risks, ensuring that we remain compliant while optimizing our financial strategies. Furthermore, we have made substantial strides in optimizing our internal control mechanisms and enhancing our internal audit processes. These efforts ensure all business activities adhere to legal and regulatory requirements.

Case Study **Specialized Compliance Training within the Company**

In August 2024, the Company conducted a specialized training session focused on compliance management. Esteemed experts were invited to interpret the standards of the compliance management system and elucidate the practical aspects of enterprise compliance management. Through case analyses, discussions, and interactive communication, participants significantly enhanced their compliance awareness and capabilities. This training not only established a robust foundation for the Company's legal and compliance framework but also played a pivotal role in advancing the development of the Two Rare Earth Bases, reinforcing our commitment to becoming a world-class leader in the rare earth industry.

Legal Compliance

The Company has devised, revised, and implemented key policy documents, including the Contract Management Measures of Northern Rare Earth and the Legal Dispute Management Measures of Northern Rare Earth. These initiatives clearly delineate the responsibilities and authorities associated with contract management, standardize legal service processes and standards, and enhance mechanisms for the prevention and resolution of legal disputes. Consequently, we have significantly elevated the overall management standards of our legal services.

Legal Training Performance

Law awareness training sessions	Law awareness training duration	Law awareness training participation
11	32 Hours	1,100

Case Study **Special Training on the Updated Company Law of the People's Republic of China**

In January 2024, the Company implemented a specialized training program entitled the Impact of Revised Company Law on Listed Companies and Corresponding Strategies. This session provided participants with a comprehensive understanding of the amended provisions and their implications, thereby significantly enhancing the Company's compliance management capabilities. As a result of this training, the Company has established clear response strategies to effectively address the legislative revisions, thereby ensuring robust support for lawful operations and promoting high-quality development in alignment with the updated legal framework.

Tax Payment Management

The Company strictly adheres to tax policies and regulations in all jurisdictions where it operates. To standardize tax management practices, Northern Rare Earth Tax Management Measures have been established, ensuring accurate tax calculation and accounting, timely tax refund and payment, and effective tax risk prevention.

In 2024, the Company conducted comprehensive training programs covering corporate income tax final settlement, digital electronic invoice operations, tax risk management, year-end financial and tax reconciliation. These programs aimed to enhance the professional capabilities of finance teams, guarantee compliant operations, mitigate tax-related risks, and optimize financial management processes.

Tax Payment Performance

Total tax payments
0.837
billion yuan

Case Study **Training on Operations for Corporate Income Tax Final Settlement**

In March 2024, the Company successfully implemented a specialized training program titled Practical Corporate Income Tax Settlement and High-Frequency Tax Risk Prevention in the Era of Big Data. This session comprehensively addressed essential topics, including recent tax policy updates, risks associated with tax accounting discrepancies, optimization of tax incentives, and applications for R&D expense super-deductions. As a result of this targeted training, the finance team significantly enhanced its tax compliance capabilities, thereby strengthening the Company's ability to mitigate tax-related risks and capitalize on available tax benefits.

Case Study

The Company Held a Special Training on Tax-related Compliance and Application Cases of Various Tax Types

In June 2024, the Company conducted a specialized training session titled Tax-Related Compliance and Application Cases of Various Tax Types for Enterprises Under the Precise Supervision of Golden Tax Phase IV. This comprehensive training addressed critical compliance policies and risk management strategies associated with key tax categories, including value-added tax, corporate income tax, individual income tax, and stamp duty. Through in-depth case analyses and the interpretation of relevant policies, participants effectively grasped essential elements of tax compliance and developed strategic approaches to enhance both the accuracy of the Company's financial data and the overall compliance of tax-related processes.

Internal Audit

The Company is committed to enhancing its internal audit reform by establishing a comprehensive and standardized auditing system. This initiative includes the creation of an independent audit department, which significantly strengthens the internal audit and oversight functions. To facilitate this process, several key policies have been developed, including the Internal Audit Management Measures of Northern Rare Earth and the Economic Responsibility Audit Management Measures for the Main Leading Personnel of Northern Rare Earth. By positioning itself as a leader in economic supervision, the Company prioritizes its critical objectives and high-risk areas while ensuring a thorough and extensive coverage of audits, thereby elevating the rigor of its audit supervision. The Company has enhanced the professional competence and practical capabilities of its audit team through participation in targeted audit training and other developmental initiatives. It systematically addresses issues identified in audits by regularly monitoring the progress of corrective actions and ensuring accountability for these rectifications. This proactive approach effectively mitigates operational risks, thereby providing a solid foundation for informed decision-making in the corporate-wide operations and management.

In 2024, the Company successfully executed 29 audit projects, encompassing operational audits, specialized audits, and post-project evaluations, with a strategic focus on annual priorities, significant subsidiaries, and critical risk areas.

Internal Controls

The Company enhances its internal control processes by developing comprehensive frameworks, including the Internal Control Management Measures of Northern Rare Earth and the Standards for Identifying Internal Control Deficiencies. By conducting thorough internal control evaluations aligned with applicable laws and regulations, it effectively prepares detailed evaluation reports, identifies areas for improvement, and diligently implements corrective actions, thereby standardizing and reinforcing a robust internal control system.

Comprehensive Risk Management

The Company has developed the Measures for Identifying and Evaluating Compliance Risks (Trial) to systematically identify, assess, and provide early warnings for compliance risks. This initiative integrates compliance reviews into core business processes, clearly delineating responsibilities among key stakeholders. By preventing and controlling compliance risks, the Company ensures the legality of its operations while establishing a solid foundation for achieving its long-term strategic objectives.

Risk Control and Management Training Performance

Risk control and compliance training sessions	Risk control and compliance training duration	Risk control and compliance training participation
9	32 Hours	750

Risk Control Measures

Mitigating Project Investment Risks

The Company requires relevant management departments to systematically review risk prevention measures, closely monitor implementation effectiveness, and mitigate potential investment risks.

Reducing Construction Project Risks

The Company has implemented a comprehensive legal risk management training program for all subsidiaries and branches. This initiative emphasizes the strict standardization of construction project management, aims to enhance compliance with safety and regulatory protocols, and promotes the proactive identification of contractual and operational risks.

Risk Identification & Control Optimization

The Company conducted an annual risk assessment to review risk events from the past year, refine the risk control checklist, and enhance risk detection and response mechanisms.

Development Empowered by Digital and Intelligent Forces

The Company recognizes digital and intelligent technologies as the primary catalyst for its transformation and modernization. Its progression toward digital and intelligent capabilities has evolved from a state of local optimization to one of comprehensive integration. By establishing a secure network and data operational environment and enhancing the construction and application of its informatization control systems at the corporate level, the Company has improved the intelligent manufacturing capabilities of its individual units. Furthermore, the dissemination of exemplary cases and implementation experiences fosters an environment that supports the high-quality development of the entire industrial supply chain.

In 2024, the Company implemented the Outline Plan for the Digital Transformation of Northern Rare Earth through the introduction of new standards and detailed assessment rules. This includes the Data Coding Design Specification for the Application System of Northern Rare Earth, the Data Exchange Specification for Northern Rare Earth and Its Subsidiaries/Branches, the Specification for the Manufacturing Execution System (MES) of Northern Rare Earth, and the Detailed Rules for Professional Management Assessment. By adhering to the 2024 Digital and Intelligent Work Plan of Northern Rare Earth, along with the Revised Measures for the Management of Digital and Intelligent Projects and the Guiding Opinions on the Implementation of Intelligent Manufacturing, the Company confidently advanced its annual agenda for digital and intelligent development.

Digital and Intelligent Infrastructure

The Company is committed to robust network and cybersecurity infrastructure development, establishing essential systems such as a private cloud platform, video conferencing capabilities, and centralized control centers. This strategic investment has enhanced our operational support capabilities, fostering a secure and stable environment for equipment operations. Such measures are instrumental in laying a strong foundation for efficient operations and advanced intelligent management.

In alignment with these efforts, the Company has enacted comprehensive policies, including the Computer Confidentiality and Security Management Measures of Northern Rare Earth and the Network Emergency Plan of Northern Rare Earth. We adopt a rigorous network security responsibility system that emphasizes the protection of network boundaries and effective terminal security management. Our approach incorporates advanced detection and audit systems, intrusion prevention measures, situational awareness platforms, and terminal anti-virus solutions, thereby creating a multi-layered and extensive network security architecture. Furthermore, the Company conducts regular network security training and emergency response drills to enhance information security awareness among employees. This comprehensive approach ensures the secure and stable operation of our information systems, thereby providing a robust foundation for successful digital transformation initiatives.

Cybersecurity Training Performance

Information security training sessions	Information security training duration	Information security training participation
3	52 Hours	141

Case Study Emergency Drill for Network Equipment Switching

In June 2024, the Company executed a comprehensive emergency drill focusing on the active/standby engine switchover of the core N18012 switch. This exercise encompassed a series of critical operational protocols, including accessing the management console, verifying module status, restarting the primary engine module, monitoring the standby engine switchover process, and conducting thorough network connectivity tests. The practical nature of this drill effectively validated both the stability and reliability of our core network infrastructure during critical engine failover scenarios. Our technical team emerged from this exercise with significantly enhanced capabilities to respond to unexpected network outages. The insights gained and skills developed during this training are instrumental in ensuring the high-performance operation of our network systems.

Information Security Management Measures

Data Security Protection

We establish an inventory of critical information systems with designated responsible personnel; implement data confidentiality and anti-tampering protocols, eliminating weak passwords; and conduct regular data backups and monitor security logs to ensure stable system operations.

Technical Safeguards for Network Security

Network Isolation and Zoned Protection: Critical information networks and business systems are physically isolated from the internet; Internal networks are segmented by functional zones, with security devices and access policies deployed to ensure zone security.

Internal Network Architecture and IP Planning: The internal network employs a robust three-layer, two-tier architecture, ensuring optimal performance and scalability through the configuration of core devices in hot standby redundancy. IP address allocation is aligned with business requirements. The external network is structured in a flat architecture, with IP addresses being centrally managed to maintain streamlined accessibility and control.

Internet Gateway Protection: Firewalls and intrusion detection systems are deployed at network gateways to safeguard the infrastructure. Real-time monitoring of external network traffic ensures proactive response to potential threats. Furthermore, branches and subsidiaries within the Inner Mongolia adhere to standardized gateway controls, while external branches are continuously monitored for security compliance.

Detection and Audit Systems: Security auditing, threat detection, and situational awareness systems are developed comprehensively assess security status. Continuously monitor vulnerabilities and cyberattacks, performing regular scans and remediation.

Website Protection: The official website is integrated with a cloud-based security platform. All access requests are filtered through cloud protection software to enhance defense capabilities.

Case Study Unified Internet Gateway Project

In 2024, the Company launched the Unified Internet Gateway Project, aimed at centralizing internet access management across all branches and subsidiaries within Inner Mongolia while simultaneously gathering cybersecurity threat logs from those situated outside the region. This initiative involved the deployment of new gigabit-level internet gateways and advanced network security devices, seamlessly integrating them with the existing infrastructure to create a dual-gigabit internet gateway environment. The project successfully achieved three significant outcomes. First, it established centralized control over internet access for regional branches. Second, it facilitated real-time log monitoring for external subsidiaries. Third, it optimized costs by reducing gateway infrastructure investments, thereby enhancing security for external data access.

Intelligent Operations Development

The Company has established a comprehensive smart operations management system that operates across three essential layers: business execution, group oversight, and strategic decision-making. This digital transformation initiative has resulted in a robust operational framework designed to support informed strategic decisions. To date, the Company has made significant strides in developing and integrating intelligent management systems on a group-wide scale. These systems encompass collaborative office platforms, human resources management, financial operations, production energy safety management, asset and equipment tracking, engineering project oversight, procurement and sales systems, and product traceability solutions. Collectively, these components establish a solid digital foundation for modernized management, enabling data-driven decision-making and significantly enhancing operational efficiency throughout the Company.

Group-Level Intelligent Management System

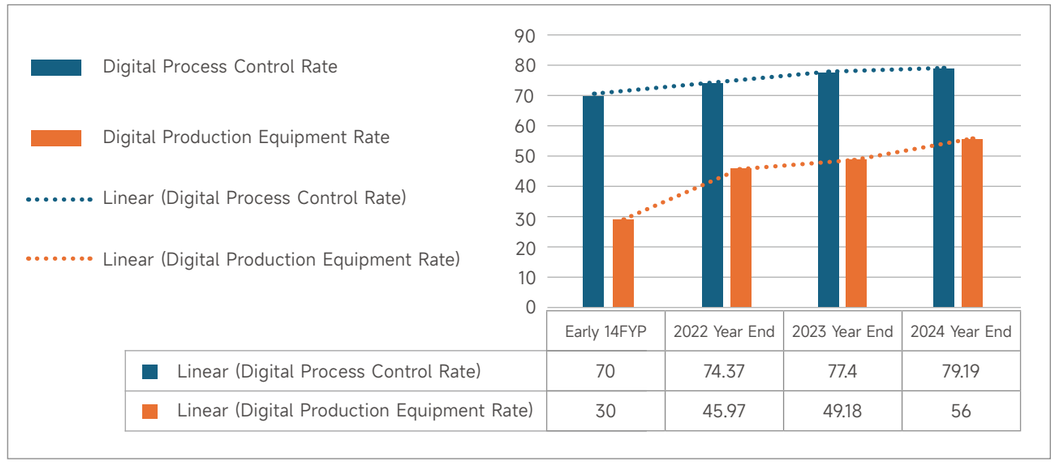
Synergy Management Platform	The platform features an integrated suite of corporate portals, email communications, workgroup chats, diverse query functions, and streamlined business processes. With nearly 300 configured workflows and applications facilitating over 100,000 transactions, it has markedly optimized work processes, substantially enhanced office efficiency, and effectively transitioned to paperless operations.
Human Resource Information System	It has achieved comprehensive digital management of all core HR functions, including employee records, attendance tracking, payroll processing, training certifications, labor contracts, and position agreements. This integrated system enhances the standardization and accuracy of data analysis while improving management efficiency and effectiveness.
Financial Management System	The system includes advanced cost accounting and capital management functionalities, facilitating direct bank connectivity for corporate transactions. It allows for swift cost analysis and centralized financial oversight throughout the Company. Additionally, it offers 22 standard report templates, ensuring effective data consolidation and accurate financial reporting across the entire Group.
Production Management Information System	The system facilitates comprehensive report generation and dynamic data analysis by capturing real-time production data. This capability enhances the collection, application, and scalability of information across key business operations, including production, energy, environmental protection, and safety management.
Assets and Equipment Management System	The system facilitates the standardized, efficient, and precise management of assets and equipment—encompassing fixed assets, diverse devices, and specialized personnel certifications. Every unit effectively employs the system to conduct daily inspection tasks.
Engineering Project Management System	The system oversees process control and management for projects within the annual investment plan, managing over 3,000 transactions. It establishes a standardized engineering project management framework, enabling comprehensive digital oversight throughout the entire project lifecycle. This approach ensures precise execution and consistent compliance with established engineering standards, thereby enhancing the efficiency and reliability of project implementation.
Purchase and Sale Management System	The primary functions of the system encompass sales operations, procurement management for raw materials and spare parts, and inventory control. It oversees material structures, contracting manufacturing, supplier relationships, demand planning, quotation processes, procurement execution, inventory management, and diverse reporting functions.
Product Traceability System	This system effectively manages essential lifecycle data pertaining to raw materials, products, and quality analysis at pivotal stages. It generates comprehensive product inventory records and quality inspection reports, systematically linking them to business contracts and invoices. This integration ensures complete product traceability and robust lifecycle management, meeting regulatory reporting requirements to MIIT.

Intelligent Production Development

The Company has prioritized equipment automation, centralized control systems, automated material handling, and intelligent sensor and instrumentation technologies as its core development directions. By emphasizing three pivotal performance indicators—namely, the increased adoption of CNC technology in critical processes, and enhanced digitalization rates of production equipment—we have emerged as leaders in automation solutions throughout various production stages. Our industry-first automation initiatives encompass several key processes, including roasting, transformation and extraction operations, ammonium bicarbonate preparation, continuous precipitation, concentration procedures, and calcination processes. Noteworthy tangible outcomes of our efforts include a significant reduction in energy consumption per unit, a marked decrease in wastewater volume and associated treatment costs, improved raw material utilization rates, increased product yields, and a substantial reduction in manual labor requirements. Furthermore, these advancements have led to significant enhancements in work environments through the automation of hazardous operations.

Two Indicators in Intelligent Production

CNC Adoption Rate in Critical Processes	Production Equipment Digitalization Rate
79.19%	56%



	Early 14FYP	2022 Year End	2023 Year End	2024 Year End
Linear (Digital Process Control Rate)	70	74.37	77.4	79.19
Linear (Digital Production Equipment Rate)	30	45.97	49.18	56

The Company has established intelligent demonstration lines across various production scenarios, deploying smart robots in highly repetitive and labor-intensive positions. This initiative earned recognition as a 2024 Excellence-Level Smart Factory (First Batch) in China's national evaluation by the Ministry of Industry and Information Technology. Building on this success, we piloted intelligent transformation at our Smelting Branch (Huamei), driving smart upgrades in rare earth smelting and separation. This made us the nation's first enterprise to achieve Smart Manufacturing Capability Maturity Level 3 for both rare earth carbonate and oxide production processes. Leveraging our group management strengths, we've extended these demonstration-line experiences to multiple subsidiaries, fostering resource sharing and technological collaboration across the Company.

Implementation and Promotion of Intelligent Demonstration Lines at the Smelting Branch

Tunnel Kiln Automation Project (Calcination Process)

The Company has automated the tunnel kiln production line, encompassing all critical processes, including ignition, rare earth carbonate filling and weighing, calcination, and material discharge, through the implementation of advanced robotic and conveyor systems. This integrated solution has been effectively deployed at Gansu Rare Earth, Hefa and Jingrui.

Automated Transfer from Tunnel Kiln to Mixing/Packaging Process

Automated Guided Vehicles (AGVs) that are equipped with advanced visual recognition and unmanned traffic management technologies efficiently transport high-temperature rare earth oxides from tunnel kilns to mixing and packaging stations, utilizing sophisticated intelligent warehouse dispatching systems.

Automated Concentrate Feeding System

The upgraded system incorporates several advanced features, including chain-conveyor automated feeding and an expert control system for rotary kilns, which realize the automatic mixing, weighing and discharging of rare earth concentrate.

Automatic weighing, discharging and conveying upgrading in RE carbonate precipitation workshop

The transformation encompasses the integration of automated weighing and disharging devices, the implementation of production rhythm-matching algorithms, and the introduction of robotics for bag handling, hoisting, and weighing. These advancements have been deployed at the Green Smelting Upgrade Project, as well as at Gansu Rare Earth and Hefa.

Extraction Process Safety Enhancement

This project employs advanced 3D visualization and IoT technologies to enhance inspection safety and efficiency in hazardous extraction environments. Its successful implementation at Gansu Rare Earth demonstrates significant advancements in operational effectiveness.

Smart Warehouse System

This project incorporates four-way shuttle vehicles, conveyors, and elevators alongside advanced warehouse management software. As a result, metal products automatic storage capability has increased by 30%, while labor intensity has significantly decreased at the Green Smelting Upgrade Project.

Manufacturing Execution System (MES)

The system delivers an extensive framework for automated control systems and control nodes, effectively integrating production planning, scheduling, and process monitoring alongside equipment, energy, and data management. This robust solution has been successfully adopted by Gansu Rare Earth, Magnetic Materials, and Hefa.

Case Study **NdFeB Strip-Casting Alloy Automated Batching Line Project by Magnetic Materials**

The automated batching line system for NdFeB strip-casting alloy newly developed by Magnetic Materials has officially begun operations, representing a significant milestone as the first of its kind in China. The system features a steel-structured frame, storage silos, anti-bridging devices, automated weighing units, and industrial-grade computer controls. By employing high-precision screw feeders and intelligent variable-frequency speed regulation, this system seamlessly integrates automated material feeding with precise ratio control. The key outcomes of this advancement include a 50% reduction in manual labor, a 200% increase in production efficiency, enhanced product consistency, and a substantial decrease in the physical workload for operators.

Case Study **The Automated and Intelligent Carbonate Production Line in Hefa**

Hefa has successfully implemented an automated carbonate production line that features PLC-based automation control with specialized software, an intelligent forklift dispatch system, and AGV smart forklift control, allowing for real-time monitoring of the packaging line. As a result, the production line operates entirely autonomously, eliminating the need for human intervention. The AGV carts, equipped with multi-sensor arrays and obstacle-avoidance systems, contribute to 24/7 uninterrupted operation, enhance transport safety and efficiency and enable adaptive production scheduling to meet fluctuating workflow demands.

Case Study **Rapid Analyzer Automated Inspection Line Project of Huaxing Rare Earth**

Huaxing Rare Earth has implemented an automated rapid inspection line for rare earth metals, resulting in a remarkable 72.22% enhancement in detection efficiency. This innovation signifies a pivotal shift from traditional sampling-based inspections to comprehensive 100% product testing. The integrated inspection line includes features such as automated sample coding, real-time analytical detection, and a substantial reduction in repetitive manual tasks. Key benefits include immediate and accurate feedback on production and quality, alongside a data-driven foundation for optimizing processes and enhanced decision-making support.

Case Study **Gansu Rare Earth 70-meter Roller Hearth Kiln Automatic Loading & Return Line**

The 70-meter roller hearth kiln utilized by Gansu Rare Earth is equipped with a fully automated loading and unloading system, alongside advanced Distributed Control System (DCS) technology. This innovation has revolutionized the rare earth calcination process, transforming it into a fully automated "digital and intelligent work section". By eliminating the previously labor-intensive practices of manual crucible handling and material collection, the operation of this automated calcination production line has remarkably enhanced single-kiln output, significantly reduced production costs, and substantially improved overall production efficiency.

Rights and Interests of Shareholders

The Company demonstrates a robust commitment to investor relations management, effectively enhancing its value creation capabilities. By fulfilling legal obligations for information disclosure, the Company fosters transparent and effective communication with both current and potential investors. These strategic efforts safeguard the rights of all shareholders, particularly minority shareholders, while promoting consistent growth in the Company's market value. This comprehensive approach underscores the Company's strategic vision and dedication to stakeholder engagement.

Information Disclosure

The Company adheres rigorously to information disclosure regulations, ensuring that all communications are truthful, accurate, complete, timely, and fair. By effectively conveying corporate developments to investors, the Company enhances transparency and bolsters investor confidence while safeguarding their legitimate rights, including the right to be informed. In 2024, the Company issued four periodic reports and 65 interim announcements, submitting a total of 107 documents to SSE. The Shanghai Stock Exchange recognized the Company's information disclosure efforts for the 2023-2024 period with an A (outstanding) rating and awarded it the Golden Bull Award for Information Disclosure at the 26th China Securities Journal Listed Companies Awards, underscoring its strong reputation among regulators and within the capital market.

Information Disclosure Performance

Announcements disclosed	Regular announcements released	Interim announcements released
69	4	65

Investor Relations Management

The Company firmly embraces a commitment to protecting investor rights while pursuing high-quality development through an investor-centric value philosophy. By prioritizing effective information disclosure and robust investor relations management, the Company actively engages in market value management, significantly enhancing both the frequency and quality of communication with a diverse range of investors. The Company continually innovates its investor relations initiatives to safeguard legitimate investor rights, particularly the right to be informed, thereby improving corporate transparency and bolstering investor confidence.

To facilitate meaningful engagement, the Company has established a range of communication mechanisms that leverage various channels, including its official website, social media platforms, and the SSE E-Interaction platform (https://sns.sseinfo.com/). It employs diverse formats, such as general meetings, earnings briefings, and on-site investor research sessions, to effectively convey its development progress and investment potential. These concerted efforts not only deepen investors' understanding and recognition of the Company but also cultivate and sustain a positive image within the capital market. In acknowledgment of its exemplary practices, the Company was recently awarded the 2023 Best Cases Award for Annual Performance Briefings held by China Association for Public Companies.

Investor Communication Performance

Performance briefings
5

Investor relations activity records released
24

Responses at http://sns.sseinfo.com/
65

2024 Half-Year Performance Briefing

Investors Visit China Northern Rare Earth

Case Study Investor Themed Reception Day of Northern Rare Earth

In August 2024, in conjunction with the 16th China Baotou Rare Earth Industry Forum, the Company hosted an investor-themed reception day titled A Date with the Grasslands: Explore the Rare Earth Resources in Northern China. This event attracted a diverse group of attendees, including representatives from the Inner Mongolia Listed Companies Association, institutional and individual investors, securities firms, and financial media. Throughout the day, investor delegates participated in key activities, including the Rare Earth Industry Forum, where they attended expert presentations and toured significant sites such as the Baiyun Obo rare earth mineral processing production line, the Mining Memory Museum, and the Baotou Rare Earth Museum. These experiences provided attendees with comprehensive insights into the status and prospects of the rare earth industry. Furthermore, direct discussions were performed with the Company's management team. Overall, this event successfully enhanced investors' recognition of both the rare earth industry and the Company, thereby bolstering investor confidence and strengthening the Company's positive image in the capital market.

Shareholder Returns

The Company rigorously upholds the legal rights of its shareholders to receive asset returns and other entitlements, embodying an investor-centric approach that aligns with our operational philosophy of rewarding investors with strong performance. We have established and implemented a comprehensive shareholder return plan, which encompasses measures such as cash dividends to ensure reasonable returns for our investors. In 2024, the Company completed the profit distribution for 2023, disbursing a total of 253 million yuan in cash dividends. Since our initial public offering, we have allocated a cumulative total of 5.419 billion yuan to shareholders through cash dividends and share repurchases, which have been subsequently canceled. This significant return positions the Company as a leader among listed rare earth enterprises in cash dividend distribution, further illustrating our commitment to sharing our developmental achievements with investors and enhancing their overall sense of value.

Green Transition toward Harmonious Coexistence 02

The Company is firmly committed to the national strategic goals of carbon peaking and carbon neutrality. We steadfastly embrace the development philosophy that prioritizes environmental sustainability as a vital asset. By adhering to the principle of establishing new systems prior to phasing out outdated ones, we meticulously plan the steps necessary for energy conservation and carbon reduction. Furthermore, we are actively exploring and implementing diverse pathways for green and low-carbon transformation, positioning ourselves as a pioneer in sustainable development practices.

Performance Highlights in 2024

Special environmental protection expenditure

0.648 billion yuan

Training sessions

91

Percentage of the Company and its affiliates with environmental management certification

91.66%

Comprehensive energy consumption per unit of output

919 kgce/tREO

Contribution to UN SDGs

Ecological Environment Management

The Company has robustly integrated environmental protection into its corporate strategy and governance processes, thus establishing a solid foundation for high-quality, sustainable development. We systematically enhance our ecological and environmental management systems, delineate clear environmental protection objectives, and fortify the accountability of our environmental responsibilities. Additionally, we actively improve our risk prevention capabilities and management practices concerning ecological conservation. In 2024, we allocated 648 million yuan in dedicated funds to further advance our environmental protection initiatives.

Environment Management System

Management Structure

The Company maintains strict compliance with environmental protection laws and regulations, including the Environmental Protection Law of the People's Republic of China, alongside national and local environmental standards. A well-defined three-tiered environmental management structure has been established, providing a robust framework for oversight. At the apex of this structure is the Environmental Protection Committee, which serves as the highest decision-making body responsible for guiding our overall environmental strategy. The Environmental Management Department functions as a dedicated unit that supervises, inspects, and directs the daily environmental activities of subsidiaries and branches. Each subsidiary/branch is accountable for its own environmental management, ensuring comprehensive implementation of all prescribed environmental protection measures.

Responsibility Fulfillment

The Company has significantly advanced its environmental management system framework by enhancing coordination mechanisms and establishing a clear and collaborative structure for environmental protection with defined responsibilities. This strategic approach ensures the effective and efficient implementation of environmental initiatives, thereby promoting sustainable and stable progress in our environmental management practices. As of the end of 2024, both the Company and its 22 affiliates have successfully achieved ISO 14001 Environmental Management System certification.

Certificate of ISO 14001 Environment Management System of the Company

Environment Management System Certifications among the Company and its Affiliates

Quantity of the Company and its affiliates that have successfully acquired environmental management certification

22

Percentage of the Company and its affiliates that have successfully acquired environmental management certification

91.66%

Environment Management Objectives

Progress of the 2024 Environmental Protection Management Targets

- Environmental protection facilities at all production units maintained a 100% synchronous operation rate. Entities within Inner Mongolia achieved "zero discharge" of industrial wastewater, while those outside Inner Mongolia ensured all pollutants meet emission standards.
- Under the Greening, Beautification, Illumination, and Sanitation initiative, six projects have been successfully completed.
- Furthermore, fourteen facilities have fulfilled their obligations by submitting industrial noise emission declarations as mandated by pollution discharge permits.
- Three facilities have received recognition as regional-level green factories by the autonomous region.

Environmental Compliance Management

The Company systematically conducts thorough reviews of environmental compliance risk inventories and implements robust environmental supervision and inspection programs. Additionally, we carry out initiatives for identifying environmental risk hazards. To further enhance our environmental management practices, we ensure that all production units update their emergency response plans for unforeseen environmental incidents. Simultaneously, we promote environmental protection awareness through comprehensive educational campaigns. These coordinated efforts significantly bolster employees' understanding of their environmental responsibilities, thus ensuring effective implementation and continuous improvement in our environmental management practices.

Environmental Supervision and Inspection

The Company has undertaken a comprehensive revision of the Solid Waste Pollution Prevention and Control Management Measures of Northern Rare Earth, aimed at enhancing environmental supervision, management, and performance evaluation, and promoting standardized environmental protection practices across all operational levels. All affiliates are required to rigorously adhere to the principle of "dual responsibility of Party and business leadership, and dual accountability for each position" in their environmental protection efforts. Compliance with environmental laws and regulations is non-negotiable; therefore, each subsidiary/branch must sign the Environmental Governance Target Responsibility Agreement, thereby reinforcing their primary responsibility for environmental stewardship. Furthermore, in 2024, the Company executed 12 specialized inspection campaigns, including New Year and Spring Festival inspections, environmental protection audits in its subordinate companies, and self-inspections in preparation for regulatory reviews. All identified issues have been thoroughly addressed and rectified.

Environmental Risk Assessment and Prevention

The Company has released the Environmental Factor Identification, Assessment, and Control Measures of Northern Rare Earth, establishing a robust tiered management system for environmental factors. This system meticulously evaluates the probability of sudden environmental incidents, their potential impact severity, detectability, preventability, regulatory compliance, existing monitoring measures, and historical incident records. By conducting comprehensive analyses, the Company effectively assesses both the likelihood and consequences of environmental risks, enabling precise identification, classification, and the implementation of preventive measures to mitigate potential environmental emergencies.

To further enhance environmental hazard screening and remediation, the Company prioritizes soil and groundwater pollution prevention and control. Through effective collaboration with relevant authorities, it ensures timely detection and prompt rectification of environmental risks, substantially reducing the likelihood of sudden incidents. In alignment with the Guidelines for Soil Pollution Risk Screening of Key Regulated Units (Trial), affiliates including Hefa, Huaxing Rare Earth, and Jingrui have successfully conducted comprehensive soil pollution risk assessments. This initiative has notably fortified the standards of environmental management across the Company.

Environmental Emergency Management

The Company has significantly enhanced its emergency response system by establishing an Emergency Management Leadership Group, which operates under the direct oversight of the General Manager. This group is tasked with centralized decision-making and command coordination. Additionally, subsidiaries and branches have developed comprehensive emergency and specialized contingency plans, customized to their unique operational contexts. Through ongoing emergency training and drills, the Company systematically fortifies its emergency management capabilities and improves its incident response effectiveness.

Case Study Acid-Alkali Leak Emergency Drill

In June 2024, the Company successfully conducted an emergency response drill focused on acid-alkali leakage incidents. This exercise significantly enhanced employees' comprehension of safety protocols and their proficiency in utilizing rescue equipment properly. Moreover, participants developed a clear understanding of how to respond effectively to unexpected emergencies, meeting the objective of achieving a "proper, safe, orderly, and rapid" response to acid-alkali leaks. The drill also improved coordination among employees in workshops handling acid-alkali materials during critical incidents, thereby strengthening the command and response capabilities across all departments. Overall, the exercise yielded the anticipated training outcomes, demonstrating the Company's commitment to robust emergency preparedness.

Environmental Protection Awareness

The Company consistently holds training programs focused on ecological and environmental protection laws, regulations, and technical skills. In 2024, it successfully conducted five corporate-level environmental training sessions that addressed key areas, including pollution discharge permit management, solid waste management, environmental management system expertise, and the management of associated radioactive solid waste. These initiatives effectively bridged existing gaps in environmental management across affiliates and significantly enhanced the professional competencies of the environmental personnel.

Environmental Protection Training Performance

Training sessions	Training duration	Training participation
91	182 Hours	6,075

Case Study Specialized Training on Environmental Protection Management

In May 2024, the Company conducted a thematic training session focused on environmental management using a hybrid format that combined both online and in-person engagement. This session was led by responsible personnel from the Environmental Management Department, who provided comprehensive guidance on standardized reporting procedures for crucial modules within the production control system. Key areas covered included supervision and task tracking, wastewater data management, industrial solid waste reporting, and routine inspection protocols. The training effectively integrated specific legal requirements and critical compliance considerations with relevant corporate case studies, which facilitated a deeper understanding among trainees of essential management strategies for environmental protection. Notably, the session enhanced awareness of environmental law compliance among operational staff at all levels, reinforced the principle of primary responsibility for environmental stewardship, and significantly improved technical competencies and management skills within environmental operations.

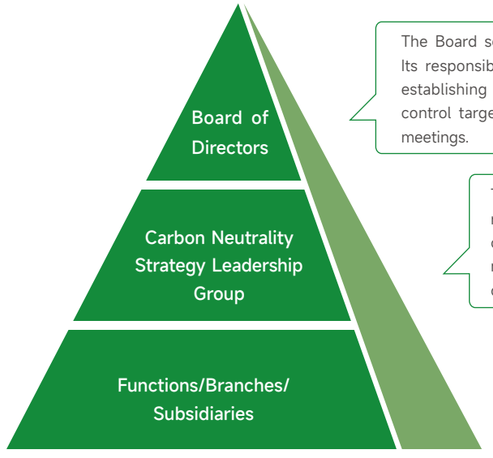
In 2024, the Company made significant strides in the development of its One Enterprise, One Policy environmental management inventories, successfully implementing customized inventory frameworks for eight smelting and separation enterprises. A proactive approach led to the organization of specialized training sessions across seven affiliates, including Tianjiao Qingmei and Ruixin. Key components of these sessions included a comprehensive interpretation of core inventory requirements, cross-enterprise exchanges to share best practices, and strengthened oversight mechanisms to ensure effective execution. As a result, this initiative has enabled precise environmental management and markedly improved operational efficiency across all facilities.

Climate Change

The Company is resolutely committed to addressing China's Dual Carbon goals—achieving carbon peaking and carbon neutrality—by capitalizing on its unique strengths and adhering to global agreements, including the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement. In alignment with the International Sustainability Standards Board (ISSB)'s climate-related disclosure standards (IFRS S2), the Company has systematically identified climate-related risks and opportunities, conducted comprehensive research on carbon peaking pathways, and implemented effective measures to continually enhance its climate governance performance.

Climate-related Governance

The Company has developed a robust climate change governance framework to effectively manage the impacts of climate-related issues on its operations. This framework enables comprehensive risk governance for climate-related challenges, facilitates strategic development aligned with low-carbon transitions, and ensures compliance with international disclosure standards. By implementing this structured approach, the Company confidently addresses both climate risks and opportunities.



The Board serves as the highest decision-making authority regarding climate-related issues. Its responsibilities include approving the Company's climate change management strategy, establishing medium-term to long-term plans and annual action plans, setting climate risk control targets, and discussing milestones for the carbon neutrality strategy during regular meetings.

The group functions as the authoritative body for managing climate change risks within the Company. It convenes regularly to facilitate cross-functional collaboration among internal departments on carbon emissions and carbon neutrality. This approach guarantees comprehensive oversight and informed decision-making across all levels of the Company.

They effectively enforce the Company's climate change resolutions, ensuring strict management of carbon emission targets and actively pursuing energy conservation and emission reduction objectives.

Climate-related Strategies

To advance the Dual Carbon goals, the Company has developed the comprehensive Technology Roadmap for 14th Five-Year Plan Carbon Peaking and Carbon Neutrality across the Entire Industry Chain of Northern Rare Earth. This roadmap entails a thorough analysis of the Company's current carbon emissions, applying standardized calculation methods to assess emissions throughout the industry chain. By forecasting peak emissions, it establishes detailed technological pathways toward carbon reduction and neutrality, effectively providing a strategic action plan to meet these ambitious targets.

The Company employs a rigorous analysis to evaluate the impacts of various capacity expansion strategies and the integration of green electricity on overall carbon emissions. This approach generates grounded projections for peak emissions and associated pathways, thereby informing more effective emission reduction strategies.

Furthermore, the Company has instituted a long-term carbon management strategy that encompasses multiple dimensions, including energy structure optimization, production process advancements, and resource recycling initiatives. Complementing these efforts, the Company has implemented an advanced carbon emission monitoring system alongside a carbon asset management platform. These initiatives not only accelerate progress toward the Dual Carbon goals but also position the Company as a leader in green and low-carbon transformation, driving decarbonization across the entire industrial chain.

Long-term Strategic Planning for Carbon Management within the Company

1. Establish a comprehensive group-level smart carbon management system.
2. Define key quantitative indicators to guide carbon reduction initiatives and develop actionable plans tailored for specific sectors and business lines.
3. Implement an internal mechanism that directly links carbon management efforts to economic benefits.
4. Conduct in-depth research on carbon reduction strategies in critical process technologies.
5. Strengthen corporate governance structures to ensure effective execution of the carbon neutrality strategy.
6. Build a collaborative carbon reduction system within the industrial chain, engaging downstream application enterprises for collective impact.
7. Promote the growth of the rare earth resource recycling industry.

Management of Climate-related Impacts, Risks, and Opportunities

The Company acknowledges the significant impact of climate change on its operations and proactively assesses associated risks. By implementing efficient pollution control and resource recycling systems, it effectively mitigates climate-related challenges. This proactive approach not only addresses risks but also seizes emerging opportunities, ensuring sustainable business growth and a competitive edge.

Capitalizing on green opportunities emerging from new energy development, the Company transforms its resource advantages into product excellence. We are committed to providing optimal materials for carbon reduction in new energy vehicles, wind power, and other eco-friendly applications, actively contributing to global decarbonization efforts

List of Climate-related Risks

Risk type	Impact time-frame	Potential impact	Response
Physical risk			
Acute risk	Short term	Extreme heat and cold waves pose significant risks to employee health, resulting in increased operational costs. Specifically, these temperature fluctuations elevate expenses related to temperature control in smelting processes.	We establish comprehensive work stoppage protocols, ensure the availability of emergency supplies, and develop early warning systems in collaboration with meteorological agencies.
Chronic risk	Middle to long term	Intensified drought conditions in northern China have resulted in significant water scarcity in essential mining regions, particularly Inner Mongolia. This shortage adversely affects critical processes such as rare earth mining, ore dressing, and smelting operations. Thawing permafrost undermines geological stability in these areas, dramatically heightening the risk of landslides.	To enhance water resource management, we implement advanced water-saving technologies and develop comprehensive water recycling systems. We establish real-time monitoring of mining area stability and employ reinforcement techniques in permafrost regions.
Transition risk			
Policy risk	Medium term	The transition to a low-carbon economy is likely to result in tighter carbon emission quotas, the implementation of carbon taxes, and the establishment of stricter environmental standards. Collectively, these may increase production costs significantly.	We strategically reshape our energy portfolio by substantially enhancing the utilization of natural gas and green hydrogen. We also implement pilot projects for carbon capture, utilization, and storage (CCUS) technologies. Furthermore, all subsidiaries and branches are mandated to perform thorough carbon emission inventories and verification processes, thereby establishing a solid foundation for advanced energy conservation and decarbonization initiatives.
Market risk	Short term Medium term Long term	Demand fluctuations in the new energy sector are likely to diminish the need for rare earth permanent magnets, while advances in circular economy technologies may lessen dependency on primary rare earth materials. Increasing consumer preference for low-carbon products and services is driving stringent requirements for emission reductions during production phases.	We enhance the applications of rare earth elements in emerging sectors such as energy storage and hydrogen technologies, and establish closed-loop supply chains and refine recycling innovations. We accelerate a transformative shift toward a green, low-carbon industry by implementing reductions in source-level emissions, increasing the adoption of renewable electricity, promoting the use of permanent magnet motors, and significantly reducing the carbon footprints of products.
Reputation risk	Medium term	Public and investor scrutiny regarding high carbon emissions and water-intensive production practices poses a significant threat to brand value and customer loyalty. Climate risk mitigation strategies are now under rigorous examination by regulators, investors, ESG rating agencies, and the public. Failure to adopt meaningful measures risk may cause skepticism and damage the reputation of the Company.	We effectively integrate green and low-carbon principles into our strategic development and operational management. By implementing energy-saving and emission-reduction initiatives, we directly address stakeholder concerns. We prioritize collaboration with external partners to strategically explore pathways for achieving the Dual Carbon goals in the rare earth industry.
Technology risk	Short term Medium term	We are firmly aligned with China's Dual Carbon objectives, which necessitates ongoing enhancements in energy-saving and emission-reduction technologies, the broader adoption of renewable energy sources, and increased investments in research, development, and infrastructure. These commitments may elevate operational costs.	To advance our sustainability initiatives, we will establish supporting photovoltaic power stations, secure long-term agreements for green electricity procurement, and actively pursue renewable energy subsidies. We will enhance energy efficiency through process upgrades in high-consumption sectors. We will invest in the development of young STEM talent to strengthen our innovation capabilities and expedite breakthroughs in essential technologies.

List of Climate-related Opportunities

Opportunity type	Opportunity impact	Response
Energy sourcing	The rapid expansion of China's wind and solar power capacity has significantly enhanced the price competitiveness of green electricity, leading to a gradual decrease in corporate procurement costs and offering more sustainable energy alternatives. Concurrently, regulatory frameworks—such as mandatory green certificate consumption quotas for energy-intensive enterprises—are accelerating the transition toward low-carbon operations. Furthermore, the emergence of the hydrogen energy sector presents transformative opportunities. Specifically, green hydrogen smelting technology has the potential to replace fossil fuels, drastically reducing emissions in metal production. Inner Mongolia, with its abundant wind and solar resources, provides an optimal environment for cost-effective green hydrogen production, enabling corporations to develop robust green hydrogen value chains and optimize their energy mix for effective decarbonization.	We will develop complementary photovoltaic power stations to enhance the coverage of green electricity. We will increase development efforts in clean and low-carbon technologies to accelerate the transition to a sustainable future.
Utilization efficiency of resources	The low-carbon transition strategy effectively enhances resource and energy efficiency, leading to three significant advantages — reducing operational costs through efficiency improvements, strengthening long-term competitive positioning in the market, and aligning with growth opportunities in the burgeoning global green economy, ultimately creating sustainable value.	We enhance energy efficiency through strategic upgrades to environmental protection equipment, along with the gradual retirement of high-energy-consuming machinery. We optimize water management by using advanced recycling systems to enable closed-loop water utilization.
Products and services	The sustained growth of green industries, particularly in new energy vehicles (NEVs), wind power, and photovoltaics, is significantly driving the demand for low-carbon products and advanced materials, such as rare earth permanent magnets. This trend enhances corporate competitiveness. Hydrogen energy has emerged as a promising sector, functioning both as a clean energy carrier for decarbonization and as a foundational industrial feedstock with distinct competitive advantages.	We rigorously investigate the carbon reduction potential of rare earth products across critical application fields while simultaneously intensifying our research and development initiatives focused on low-carbon technologies and sustainable product innovation.
Market	The swift evolution of green trade is propelling companies toward low-carbon transitions, where early adopters will secure competitive advantages and effectively navigate international green trade challenges.	We conduct comprehensive carbon accounting throughout the rare earth industrial chain to establish a robust carbon footprint database for rare earth products. We accelerate strategic initiatives in the new energy sector, driving a transformative energy mix.

Climate-related Indicators and Objectives

Low-Carbon Objectives

The Company is firmly aligned with the national development strategy, actively driving the transition toward green and low-carbon practices. It has established a comprehensive system for carbon emission statistical accounting, alongside a robust product carbon labeling certification system and an effective product carbon footprint management framework. Additionally, the Company enhances the carbon market trading system and the voluntary greenhouse gas emission reduction trading mechanism, all while confidently advancing towards achieving the ambitious goals of carbon peaking and carbon neutrality.

2025 Low-carbon Targets

- Carbon emission intensity of 7 key entities ⩽2.956 tCO_2/tREO
- Carbon emission intensity of the smelting and separation segment ⩽2.63t CO_2/tREO, carbon emission intensity of metal facilities ⩽6.98 tCO_2/t

Greenhouse Gas Emissions

Greenhouse Gas Emissions[1]

Direct carbon emissions (Scope 1)
343,967.58 tCO_2e

Indirect carbon emissions (Scope 2)
696,684.16 tCO_2e

Others indirect carbon emissions (Scope 3)
227,513.93 tCO_2e

Total carbon dioxide emissions
1,268,165.67 tCO_2e

[1] The Company employs the operational control approach for greenhouse gas emissions accounting, ensuring comprehensive quantification of emissions from all facilities under its management, thereby achieving 100% accuracy in its reporting.

Greenhouse Emissions Reduction Practices

As a leader in the industry, the Company has taken significant strides in implementing rare earth carbon emission verification and securing product carbon footprint certification. Notably, we have developed eco-friendly processes and embraced renewable energy solutions. These initiatives not only bolster the green competitiveness of our products but also reflect our commitment to sustainability.

A key achievement is the successful connection of our 5.93 MW distributed photovoltaic power plant at the Smelting Branch to the grid. This project generates an impressive 7 million kWh annually, providing substantial environmental benefits. Specifically, it saves 860 tons of standard coal each year and reduces CO_2 emissions by 4,000 tons. In addition, we have constructed a 5,000 m^2 solar carport, providing 96 parking spaces and six complimentary electric vehicle charging stations for our employees.

5.93 MW Distributed Photovoltaic Power Plant

PV Car Port

Case Study Our Carbon Emission Accounting Platform Certified by Chinese Society of Rare Earths

In 2024, the Chinese Society of Rare Earths convened a scientific and technological achievement appraisal meeting in Beijing. At this meeting, a significant milestone was reached with the appraisal of the Carbon Emission Accounting Platform of Northern Rare Earth, which aligns with the Technology Roadmap for 14th Five-Year Plan Carbon Peaking and Carbon Neutrality across the Entire Industry Chain of Northern Rare Earth. Experts in attendance unanimously recognized this platform as the world's first dedicated carbon emission accounting system for the rare earth industry. With capabilities for online analysis, intelligent evaluation, and precise calculation, this platform has achieved international advanced standards and has successfully passed the appraisal for scientific and technological achievements.

Resource Efficiency

The Company effectively integrates the principles of circular economy and resource conservation throughout its production and operational processes. By harnessing digital construction and advancing energy-saving, it significantly enhances resource utilization efficiency. The Company is dedicated to the responsible management of resources, thereby promoting sustainable development and solidifying its reputation as an environmentally conscious enterprise committed to conservation.

Energy Management

Energy-related Governance

The Company fully adheres to the Energy Conservation Law of the People's Republic of China and actively revises internal policies, including the Energy Management Measures of Northern Rare Earth, to enhance energy management accountability. A dedicated energy management leadership group has been established to rigorously implement national energy conservation policies and regulations. The Company formulates and executes comprehensive energy conservation management rules, objectives, plans, and technical transformation initiatives, thereby strengthening the energy management framework to ensure optimal operational efficiency. As a testament to its commitment, by the end of 2024, the Company and 11 key energy-consuming affiliates successfully obtained ISO 50001 energy management system certification.

ISO 50001 Energy Management System Certificate

Energy-related Strategies

The Company has successfully launched and implemented the Guidelines for Green and Low-Carbon Management of Northern Rare Earth, which effectively standardizes and normalizes its energy conservation and carbon reduction initiatives. By establishing a robust energy management platform, pursuing energy-saving technological transformations, and integrating renewable energy sources, the Company systematically enhances the management and performance of energy conservation and carbon reduction across its branches and subsidiaries. These comprehensive measures ensure the quality achievement of its green and low-carbon development objectives, establish a reputable and sustainable rare earth brand, and significantly bolster its competitiveness in the market.

Energy Saving Technologies

Renovations for saving energy

- The waste heat recovery project for air compressors significantly reduces the Company's reliance on external heating sources while indirectly lowering greenhouse gas emissions (e.g., CO_2). This initiative has led to a substantial improvement in comprehensive energy utilization efficiency.
- The adopt of high-efficiency mixing approach for rare earth hydrometallurgy smelting process has achieved about 40% reduction in electricity consumption, and can generate annual cost savings of 1.3 million yuan.
- The newly introduced rare earth concentrate drying system has reduced natural gas consumption per rotary kiln by over 20%, and increased ore processing capacity per kiln by more than 25%.

Green power usage

- The Company actively leverages Inner Mongolia's competitive electricity supply advantages to secure green power quotas.

Energy-related Risk Management

The Company identifies several energy-related risks that could impact its operations, including water resource shortages in key production areas, delays in the development of new energy projects, and the pressing need to enhance equipment energy efficiency. To address these challenges, the Company has implemented proactive strategies to secure water rights, ensuring a reliable water supply essential for uninterrupted production. Furthermore, it has advanced the construction of distributed photovoltaic projects and developing hydrogen energy technologies, thereby optimizing its energy structure and progressively increasing the share of renewable energy sources. The Company has also initiated the Guidelines for Green and Low-Carbon Management of Northern Rare Earth, which serves as a comprehensive framework for energy management. This initiative includes the establishment of dedicated energy management roles, the formulation of energy-saving target indicators, and the enhancement of equipment data tracking systems. Additionally, specialized training programs on energy management are conducted to elevate the skillset of employees. By systematically promoting the standardization and practical implementation of energy conservation and carbon reduction efforts, the Company has enhanced the management and performance levels across its branches and subsidiaries, thereby ensuring efficient and compliant energy management.

Energy-related Indicators and Objectives

The Company strategically develops annual energy management plans that incorporate well-defined measurement targets. It enhances energy consumption monitoring and performance evaluation processes, thereby ensuring the successful attainment of its yearly objectives.

2025 Energy Saving Targets

- 11 key energy-consuming entities must maintain collective energy use ≤285,200 tons of standard coal equivalent (tce)
- Energy consumption intensity of 7 key entities lower by 6% YoY

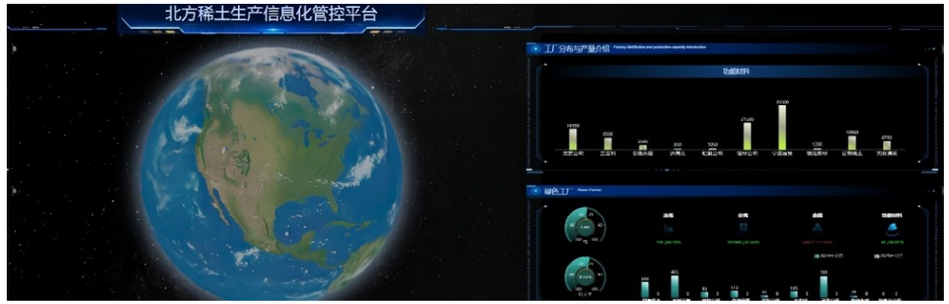
Energy Consumption Performance

Indicator	Unit	2022 value	2023 value	2024 value
Comprehensive energy consumption per unit of output	kgce/tREO	1,175	997	919
Indirect energy consumption				
Purchased electricity	MWh	643,017	739,771	819,687
Purchased steam	Tons	79,318	119,186	41,225
Direct energy consumption				
Natural gas	m^3	95,983,976	73,386,298	69,759,526
Petroleum	Tons	50	58	44
Diesel	Tons	944	1,065	931
Coke oven gas	m^3	27,951,160	22,052,458	20,456,292
Power Coal	Tons	91,856	102,459	90,899
New energy/ renewable energy sources				
New energy/ renewable energy consumption	MWh	/	/	93,750
Percentage of new energy/ renewable energy consumption	%	/	/	4

Case Study

Energy Management Platform

In 2024, the Company successfully completed the second phase of its energy management platform deployment. This phase builds upon the initial functionalities, achieving seamless integration of energy consumption data collection, statistics, and analysis. The platform now facilitates real-time monitoring and analysis of energy usage, significantly enhancing operational efficiency. Eight key energy-consuming units within the Company have established their IT-based energy platforms, enabling comprehensive capabilities for energy monitoring, early warning, and analysis. These advancements collectively contribute to a marked improvement in energy use efficiency across the enterprise.



Case Study

Project for Solid-State Hydrogen Storage Device with Hydrogen Recycling Supply

By integrating rare earth hydrogen storage materials with solid-state systems, this project pioneers a novel approach to thermal management within hydrogen storage. The outcomes include versatile applications that fulfill hydrogen storage requirements across various scenarios, showcasing its adaptability. Furthermore, the project introduces proprietary solid-state thermal regulation technology, which enhances the efficiency of the system. Most notably, it significantly improves heat exchange rates during hydrogen absorption and desorption processes, achieving performance metrics that meet and exceed both domestic and international standards. This technological achievement has been robustly recognized and selected for inclusion in the 2023 China Excellent Technologies Project Database (Category C) by the China Association of Productivity Promotion Centers, as publicly announced.

Water Resource Management

Water Resource Management Framework

The Company adheres rigorously to all relevant laws and regulations, including the Water Law of the People's Republic of China, the Regulations on the Administration of Groundwater, and the Regulations concerning Water Intake Permits and the Collection of Water Resources Fees. Additionally, it follows the Policy on the Administration of Water Resources Demonstration of Construction Projects and the Guidelines for Water Intake Permits. In alignment with its operational realities, the Company has developed the Water Resources Management Policy of Northern Rare Earth. This policy prioritizes water conservation, imposes stringent constraints on water resource usage, enhances water resource management practices, and advocates for the efficient and intensive use of water resources.

All subsidiaries and branches diligently implement these water resource management protocols, ensuring compliance with these stringent standards and contributing to sustainable water resource stewardship.

Water Saving Targets

2025 Water Saving Targets

- Operations in Inner Mongolia consistently exceed the advanced benchmarks set by the Industrial Water Quota and Standards of Inner Mongolia Autonomous Region (DB15/T385-2022).
- Smelting Branch (Huamei) uses 2.06 million tons of purified water from Yellow River.

Water Saving Measures

The Company has effectively enhanced its source water intake control and optimized its water usage strategies, demonstrating a robust commitment to conservation. By integrating state-of-the-art water-saving processes and technologies, the Company has successfully replaced a significant amount of freshwater usage with unconventional resources. It actively promotes rainwater recycling, improves wastewater reuse, and continuously increases the efficiency of water resource utilization.

Water Management Performance

Indicator	Unit	2022 value	2023 value	2024 value
Fresh water consumption per unit in rare earth smelting and separation	m^3/tREO	15.71	13.99	13.47
Recycled water consumption	ML	6,106	6,039	8,030

Case Study Hybrid (Dry/Wet) Cooling Tower

In compliance with the National Catalog of Encouraged Industrial Water-Saving Technologies, Equipment, and Processes (2023), the Company has implemented innovative upgrades to its hybrid cooling towers. Specifically, it has installed top-mounted horizontal dampers and vertical damper baffles to resolve air distribution challenges between dry and wet sections of water-saving fog-dissipating cooling towers; it applied detachable snap-on lightweight dust screens, effectively preventing clogging of finned tubes by dust and airborne debris. This design ensures easy cleaning and replacement of air filtration systems, and enables a reduction in water consumption of over 50% compared to conventional systems.

Material Management

The Company adheres to the principles of green, low-carbon, and high-quality development by implementing strict controls across all packaging processes, including classification, specifications, labeling, surface printing, and material selection. Committed to advancing intelligent manufacturing, the Company has independently developed innovative packaging technologies. Through digital solutions such as vacuum packaging and automated coding-inspection lines, it has reduced material consumption, and enhanced production sustainability and efficiency.

Development of Material Processes

- The upgraded process from the Green Smelting Upgrade Project significantly reduces chemical material consumption in actual production, achieving green, efficient, and clean manufacturing.
- Tianjiao Qingmei's "Packaging Optimization Project" has successfully reduced material costs by 104,000 yuan through improved packaging techniques and minimized auxiliary material usage.
- Gansu Rare Earth effectively replaces traditional ammonium chloride packaging with recycled magnesium oxide woven bags, thereby enhancing resource utilization efficiency.

Circular Economy

The Company rigorously implements the principles of the circular economy by seamlessly integrating them into all facets of its production and operational processes. In alignment with its actual production needs, the Company significantly enhances its investment in technological transformation. It actively promotes the upgrade of green process technologies, emphasizing energy conservation, emission reduction, resource recycling, and clean production methods. This comprehensive approach ensures the maximized utilization of resources, reflecting the Company's unwavering commitment to advancing a circular economy that harmonizes economic and social benefits.

In 2024, the Company proudly achieved the SGS Recycled Content Certification. Furthermore, it effectively organized its branches and subsidiaries, including Ruixin, Huaxing Rare Earth, and Gansu Rare Earth, to process 15 tons of recycled praseodymium-neodymium metal monthly. This initiative underscores the Company's proactive efforts in enhancing resource efficiency and advancing the principles of the circular economy.

SGS Recycled Content Certification

2024 Resource Circularity Performance

Ammonia recovered from industrial wastewater
133,483.24 Tons

Cooling water recovered from industrial wastewater
4,258,710.188 Tons

Ammonium sulfate recovered from industrial wastewater
85,632.11 Tons

Ammonium chloride recovered from industrial wastewater
126,335.209 Tons

Sulfuric acid recovered from industrial wastewater
41,275.401 m^3

Hydrofluoric acid recovered from industrial wastewater
41,024.81 m^3

As a frontrunner in green and low-carbon development within the rare earth industry, the Company is steadfast in its commitment to process optimization and facility enhancements. By implementing environmentally sustainable initiatives—including boiler flue gas desulfurization and denitrification, VOCs treatment, and oxalic acid recovery—the Company has achieved substantial upgrades to its wastewater and exhaust gas treatment systems. These advancements facilitate the categorized recycling, disposal, and resource utilization of wastewater and emissions, substantially enhancing resource efficiency and significantly advancing the Company's transition toward a green and low-carbon operational model.

Case Study Project Oxalic Acid Recovery from Precipitation Pregnant Liquor Solution

Jingrui has developed an innovative process to recover oxalic acid from wastewater and reuse it in production, achieving significant results including reduced oxalic acid consumption, decreased wastewater treatment volume and cost savings of about 1.6 million yuan within six months of implementation. The oxalic acid precipitation pregnant liquor solution undergoes extraction, separation and recovery processes, which effectively remove impurities from byproducts, obtain oxalic acid and recycled acids, recover high-purity oxalic acid and reusable acids, eliminate impurity interference during ammonium chloride evaporation, improve byproduct quality and comprehensive resource utilization.

Case Study Project of Magnesium Bicarbonate Preparation and Recycling Production Line

This project innovatively utilizes magnesium sulfate wastewater generated during the smelting and separation processes of Baotou rare earth concentrate, combined with recycled carbon dioxide, to produce magnesium bicarbonate solution in a circular manner. The magnesium bicarbonate solution effectively replaces solid magnesium oxide in the saponification of organic phase, extraction, transformation and separation of rare earths. Through this approach, we achieve significant recycling of water resources and valuable chemical materials, including magnesium and carbon dioxide, while eliminating the pollution associated with ammonia-nitrogen wastewater at the source. Additionally, this methodology circumvents complications arising from calcium sulfate scaling and impurities such as aluminum and iron, thus streamlining the extraction process. As a result, the utilization rate of rare earth resources is enhanced, leading to improvements in product quality. Furthermore, this innovative process significantly reduces production costs, promoting an environmentally friendly, efficient, and sustainable method for rare earth production. The project boasts an impressive annual output of 1.87 million tons of magnesium bicarbonate, recycles 970,000 cubic meters of magnesium sulfate wastewater, and recovers approximately 11 million tons of carbon dioxide.

Pollution Prevention and Control

The Company is firmly committed to meeting stringent ecological and environmental protection standards by continuously enhancing its pollution prevention mechanisms. It adopts a comprehensive approach to the integrated management of waste gas, wastewater, solid waste, and industrial noise, strictly regulating and reducing environmental pollution. This dedication supports the Blue Skies, Clear Waters, and Clean Lands initiative, driving forward green and sustainable development with confidence and determination.

Waste Gas Management

The Company demonstrates a steadfast commitment to environmental compliance by rigorously adhering to the Law of the People's Republic of China on the Prevention and Control of Air Pollution. Emissions of waste gases from its branches and subsidiaries within Baotou City consistently fall below the stringent limits outlined in the Emission Standards of Pollutants from Rare Earths Industry. To address primary air pollutants, including nitrogen oxides, sulfur dioxide, and particulate matter, the Company employs effective source control measures and real-time monitoring systems aimed at minimizing emissions. Furthermore, by advancing the adoption of clean energy solutions, the Company fundamentally reduces air pollutant emissions at their source. Through process optimization and the installation of advanced equipment such as spray devices and dust removal towers, the Company significantly mitigates dust generation during production. These concerted efforts not only ensure compliance with environmental protection standards but also reflect a proactive approach to sustainable industrial practices.

Air Pollution Prevention and Control Objectives in 2024

- The concentration of waste gas emissions will adhere to the specific limits established for air pollutants in the Emission Standard of Pollutants from Rare Earth Industry (GB 26451-2011) and its amendments.

Progress of Air Pollution Prevention and Control Objectives in 2024

- The emission concentrations of waste gases from each pollution source consistently fell below the limits outlined in the Emission Standard of Pollutants from the Rare Earth Industry and its amendments. Furthermore, the actual emissions were significantly below the national permissible limits.
- In response to yellow heavy pollution weather in Baotou City, we launched the "one enterprise, one policy" approach, ensuring targeted and effective emission reductions.

Waste Gas Management Performance

SO_2 emissions 313.22 Tons	SO_2 emissions intensity 1.80 kg/tREO	NOx emissions 347.94 Tons
NOx emissions intensity 1.99 kg/tREO	Flue gas and dust emissions 38.17 Tons	Flue gas and dust emissions intensity 0.22 kg/tREO

Case Study Wastewater Lime Digestion Transformation Project in Huamei

The newly constructed lime digestion project represents a significant advancement in operational efficiency and safety. A key enhancement involves transitioning the mode of transportation from ton bags to tank trucks, thereby streamlining the logistics process. Upon arrival at the designated site, the lime is pneumatically conveyed into storage silos, addressing potential safety hazards associated with the intersection of the unloading area and production zone. This method effectively minimizes uncontrolled dust dispersion during unloading. For the subsequent silo discharge and digestion processes, the implementation of a quantitative screw feeder in conjunction with a tank-type digester replaces the previous system that relied on electric hoisting, belt conveyors, and horizontal digesters. This improvement facilitates more precise measurement during digestion and strengthens production continuity. Moreover, the new lime digestion system is integrated with a Distributed Control System (DCS), allowing for automated interlocking control throughout the operation. This transition shifts the operational environment from a semi-closed to a fully closed system, significantly mitigating the release of dust and steam. The dust and steam produced during operations is effectively captured by the newly installed bag filter and spray tower, ensuring a controlled workshop environment. The process boasts zero leakage of waste gas and dust.

Wastewater Management

The Company's wastewater primarily comprises ammonium chloride (NH_4Cl), ammonium sulfate ($(NH_4)_2SO_4$), and magnesium sulfate ($MgSO_4$), generated through smelting processes. In alignment with China's stringent Water Pollution Prevention and Control Law, the Company is committed to continuously enhancing its wastewater treatment methods by investing in resources and leveraging technological innovations. Through a systematic approach involving categorized collection, quality-based treatment, and recycling initiatives, the Company has successfully achieved Zero Discharge of industrial wastewater across all facilities within Inner Mongolia, while also progressing towards Near-Zero Discharge for facilities outside Inner Mongolia. These proactive measures ensure sustainable water management practices.

Wastewater Management Performance

Total wastewater discharge 1,719,887.56 Tons	*Industrial waste water discharge* 1,502,739.60 Tons	*Household waste water discharge* 217,147.96 Tons
COD discharge 48.26 Tons	COD discharge intensity 0.278 kg/tREO	Ammonia nitrogen discharge 7.06 Tons
Ammonia nitrogen discharge intensity 0.041 kg/tREO		

Water Source Conservation

The Company rigorously complies with the Regulations of Inner Mongolia Autonomous Region on Building a Key Ecological Security Barrier in Northern China. These regulations require that all enterprises build comprehensive wastewater treatment facilities to ensure compliance with discharge standards, strengthen soil and groundwater management to prevent leakage and groundwater contamination, and establish a real-time groundwater monitoring system to track water quality changes, issue timely warnings, and safeguard against pollution risks. These measures ensure that rare earth resource development does not compromise surrounding water sources, protecting both ecological security and residential water safety.

Waste Management

General Waste

The Company's general waste composition consists predominantly of desulfurization gypsum, spent dust removal ash, discarded refractory materials, calcium fluoride residue, and construction debris. In alignment with the Solid Waste Pollution Prevention and Control Management Guidelines of Northern Rare Earth, the Company has significantly enhanced its solid waste management protocols through several decisive measures: bolstering pollution prevention and control, establishing clear primary responsibility for solid waste oversight, and promoting the 3R principle—Reduce, Reuse, Recycle. These initiatives aim to achieve waste minimization, resource recovery, and environmentally sound disposal practices.

The Company adheres rigorously to all relevant laws, regulations, and standards governing solid waste pollution control. It maintains comprehensive lifecycle management of domestic waste, construction waste, general industrial solid waste, and hazardous waste. This robust framework encompasses the monitoring of waste generation, storage, transportation, and disposal processes to ensure absolute compliance with regulatory requirements. To ensure transparent and standardized management, the Company has successfully implemented a real-time digital tracking system that interfaces directly with China's National Solid Waste Management Information System. This advanced system meticulously records waste categories, quantities, and flow trajectories with precision.

Solid Waste Pollution Prevention and Control Objectives in 2024

- The compliance rate for the comprehensive process of industrial solid waste collection, storage, transportation, and disposal should reach 100%.

Progress of Solid Waste Pollution Prevention and Control Objectives in 2024

- The Company achieved 100% compliant disposal of solid waste, including the proper treatment of 760,000 metric tons of gypsum.

Case Study The Renewable Resource Landfill Project of Northern Rare Earth

The Company has made a substantial investment of 300 million yuan to establish Recycling Resources, a renewable resource subsidiary, which will lead the development of the Company's Renewable Resource Landfill Project. This initiative effectively addresses the landfill disposal requirements for water-leached slag produced by the Company's smelting and separation processes in the Baotou region. It not only enhances the utilization of the Company's rare earth raw materials but also accelerates the implementation of the Two Rare Earth Bases. Upon completion, the project is anticipated to fulfill the Company's water-leached slag landfill needs for approximately 33.2 years, thereby providing a robust foundation for sustainable production and operations.

Hazardous Waste

The Company's hazardous waste primarily comprises mineral oils and waste acids produced during smelting and processing operations. Adhering rigorously to the Cleaner Production Promotion Law of the People's Republic of China, the Interim Measures for Cleaner Production Audit, and the Solid Waste Pollution Prevention and Control Management Guidelines of Northern Rare Earth, the Company has implemented comprehensive management protocols. These protocols facilitate meticulous tracking of the hazardous waste lifecycle, ensuring that all waste transfers undergo thorough transport qualification reviews, contractual agreements, and manifest requirements. Storage facilities are constructed in accordance with stringent national Three Protections standards, which ensure leak-proof, corrosion-resistant, and spill containment measures. Standardized warning signs are displayed.

Furthermore, process optimization initiatives prioritize the use of environmentally friendly materials, including non-toxic and low-toxicity alternatives, low-VOC or zero-VOC raw materials, and enhanced production controls to uphold internal standards, effectively reducing hazardous material usage.

Waste Management Performance

Flue-gas desulfurization gypsum
763,249.04 Tons

Discharge intensity of general industrial solid waste
4,389.71 kg/tREO

Mineral oil
26.18 Tons

Discharge intensity of hazardous waste
0.15 kg/tREO

Total general waste generation per million-yuan revenue
23.15 Tons

Noise Management

The Company fully complies with the Noise Pollution Prevention and Control Law of the People's Republic of China and the Technical Specification for Application and Issuance of Pollutant Permit——Industrial Noise. To effectively manage and mitigate noise pollution, we have implemented several strategic measures. We prioritize the utilization of low-noise equipment and have successfully replaced 459 conventional motors with permanent magnet motors as of 2024, significantly reducing noise at the source. Additionally, we have installed sound insulation shields and noise barriers to enhance noise suppression. Our commitment to noise reduction extends to proactive equipment management, involving technical modifications to further minimize noise impact. Regular inspections and maintenance are conducted to ensure reliable equipment operation, while periodic noise emission monitoring guarantees compliance with established factory boundary standards. Moreover, we have completed industrial noise pollution permit applications for 14 subsidiaries and/or branches in 2024.

Green Living

The Company is committed to integrating ecological and environmental protection principles into the daily practices of its employees. Through comprehensive awareness campaigns and hands-on initiatives, we effectively promote ecological conservation obligations and advocate for best practices in sustainable operations. Our programs are designed to protect ecosystems and biodiversity. We are fostering a culture of environmental stewardship to drive collective Sustainability.

Green Operation Practices

Green Office

The Company has effectively implemented a robust array of energy-saving and environmental protection measures. Key initiatives include energy efficiency upgrades such as the installation of timers and low-flow irrigation systems to optimize resource utilization, as well as replacing conventional lighting with LED tubes. The procurement strategy prioritizes energy-efficient, water-saving, and renewable products, while actively phasing out high-energy-consumption office equipment. Moreover, behavioral awareness campaigns have been instituted, featuring conservation reminders in office environments, the adoption of paperless workflows, and the promotion of green commuting options. Stringent management of official vehicles further ensures fuel efficiency. Lastly, we advocate for waste reduction through structured waste sorting and our Clean Plate campaigns, significantly minimizing food waste.

Green Office Management Performance

Office paper consumption
30.59 Tons

Office paper savings
3.56 Tons

Electronic waste discharge
0.4 Tons

Toner cartridge consumption
2.36 Tons

Ink cartridge consumption
2.07 Tons

Household waste generation
1,572.20 Tons

Kitchen waste generation
172.3 Tons

Gasoline consumption
114,371.7 L

EV charging station
29

Environmental Awareness

The Company prioritizes enhancing environmental awareness and reinforcing eco-friendly practices through comprehensive initiatives. These include conducting diverse awareness campaigns to promote sustainable principles, engaging employees in sustainability efforts, and fostering a collaborative culture dedicated to environmental protection.

Environmental Protection Awareness Campaigns

The Company organized an online environmental quiz on the YouSpace platform, addressing key topics such as environmental laws, pollution control technologies, and sustainability best practices. The initiative drew participation from 2,600 employees, significantly enhancing their environmental awareness and knowledge retention while fostering greater engagement in corporate sustainability initiatives.

The Company also initiated a best practice competition focused on environmental management solutions, garnering 18 submissions. Entries were rigorously evaluated according to techniques, environmental performance, cost efficiency, and scalability. As a result, six exemplary cases were selected for company-wide implementation, fostering cross-departmental knowledge sharing to promote continuous improvement in environmental practices.

Environmental Protection for Public Interest

The Company demonstrates its commitment to social responsibility through the corporate of environmental public welfare initiatives, including tree-planting campaigns, and by promoting sustainable, low-carbon lifestyles. These initiatives aim to enhance employees' awareness of energy conservation and environmental stewardship while cultivating a culture of sustainability throughout its operations.

Case Study **Spring Time for Tree Planting**

In March 2024, the Company facilitated a spring voluntary tree-planting initiative. This initiative effectively demonstrated employees' collaborative spirit and commitment to environmental stewardship through active involvement. It also contributed significantly to the establishment of a green, modern state-owned enterprise and reinforced China's northern ecological security barrier.

Biodiversity Protection

The Company demonstrates unwavering commitment to compliance with pertinent laws and regulations, including the Environmental Protection Law of the People's Republic of China, the Wetland Protection Law of the People's Republic of China, the Forest Law of the People's Republic of China, and the Regulations on Nature Reserves of the People's Republic of China. To mitigate ecological impacts, the Company employs strategic measures in its operations. Site selection processes intentionally exclude ecologically protected areas and environmentally sensitive zones. Furthermore, all subsidiaries and branches are mandated to incorporate biodiversity conservation measures at each project stage—design, construction, and operations. Comprehensive and continuous monitoring ensures timely assessment of ecological effects, facilitating prompt corrective actions when unintended impacts arise.

Land Resource Protection

The Company effectively manages and utilizes land resources through optimized allocation, robust protection, and comprehensive ecological restoration measures. A key achievement in 2024 includes the implementation of soil and groundwater monitoring at the tailing ponds of the Baiyun Boyu Rare Earth Beneficiation Plant and the Har Oboo Beneficiation Plant. Following rigorous verification, the Company successfully closed and deregistered these tailings ponds, demonstrating compliance with Inner Mongolia's Dynamic Adjustment Scheme for Tailings Pond Environmental Supervision List (Trial) regarding vegetation recovery and remediation outcomes.

Case Study **Green Transformation at the Baiyun Obo Mine**

The Baiyun Obo Mine, recognized as the largest iron and rare earth co-existing ore in reserves in northwest region China and home to the world's most substantial rare earth reserves, stands as a prominent asset within Inner Mongolia. However, its challenging environmental conditions—characterized by strong winds, low rainfall, high evaporation rates, and deep groundwater levels—have historically hindered effective ecological restoration. Key obstacles have included poor soil water retention, a deficiency of essential nutrients for plant growth, and historically low vegetation survival rates.

In response to these challenges and to promote green mining practices while facilitating Inner Mongolia's transition to low-carbon mining, the Energy Conservation & Environmental Protection has implemented a series of innovative solutions. These include soil revitalization techniques that achieve a reduction in the bioavailability of lead and cadmium, pathogen elimination, salt-alkali decomposition for enhanced soil structure, and the application of microbial inoculants alongside drought-resistant forage grasses. The outcomes of these initiatives have been remarkable, transforming waste dumps into vibrant grasslands, significantly increasing biodiversity, and enhancing carbon sequestration capabilities.

03

Quality Leadership for Operational Excellence

The Company firmly establishes quality as the foundation of its corporate development, prioritizing safety management as a core principle. Our commitment to responsible business practices allows us to continually enhance customer satisfaction through the implementation of a sustainable, high-resilience supply chain, the promotion of technological innovation, and the facilitation of collaborative value creation. Our ultimate objective is to emerge as a world-leading rare earth enterprise.

Performance Highlights in 2024

R&D expenditure
1.604 billion yuan

R&D expenditure to revenue ratio
5.11%

Product on-time delivery rate
100%

Safety inspections
878

Customer satisfaction
100%

Contribution to UN SDGs

Product Quality

The Company prioritizes quality as its foundational pillar, which drives continuous improvement through enhanced quality management systems, innovative quality models, and cultural transformation with total staff quality awareness. We aim to provide consistent products with premium quality.

Product Quality Performance Highlights

Rate of product/service-related complaints	Product recall	Product on-time delivery rate	Major liability incidents related to product safety and quality
0.5%	104 Tons	100%	0

Quality-related Governance

The Company embraces the quality philosophy of Customers First, Brand Uppermost by vigorously advancing the development of its quality management system. Adhering to pertinent legislation, including the Product Quality Law of the People's Republic of China, the Company executes its quality management responsibilities in alignment with the Management Manual of Northern Rare Earth, the Procedure Documents of Northern Rare Earth, and the Quality Management Guidelines of Northern Rare Earth. This comprehensive approach enhances the standardization, normalization, and specialization of quality management practices.

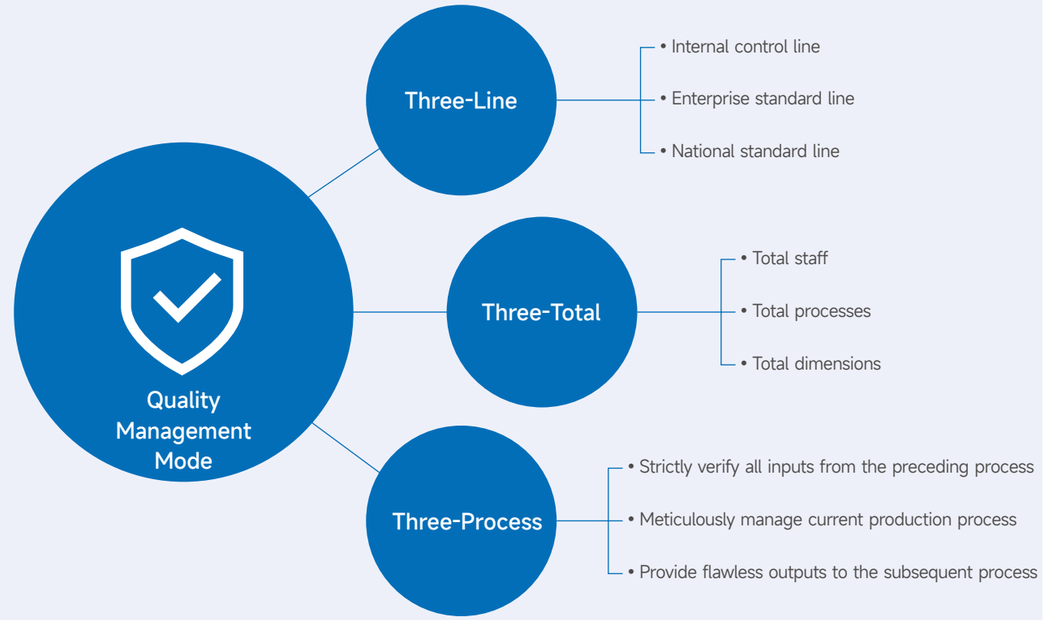
To ensure effective implementation, the Company has established a robust three-level organizational structure featuring a Chief Quality Officer, a Quality Committee, and Quality Champions system. It has also formulated and finalized annual quality objectives while strategically coordinating efforts to achieve ISO 9001 certification. Consequently, this framework guarantees the sustained effectiveness of the Company's quality management operations.

ISO 9001 Quality Management System Certificate

Quality-related Strategies

The Company strategically emphasizes quality as a cornerstone of its development, implementing a comprehensive approach to quality management. By instituting management measures such as quality planning, product quality oversight, quality dispute resolution, and rigorous supervision and assessment, the Company continuously enhances the quality of its rare earth products. This commitment significantly contributes to establishing a robust quality-driven country.

The Company has introduced an innovative quality management mode encompassing Three-Line, Three-Total, and Three-Process. The Three-Line framework enforces stringent internal control standards, effectively creating a protective net for product quality. The Three-Total model broadens accountability, establishing a responsible chain that underscores product quality at every level. Meanwhile, the Three-Process framework facilitates hierarchical control, forming a robust regulatory mechanism for quality assurance. As a testament to these efforts, the Company achieved an impressive one-time pass rate of 99.12% for rare earth products during OQC process in 2024.



Three-Line, Three-Total and Three-Process Management Mode

Case Study

Northern Rare Earth is Recognized as a Flagship Enterprise under the National Quality Empowerment Strategy

In December 2024, the National Quality Leadership Exchange Conference titled Quality-Driven Enterprises, Co-Creating the Future was convened in Beijing. During this prestigious event, the Company was distinguished as a Flagship Enterprise under the National Quality Empowerment Strategy, uniquely representing the Inner Mongolia Autonomous Region among the selected organizations.

Quality-related Risk Management

The Company underscores its commitment to product quality management through the rigorous implementation of the Northern Rare Earth Procedures Documents. It has established comprehensive control systems, including Non-Conforming Product Control Procedures and Quality Dispute Resolution Procedures. These initiatives ensure the timely and effective resolution of quality disputes, the proper handling of non-conforming products, and the protection of customer rights and interests. The Company achieved zero major quality incidents and no product recalls in 2024.

Quality-related Indicators and Objectives

Quality Management Objectives

2024 Quality Management Targets	Progress
First-pass yield rates across all product lines —Separation >98%; Functional Materials >98%; Metals Segment >93%; End-Use Applications >97%	Completed
Zero quality incidents at secondary-level or higher operating entities	Completed
Customer satisfaction with products and services ≥ 98.5%.	Completed
Year-over-year growth in production of high-value products — high-value raw materials ≥10%; High-value functional materials ≥12%	Completed
The integrated management systems for Quality, Environment, Occupational Health & Safety (OHS), and Energy continue to operate effectively and sustainably.	Completed

Quality Culture Development

The Company actively fosters a culture of quality excellence through a multifaceted approach that prioritizes the implementation of quality responsibilities at all levels. By conducting comprehensive, tiered training and awareness initiatives, the Company cultivates an environment that emphasizes quality as a core value. This strategic focus enhances employee engagement and instills ownership and pride in delivering superior products.

Structured Quality Control (QC) group activities further mobilize all employees in the pursuit of quality improvements, empowering frontline staff to spearhead enhancements. Initiatives such as Quality Month and skills competitions encourage subsidiaries and branches to engage in ongoing training, facilitate targeted quality breakthroughs, promote a mindset of continuous improvement, and stimulate internal innovation. This commitment ensures that quality remains at the forefront of the Company's operational agenda.

Case Study **Quality Month Activities**

During the 2024 Quality Month campaign, the Company effectively unified all subsidiaries and branches to achieve several key objectives. We systematically reviewed quality achievements, benchmarked against industry-leading practices, and shared advanced quality methodologies. Collaborative efforts were initiated to address recurring quality challenges and enhance critical process controls. Furthermore, we implemented a robust training program that included 66 sessions on total quality management (TQM) and 17 Chief Engineers on Quality workshops featuring in-depth technical discussions. These initiatives were complemented by tailored activities to develop employee skills, culminating in online quizzes, knowledge competitions, and technical skill contests

Lean Management Initiative

The Company has developed the Detailed Rules for Lean Management Implementation to strengthen digital lean management and optimize lean processes. We have consistently performed targeted improvements and created model lean production lines as per the internal policy.

Lean Management Performance

Lean projects	Lean groups	Lean production lines
76	36	8

Six Sigma Management

The Company is committed to advancing its quality control processes through the rigorous application of Six Sigma methodologies. These efforts aim to enhance quality management capabilities, boost efficiency, and bolster resilience in the face of market fluctuations, thereby establishing a sustainable competitive advantage in product quality. In 2024, we successfully completed eight Six Sigma projects, implemented 51 effective Quick Win improvements, standardized 76 best practices, developed 15 comprehensive work instructions, and expanded the application of quality tools to ensure continuous improvement.

Case Study **Six Sigma Project Kickoff and Champion Training**

In May 2024, the Company conducted a Six Sigma Project Kickoff Meeting alongside a Champion Training Session. The objectives included outlining project goals, elucidating the strategic context for Six Sigma implementation, defining project requirements, fostering organizational alignment, building consensus on methodologies across departments, and unifying efforts to enhance the development of new quality productivity initiatives.

Safety Bottom Line

The Company rigorously upholds fundamental workplace safety principles by diligently enforcing safety production responsibilities and continually enhancing safety management systems and operational procedures. These initiatives are designed to strengthen safety awareness among employees, develop smart, safety-focused factories, and establish a secure operational foundation for sustainable business growth. For 2024, a dedicated safety investment allocation amounts to 49.537 million yuan.

Safety-related Governance

Safety Management System

The Company firmly upholds the Three-Manage and Three-Must principle—encompassing management of business, operations, and production while prioritizing safety in alignment with China's Work Safety Law. To enhance safety management, the Company has implemented several key initiatives. It has revised and strengthened the Comprehensive Work Safety Responsibility System, optimized safety responsibility lists specific to departments and positions, introduced quantitative evaluation criteria for annual safety performance assessments.

Also, the Company has established ten distinct safety management policies, including the Dual-Prevention Mechanism for Safety Risk Classification and Hidden Hazard Investigation of Northern Rare Earth. It has augmented safety supervision frameworks and organizational structures. Moreover, a Work Safety Committee has been formed as the core decision-making body, complemented by the establishment of a dedicated Safety Committee Office to oversee daily enforcement of safety measures. These actions reflect the Company's unwavering commitment to fostering a culture of safety.

Safety-related Strategies

The Company has released the 2024 Work Safety Standardization Implementation Plan to enhance safety standardization across all operations. This initiative emphasizes robust internal audits and self-assessments while improving internal review mechanisms and tracking corrective actions. Additionally, the launch of the Safety Standardization Tier-Upgrading Plan aims to bolster compliance among subsidiaries and branches.

In 2024, this commitment has yielded significant achievements, with five affiliates obtaining Tier-2 Safety Standardization Certification and eighteen achieving Tier-3 Certification.

The Company has initiated the Development of Safety Standards for the Rare Earth Industry research project, spearheading the development of the mandatory industry standard titled Safety Regulations for Rare Earth Smelting. This initiative confidently aims to define safety norms and boundaries, establish clear operational guidelines, standardize hazard controls, enhance industry-wide safety, promote unified safety management practices, and significantly reduce workplace accidents through proactive preventive measures.

Tier-2 Safety Standardization Certificate

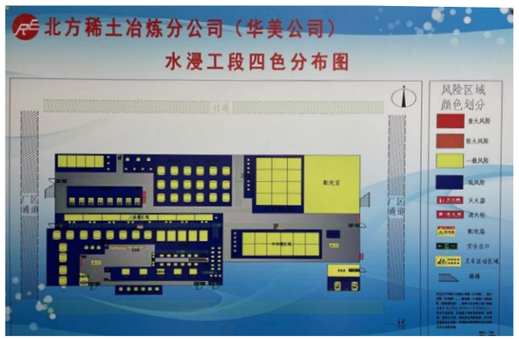
Safety-related Risk Management

Safety Risk Management

The Company has launched the Three-Year Action Plan for Fundamental Improvement in Work Safety (2024–2026). This plan is designed to enhance risk management improve the quality of hazard identification and rectification, and ensure the dynamic clearance of major accident risks. Additionally, it aims to strengthen intrinsic safety and modernize the work safety governance system, fostering a virtuous cycle of high-quality development alongside elevated safety standards. As of 2024, 100% of identified risk points under daily management have been effectively controlled.

Graded Risk Management

The Company is committed to advancing its risk management system through several strategic initiatives. First, it has established detailed protocols by formulating the Implementation Rules for the Dual-Prevention Mechanism of Risk Classification and Hidden Hazard Investigation. In addition, expert-led teams are organized to conduct thorough safety risk reassessments, ensuring comprehensive risk identification. The Company employs the LEC Method to classify risks by severity, assigning tiered ownership for effective mitigation. Finally, it guarantees that all identified risks are both manageable and preventable, reinforcing its dedication to workplace safety.



Four-Color Risk Identification Map

In 2024, the Company launched the Notice on Launching the 'Identify Risks, Eliminate Hazards' Special Campaign, reinforcing its commitment to comprehensive safety enhancements across all operational units. As a result of this initiative, 4,562 hazards were identified company-wide, with 22 major/high-risk hazards earmarked for priority control. Furthermore, the campaign has strengthened baseline safety protocols and intensified risk management measures, establishing a robust framework for ongoing safety improvements.

Safety-related Indicators and Objectives

Safety Management Targets

2024 Quality Management Targets	Progress
No significant incidents recorded in production safety, equipment safety, traffic safety, or fire safety	Completed
Lost-time injury frequency rate (LTIFR) per 1,000 employees ＜0.6‰	Completed
The implementation rate of the safety training plan, full-staff training rate, three-level safety education rate, and certification training rate for special operations and equipment operators, all reach 100%.	Completed
Annual inspection of special equipment, along with periodic inspections and registration/certification processes reaches 100% completion rate.	Completed
All identified risk points are controlled by daily management with a 100% hazard rectification rate.	Completed

Spotting Safety Hazards

The Company is committed to enhancing its hidden hazard identification mechanism through several strategic initiatives. These include the integration of risk classification and control outcomes to establish a comprehensive hazard investigation and rectification checklist. Furthermore, it specifies detailed criteria for hazard identification and enhances incentive and disciplinary mechanisms for effective hazard management. Additionally, the Company strengthens its information archiving systems to ensure robust documentation and facilitates effective implementation. Collectively, these efforts provide a solid foundation for ensuring workplace safety.

Safety Hazards Inspection Performance

Safety inspections	Safety hazards corrected	Correction rate of safety hazards
878	4,435	100%

1. **Plan** — A detailed hazard inspection plan is established, explicitly defining the scope of inspections, specific checkpoints, assigned responsibilities, and risk-based inspection frequencies.
2. **Inspect** — The inspection system must ensure comprehensive coverage through integrated approaches combining scheduled and ad-hoc inspections, specialized technical reviews with cross-functional audits, as well as routine checks complemented by focused priority-area verifications.
3. **Remedy** — Upon identification, general hazards shall trigger immediate remediation procedures, while critical hazards demand emergency containment measures.
4. **Assess** — Post-remediation, qualified technicians must conduct thorough effectiveness evaluations to confirm hazard control or elimination.
5. **Accept** — The originating inspection department verifies completion through formal acceptance protocols, updates relevant control measures, and documents the closed-loop management process to ensure full accountability.

Specific Process for Safety Hazards Inspection

In 2024, the Company successfully implemented a multi-layered safety supervision system across all subsidiaries and branches. The methodologies employed included Self-Audits and Peer Reviews Comprehensive Checks and Targeted Inspections, as well as On-Site Inspections and Off-Site Monitoring, focusing on Key Entities and Construction Projects. These initiatives ensured the effective implementation of the work safety responsibility system while enhancing the rigor and effectiveness of safety management practices.

Case Study Pre-Holiday Safety Inspection

In September 2024, just ahead of the National Day holiday, executives of the Company undertook thorough safety inspections at Magnetic Materials and Tianjiao Qingmei. The primary objectives were to verify the implementation of work safety protocols, enhance the management of production safety, and ensure stable operations throughout the holiday period.

Safety Emergency Management

The Company has taken significant strides in strengthening its emergency management regulations. This includes the standardization of procedures in alignment with the Work Safety Emergency Response Plan. Notable enhancements involve the development of unified emergency response cards that comprehensively outline hazard types, response procedures, essential precautions, evacuation routes, and emergency contact numbers. Additionally, the Company has amplified on-site preparedness and improved the response capabilities of its staff.

In 2024, the Company successfully conducted 472 emergency drills addressing various scenarios, including fire emergencies, confined space rescues, electric shock incidents, and crane accidents. All part-time emergency response teams received training, strengthening the Company's overall crisis management framework.

Safety Emergency Drill Performance

Emergency drills

472

Emergency drill participation

5,505

Case Study **Fire Drill**

In June 2024, Gansu Rare Earth executed a comprehensive chemical firefighting and rescue drill, simulating diverse levels of chemical leaks in workshop areas. The exercise effectively activated internal emergency protocols, deployed the on-site professional fire brigade, and tested multi-level response strategies. Outcomes included enhanced technical skills and improved coordination among emergency teams, significantly bolstering company-wide emergency preparedness.

The Company has released the Notice on Strengthening Emergency Duty and Safety Management During Extreme Weather and Critical Periods, which outlines comprehensive preventive measures for addressing extreme weather challenges. Furthermore, a strategic work deployment meeting was convened to coordinate and enhance preparedness and response initiatives specifically for the upcoming flood season.

Safety Culture

The Company is committed to enhancing workplace safety through comprehensive training programs and initiatives that promote safety awareness among employees. By standardizing operational procedures and improving safety competencies, the Company effectively cultivates a culture of safety. Utilizing digital tools, it has elevated safety management standards to ensure a secure and stable working environment. In 2024, various tailored safety training sessions were implemented, specifically designed for distinct employee groups, reinforcing safety awareness and equipping all staff members with essential knowledge and skills.

Safety Training Performance

Safety and occupational health training sessions

314

Safety and occupational health training duration

872 Hours

Safety and occupational health training participation

23,845

Case Study **Safety Management Skills Enhancement Training**

In November 2024, the Company successfully conducted six sessions of Safety Management Skills Enhancement Training, addressing critical topics such as regulatory compliance, criteria for identifying major accident hazards, standardized workplace safety practices, and safety management of high-risk operations and equipment. Additionally, the training covered the proper use of safety measures funds and the development of a robust safety culture. Participants gained a deeper understanding of workplace safety through the interpretation of safety regulations, analysis of real-world accident cases, and introduction to the latest safety technologies. These initiatives undeniably strengthened employees' safety management competencies, establishing a solid foundation for a safer and more compliant work environment.

The Company has consistently reinforced its commitment to safety culture by organizing a comprehensive series of Workplace Safety Month activities under the compelling theme "Safety is Everyone's Responsibility, Emergency Preparedness is Everyone's Skill". Through a variety of engaging formats, including pre-shift meetings, safety warning education sessions, and knowledge competitions, the Company actively cultivates a heightened awareness of safety culture. These initiatives not only foster employees' sense of belonging to the corporate safety framework but also ensure the integration of safety principles throughout all production processes.

Case Study **Workplace Safety Month**

In May 2024, the Company successfully initiated its Workplace Safety Month campaign, aptly themed Safety is Everyone's Duty, Emergency Preparedness is Everyone's Skill - Keeping Escape Routes Clear. This comprehensive initiative incorporated a range of online and offline activities designed to enhance safety awareness, boost employee engagement in safety initiatives, and support the Company's commitment to exceptional corporate development through improved safety performance.

Safety-themed Artworks

Safety Culture Wall

Safety Culture Corridor

Safety Warning Signs

Smart and Safe Factories

The Company is resolutely enhancing its information technology capabilities while expediting the upgrade of intelligent equipment. Building upon the 3D transformation project, we have advanced the implementation of mechanization to replace manual operations, automation to minimize workforce exposure, and intelligent systems aimed at achieving unmanned production. Key achievements include remote monitoring of critical hazard control parameters, development of a smart safety factory through intelligent and digital solutions, significant enhancements in intrinsic safety across all operational domains, and effective reduction of overall safety risks. These initiatives fundamentally reinforce the Company's inherent safety management system.

Workplace Safety Management System

Intelligent Forklift

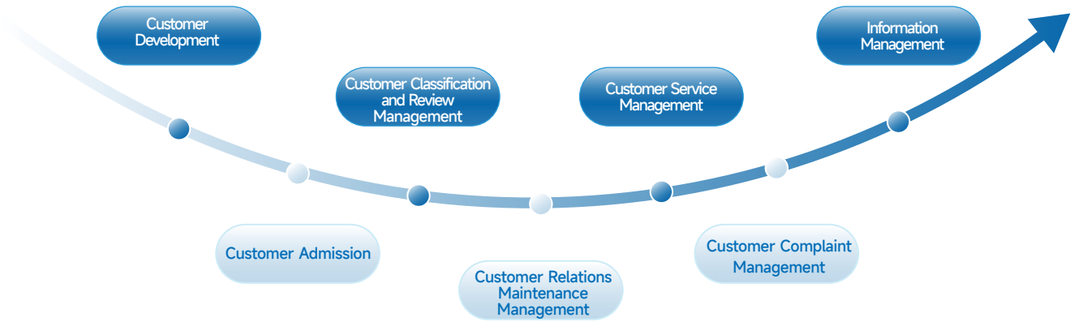
Intelligent Inspection Line

Responsibility for Customers

The Company places high importance on customer service quality, continuously optimizing the customer service system and refining service standards. We are committed to protecting customer rights through ongoing initiatives, strengthening data privacy safeguards, building long-term, mutually beneficial partnerships, and creating shared value and collaborative growth with our clients. By fostering reciprocity and win-win cooperation, we achieve shared development with our customers.

Customer Service System

The Company unwaveringly follows a customer-first service philosophy and rigorously enforces the Consumer Rights Protection Law of the People's Republic of China. To standardize customer management and elevate market service awareness, we have developed comprehensive internal regulations, including the Northern Rare Earth Customer Management Procedures and the Northern Rare Earth Marketing Service Management Procedures. These initiatives effectively strengthen brand influence, enhance market competitiveness, and maintain the highest standards of service excellence.



Customer Management Structure

The Company prioritizes the protection of customer rights and provides exceptional end-to-end services—encompassing pre-sales, during-sales, and after-sales—to optimize the user experience. Our commitment lies in fostering long-term, stable, and collaborative partnerships with our customers.

Before Sale

Our integrated service model delivers comprehensive information support through market research, product promotion campaigns, and structured feedback systems. We provide customized solutions via efficient inquiry processing and specialized technical evaluations for unique product requirements.

During Sale

The sales cycle is managed through end-to-end tracking with proactive progress updates to clients, complemented by scheduled follow-ups to monitor evolving needs and satisfaction levels.

After Sale

To ensure continuous improvement, we implement satisfaction surveys, establish dedicated complaint hotlines with multiple reporting channels, and conduct periodic relationship reviews with key accounts through mutually scheduled visits.

Customer Service System

The Company has developed the Northern Rare Earth Product After-Sales Quality Dispute Management Procedures, which incorporate a robust customer complaint mechanism that ensures a comprehensive closed-loop management system. This system encompasses the categorization of complaint types, meticulous documentation of complaint details, thorough investigation of root causes, proposal of effective solutions, tracking of resolution progress, and provision of feedback and evaluation to customers. Notably, in 2024, the Company didn't receive customer complaints.

Customer Satisfaction Survey

The Company prioritizes customer experience through the Northern Rare Earth Customer Satisfaction Measurement Management Procedures, which encompass systematic customer satisfaction surveys, standardized evaluation protocols, and a robust assessment framework. This comprehensive approach facilitates the collection of insightful feedback on products and services, identification of improvement areas, implementation of targeted enhancements, and continuous elevation of quality management and service standards. Notably, in 2024, the Company achieved a remarkable 100% customer satisfaction rate.

Customer Satisfaction
100%

Customer Communication

The Company continuously enhances its marketing strategies by closely monitoring policies from national and local governments, strengthening collaborations with local authorities, maintaining ongoing dialogues with customers, and deepening partnerships with high-quality strategic allies. Through multi-channel engagement—encompassing phone, email, and site visits—we have established a closed-loop communication system that facilitates demand insight, service upgrade and ecosystem synergy.

Customer Privacy Protection

Customer Information Archive

The Company places a significant emphasis on the management of customer information through the implementation of a comprehensive customer data archive system. This system methodically collects and preserves essential information, including credit profiles, sales contracts, business correspondence, and legal dispute resolutions. Through centralized management, regular updates, and consolidated reporting, we guarantee data accuracy and timeliness while enhancing the completeness and reliability of information. Consequently, this robust framework supports informed decision-making and fosters more efficient, professional services. The ultimate outcomes are a strengthened customer satisfaction and reinforced client trust.

Customer Privacy Protection

The Company upholds exemplary standards in customer privacy protection, strictly adhering to the Consumer Rights Protection Law of the People's Republic of China. We have implemented stringent protocols to safeguard all customer information obtained during business operations, prohibit unauthorized access or disclosure of client data, and eliminate any potential breaches of customer privacy. As a testament to our effectiveness, we achieved zero incidents of customer data breaches in 2024.

Green Procurement Practices

The Company is resolutely committed to establishing a secure, healthy, and stable supply chain through several strategic initiatives. These include the integration of ESG principles into supply chain management, equitable treatment of all suppliers, the adoption of green and transparent procurement strategies, and the enhancement of supplier management standards. Our purpose is to actively co-create a collaborative and sustainable supply chain ecosystem, ensuring long-term viability and ethical responsibility.

Supplier Management

The Company firmly employs the principles of "categorized management and dynamic maintenance", establishing robust supplier management systems through internal regulations, notably the Northern Rare Earth Supplier Management Procedures. We have implemented standardized processes for supplier sourcing, qualification, and tiered evaluation, as well as optimal resource utilization and quality-assured procurement mechanisms. This comprehensive framework facilitates the development of a transparent, efficient, and sustainable procurement and supply chain management system.

Supply Chain Risk Management

The Company is diligently enhancing its supplier ESG management by explicitly integrating ESG principles into its Supplier Management Procedures. This integration encourages the incorporation of ESG criteria throughout the entire supplier lifecycle, including admission, performance evaluation, and ongoing assessment. We maintain rigorous oversight of supplier practices in critical areas such as labor rights protection, environmental compliance, occupational health and safety, and business ethics. Our categorized supplier management system ensures stringent control over admission, performance evaluation, and exit procedures, facilitating effective supplier risk assessment and strengthening the stability and reliability of our supply chain.

Supplier Management Mechanism

Supplier admission	Suppliers are required to adhere to national, regional, and industry regulations, as well as the Company's standards for quality, safety, and environmental management. For the procurement of bulk raw materials and critical equipment, it is essential to implement mandatory traceability verification and conduct on-site inspections.
Supplier review and assessment	We carry out both regular and annual assessments that emphasize quality performance, service reliability, and compliance records. Essential requirements include: zero violation records, complete supply chain compliance, and the development of sustainable partnerships.
Supplier classification	Approved suppliers are systematically categorized into three distinct classifications: Strategic Suppliers, Key Suppliers; and General Suppliers.
Supplier exit	The evaluation results will inform the following actions: downgrading suppliers based on performance metrics; or removing suppliers from the approved list as necessary.

The Company actively enhances its supply channels to ensure a reliable procurement of essential bulk materials. By establishing strategic partnerships with leading domestic and international suppliers, we reinforce the resilience of our supply chain. Additionally, we have implemented robust emergency procurement protocols that effectively maintain stability during disruptions. In 2024, we achieved zero major supply chain incidents and sustained uninterrupted material supply.

Supply Chain Risk Management

Critical risk incidents in the supply chain	Suppliers involved in critical supply chain risk incidents	Persons involved in critical supply chain risk incidents
0	0	0

Synergistic Development with Suppliers

The Company as well as its subsidiaries and branches uphold several core principles in supplier engagement that emphasize the importance of strategic partnerships and quality. Our approach prioritizes collaborations with manufacturing enterprises while focusing on creditworthiness and service excellence. To strengthen market development, we engage in comprehensive resource research, conduct in-depth negotiations, and expand our strategic supplier network. The enhanced collaboration framework employs multiple engagement channels, including phone calls, correspondence, on-site visits, and strategic partnership forums. Our strategic objectives are to establish long-term relationships with suppliers, deepen industrial collaboration, and share developmental achievements, all while ensuring an efficient and interconnected industrial ecosystem. This approach guarantees end-to-end supply chain stability, culminating in optimized supplier network structures, enhanced resilience, and sustainable value co-creation.

Efficient Procurement Transparency

The Company operates within a robust procurement governance framework that mandates strict adherence to principles of transparency, fairness, and impartiality. Our procurement practices are underpinned by a commitment to good faith and scientifically informed selection, ensuring regulatory compliance with essential guidelines, including Procurement Procedures for State-Owned Enterprises and the Northern Rare Earth Procurement Management Procedures. To enhance competitiveness and efficiency, we employ a diverse array of procurement methods, such as public tendering, price inquiries, comparative selection, and competitive negotiations. Our strategic partnership model emphasizes the establishment of long-term agreements with reputable suppliers, striking a balance between supply stability, risk mitigation, and mutual value creation.

We foster an ethical procurement ecosystem by prioritizing professional development through regular competency training and anti-corruption compliance programs. Our strict integrity safeguards and comprehensive ethical oversight create a culture of accountability, underpinned by mandatory integrity agreements with suppliers and transparent practices. Through our commitment to pioneering clean procurement standards and driving ethical industry practices, we fulfill our corporate responsibility with tangible actions.

Technological Innovation

Guided by the principle that Technology Enables Development, Innovation Leads the Future, the Company identifies technological innovation as the fundamental driver of corporate growth. We strategically integrate our innovation chain with the industrial chain, effectively transforming technological advancements into a powerful engine for cultivating new high-quality productive forces. This resolute commitment positions us as a premier rare earth enterprise and establishes us as a key contributor to the creation of the Two Rare Earth Bases. In 2024, we marked significant achievements in research and development, with an expenditures of 1.604 billion yuan, representing an R&D dedication of 5.11% of total revenue.

R&D Expenditure

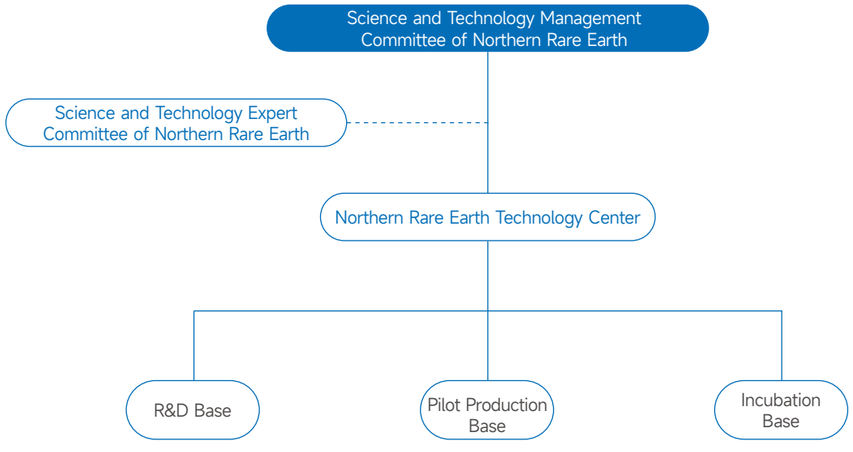
R&D expenditure
1.604
billion yuan

R&D expenditure to revenue ratio
5.11

Technological Innovation Governance

The Company has successfully established a comprehensive and robust research and development management system, underscored by a series of internal regulations. These include Research and Development Project Management Procedures, Research and Development Funding Management Procedures, and R&D Achievement Transformation Procedures. Key features of this system allow for end-to-end project management, optimal utilization of societal science and technology resources, enhanced incentive mechanisms for achievements, and a strengthened framework for the application and promotion of research outcomes.

Moreover, the Company has adopted an innovative architecture titled One Hub + Three Bases. This structured framework incorporates the National Enterprise Technology Center as the core hub, facilitating organizational coordination, management oversight, and resource integration across various platforms. The three-tier innovation chain encompasses an R&D Base for achievement cultivation, a Pilot Base dedicated to product trial production, and an Incubation Base focused on commercial output.



Technological Innovation Framework

Technological Innovation Strategies

The Company has effectively developed and implemented the Collaborative Sci-Tech Innovation Work Plan and the Research Funding Management Guidelines, utilizing a Block Grant + Negative List mechanism. This strategic approach ensures the efficient integration of R&D resources, fostering a robust environment for the transformation of research achievements. Key implementation measures include the rigorous execution of the Northern Rare Earth Sci-Tech Innovation Leadership Plan and the establishment of an open, shared, and collaborative innovation ecosystem. This framework fully leverages the leading and driving role of sci-tech innovation, positioning the Company for sustained success in its endeavors.

Technological Innovation Principles

- Centered on addressing industrial needs.
- Propelled by open collaboration among stakeholders.
- Anchored in the development of robust platforms.
- Invigorated by institutional reform.

Technological Innovation Risk Management

Our R&D compliance framework is rigorously aligned with pertinent policies and regulations. We conduct regular compliance reviews to systematically examine our research activities, identify potential risks, and provide corrective recommendations. In accordance with the Northern Rare Earth R&D Project Management Procedures, we have established daily research integrity protocols and clear accountability mechanisms. These measures have led to significant risk control outcomes, ensuring regulatory conformity, maintaining operational standardization, and proactively mitigating innovation risks.

Technological Innovation Indicators and Objectives

Innovation Objectives

- We will develop new products, new processes and new equipment;
- We will undertake standardization pilot and/or demonstration projects
- We will complete the transformation from technological innovation to industrialization;
- We will build demonstration production lines.

Management Objectives

- We will intensify annual R&D investment to maintain our status as a National High-Tech Enterprise,
- We will cultivate domestic-leading research teams specialized in advanced materials and related fields.
- We will consistently participate in national, provincial, and municipal-level research initiatives each year.
- We will expand our portfolio of national-level technological innovation platforms and achieve recognition as a Little Giant enterprise specializing in niche technologies.
- We will strengthen postgraduate talent development programs to foster a robust pipeline of master's degree and above professionals.

R&D and Innovation Management Objectives

R&D Platform Infrastructure

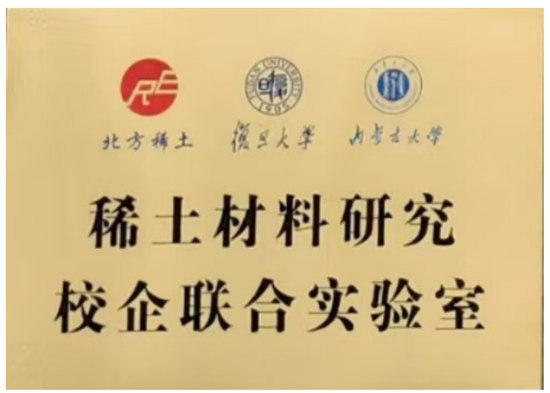
The Company strategically leverages sophisticated science and technology platforms as essential drivers for enhancing its capabilities, thereby securing national recognition as a technology innovation demonstration enterprise and a high-tech enterprise. Its platform portfolio comprises nine national innovation and service platforms, two national enterprise technology centers, two national postdoctoral research stations, and sixteen provincial-level (autonomous region) innovation platforms. This strategic utilization not only accelerates project commercialization but also effectively addresses technical bottlenecks, broadens industrial perspectives, tracks cutting-edge advancements, and supports transformative innovations.

Case Study Establishment of Magnetic Materials Academician Workstation with Beihang University

In June 2024, we entered a strategic partnership with Beihang University to establish the Magnetic Materials Academician Workstation. This collaboration will concentrate on the development of rare-earth permanent magnetic materials, magnetostrictive materials, and other advanced materials and applications. The primary objectives of this initiative include conducting fundamental and cutting-edge research, developing core technologies, accelerating technology transfer and commercialization, and creating a high-level open innovation platform. This partnership is poised to significantly enhance our innovation capabilities and strengthen its market competitiveness.

Case Study University-Enterprise Joint Laboratory for Rare Earth Materials Research

In 2024, the Company successfully established a joint laboratory agreement with Fudan University and Inner Mongolia University, resulting in the formation of the University-Enterprise Joint Laboratory for Rare Earth Materials Research. This initiative focuses on addressing critical technical bottlenecks, streamlining technology commercialization, and contributing to industrial upgrading through efforts around four areas.



Case Study Establishment of Joint Laboratory of Rare Earth New Materials and Applications

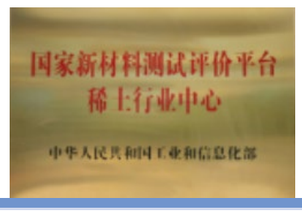
During the opening ceremony of the 16th China·Baotou Rare Earth Industry Forum, the Company was honored with the prestigious title of National Leading Enterprise in Rare Earth New Materials. This recognition underscores the Company's commitment to advancing the field of rare earth materials. A key achievement in this pursuit is the establishment of the Joint Laboratory of Rare Earth New Materials and Applications in collaboration with Xiamen Tungsten Co., Ltd. The laboratory focuses on several research areas, including rare earth smelting and separation, the development of rare earth metals and alloys, the creation of permanent magnetic materials, rare earth hydrogen storage material and solid-state hydrogen storage installations, and the advancement of optical functional materials and permanent magnet motors.

Enterprise Technology Center

National Level Key Laboratory

National Engineering Research Center

International Science and Technology Cooperation Base



Rare Earth New Material Testing and Evaluation Platform (Rare Earth Industry Center)

The Company has enhanced its strategic partnerships with esteemed universities and research institutions, including Zhejiang University, Lanzhou University, and Inner Mongolia University of Science and Technology. By concentrating on critical areas such as the development of scientific and technological innovation platforms, addressing significant research challenges, facilitating the transformation of scientific achievements, and nurturing talent, the Company fosters a robust integration of industry, academia, and research to generate substantial momentum for the innovative advancement of the sector. In 2024, the Company successfully forged cooperative relationships with four additional industry-university-research institutions and allocated an expenditure of 20.59 million yuan to support strategic collaboration projects with universities.

R&D Training & Development

The Company organizes specialized research training programs tailored to the specific needs of the rare earth industry. These initiatives are designed to foster a sustainable innovation ecosystem, unlock the potential of science and technology talent, enhance employees' independent innovation capabilities, elevate research quality standards, and continually upgrade technical competencies.

R&D-related Training and Knowledge-sharing Performance

R&D training and exchange sessions

4

R&D training and exchange participation

225

Case Study

Training on Standardization Policies and Requirements for Standard Project Declaration

In December 2024, a comprehensive training course titled Standardization Policies and Requirements for Standard Project Declaration was conducted. This initiative significantly enhanced participants' understanding of standardization policies and clarified the essential requirements for effective project declaration. As a result, participants experienced improved capabilities in establishing and declaring standard projects. Furthermore, the training contributed to the development of a robust standardization talent pool and facilitated the high-quality construction of the national technical standard innovation base, reinforcing the importance of standardization in advancing technical excellence.

R&D Achievements

The Company has solidified its position as a leading innovator, driving collaborative advancements in key technologies and advanced research. This strategic focus has yielded original, high-quality technological achievements that reinforce our commitment to innovation. Through technological innovation, we are poised to industrial innovation industries and enhance our core competitiveness.

In 2024, our R&D portfolio highlights the execution of over 30 major projects, including six national-level initiatives, 25 projects aligned with Inner Mongolia's Technology Breakthrough initiatives, two municipal-level projects in Baotou, and several internal priority projects that collectively underscore our strategic vision.

National Projects undertaken in 2024

1. Key Technologies and Application Demonstration for Intelligent Preparation of High-Quality Ce-Pr-Nd Alloys
2. Project Task 4 of Integrated Demonstration of Green and Efficient Development and Utilization of Baiyun Obo Polymetallic Resources
3. Project Task 5 of Integrated Demonstration of Green and Efficient Development and Utilization of Baiyun Obo Polymetallic Resources
4. Metallurgical Process and Flake Structure Formation Mechanism of High-Quality Rapidly Solidified Strips
5. Preparation and Property Control of High-Stability Nano-Ceria Polishing Slurries

Technological Innovation Awards

The Company has established itself as a formidable leader in the rare earth sector, leveraging its exceptional technical expertise and innovative spirit to engage in the research and development of advanced technologies. By effectively addressing critical technical challenges, the Company has achieved a series of impactful research milestones that underscore its preeminent position and innovative capabilities within the industry. These accomplishments not only demonstrate the Company's technical leadership but also set a standard for high-quality development across the sector. In 2024, the Company garnered significant accolades, including a first prize and four second prizes of the Rare Earth Science and Technology Awards, a first prize of the Science and Technology Awards of the China Nonferrous Metals Industry, and multiple awards from the National Rare Earth Standardization Technical Committee.

Case Study

We Receive the First Prize of the Science and Technology Awards of the Chinese Non-ferrous Metal Industry

The Company's leadership in the development of the First Batch of Critical International Rare Earth Standards—Rare Earth Terminology Series has earned it the prestigious first prize of the Science and Technology Awards of the Chinese Non-ferrous Metal Industry. This notable achievement significantly elevates China's rare earth industry standards on the global stage, providing a robust foundation for the establishment and advancement of relevant international standards. Consequently, it fosters enhanced global collaboration and drives technological progress within the rare earth sector.

Transformation of R&D Achievements

The Company accelerates the transition from laboratory innovations to industrial applications by implementing a robust mechanism for transforming scientific research achievements. This strategic approach ensures a seamless integration of research innovation with industrial development.

In 2024, the Company submitted applications for 176 patents, comprising 134 inventions and 42 utility models. Notably, the Thermal Stabilizer of Ternary Complex of Rare Earth-Stearic Acid-8-Hydroxyquinoline and Its Preparation Method has been distinguished as a recommended project for the Invention (Utility Model) Patent category in the 25th China Patent Award.

Overview of Patents

Total patents authorized by the end of the year	Total patents newly authorized in 2024	New patent applications in 2024
958	150	176
Inventions authorized 413	*Inventions authorized* 51	*Invention applications* 42
Utility models authorized 531	*Utility models authorized* 95	*Utility model applications* 134
Industrial designs authorized 14	*Industrial designs authorized* 4	*Industrial designs applications* 0

In 2024, the Company achieved notable advancements in technological innovation, marking two core technology breakthroughs and the development of eight new processes and pieces of equipment. Additionally, it successfully commercialized eight research and development outcomes and formulated or revised 56 standards. These accomplishments underscore the Company's commitment to integrating technology with industry, accelerating the transformation of research into practical applications, and affirming its leadership role in establishing China's Two Rare Earth Bases.

Overview of Standards

Total standards developed in the year

56

International standards	*National standards*	*Industrial standards*
1	18	2
Local standards	*Group standards*	*Enterprise standards*
6	24	5

Technological Innovation Incentives

The Company has implemented a robust patent reward and evaluation system designed to drive technological innovation. This system encompasses Achievement Transformation Management Procedures and Innovation Performance Assessment Guidelines, alongside effective motivation mechanisms. Noteworthy initiatives include recognizing outstanding innovation units, awarding exceptional R&D teams and individuals, and enhancing the professional prestige of researchers. As a result, the Company has achieved comprehensive technological breakthroughs across the entire industry chain, significantly accelerating the commercialization of research outcomes and laying a strong foundation for new quality productive forces. In 2024, the Company recognized 29 qualified patents and distributed a total of 85,000 yuan in rewards.

IPR Protection

The Company rigorously complies with all relevant laws and regulations, including the Trademark Law and the Patent Law of the People's Republic of China. We have established and refined the Northern Rare Earth Patent Management Procedures to strengthen our intellectual property (IP) management system. Our initiatives include implementing a comprehensive patent incentive and evaluation mechanism, conducting regular IP protection training programs, and motivating employees to innovate. We are committed to enhancing technological innovation and upholding high standards of IP protection.

In 2024, we focused on developing a robust patent portfolio in smelting and separation technologies, implementing a patent early-warning system in pyrometallurgy, and significantly upgrading our IP management capabilities.

IPR Training Performance

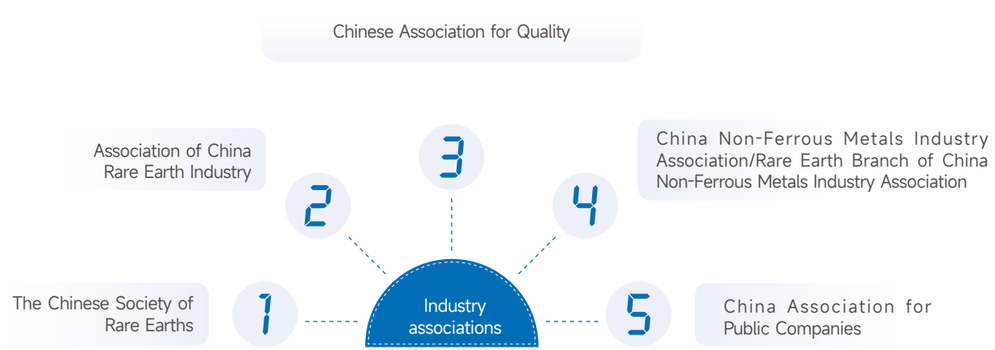
IPR protection training sessions	IPR protection training participation	IPR protection training duration
2	153	7 Hours

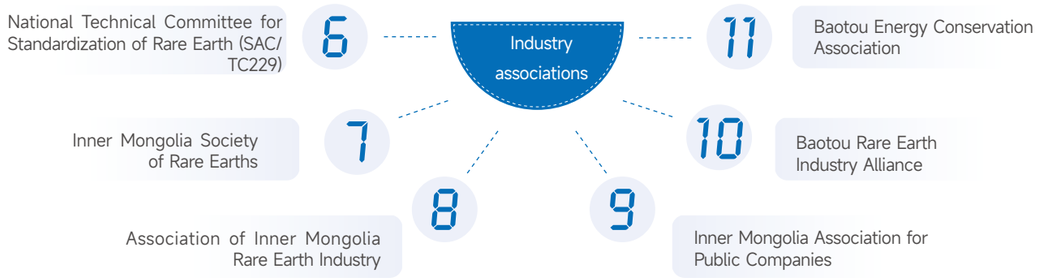
Case Study **Training on the High-quality Development of Intellectual Property**

In April 2024, the Company, in collaboration with the BRIRE, the Technology Innovation Center for Rare Earth New Materials, the National Technical Standard Innovation Base (Rare Earth), and the Inner Mongolia Autonomous Region High-value Patent Cultivation Center, held a training course focused on advancing the high-quality development of intellectual property. This training course provided in-depth insights into essential topics, including the fundamentals of patents, strategies for patent mining, techniques for patent application writing, effective patent layout, and the analysis of patent navigation applications. Such comprehensive training significantly enhances the professional capabilities of intellectual property management personnel, cultivates a strong awareness of intellectual property protection, and fosters the effective transformation and application of intellectual property.

Industry Exchange and Cooperation

The Company is committed to advancing industry exchange and collaboration by strengthening ties with industry associations and external enterprises. By effectively integrating resources and expertise, it promotes technological progress and catalyzes industry development. Furthermore, the Company clarifies its brand value objectives, refines its brand strategy, and enhances its influence through strategic partnerships, all of which empower the sustainable growth of the rare earth industry.



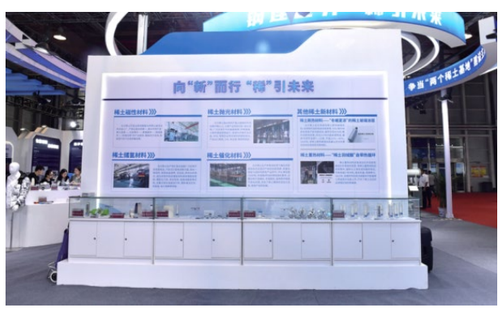


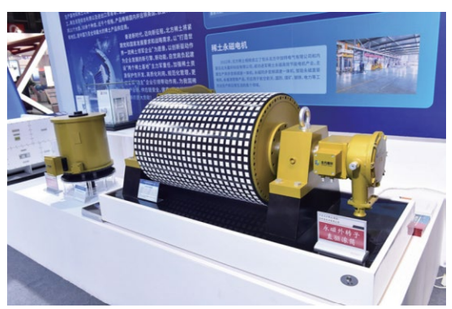
Case Study **Northern Rare Earth Showcased on 2024 China Brand Day**

In May 2024, the Company prominently showcased its innovations at the China Brand Day event held at the Shanghai World Expo Exhibition and Convention Center. The exhibition featured an array of high-end application products, including polishing solutions, solid-state hydrogen storage systems, and rare earth permanent magnet motors, alongside notable scientific research advancements. Utilizing physical models, graphic displays, video presentations, and comprehensive brochures, the Company effectively elevated its brand image. This multifaceted approach successfully garnered significant attention and engagement from diverse sectors of society.

Case Study **China (Baotou) Rare Earth Permanent Magnet Motor and Rare Earth High-end Application Exhibition**

In August 2024, the Company showcased its prowess at the Second China (Baotou) Rare Earth Permanent Magnet Motor and Rare Earth High-end Application Exhibition. The exhibition featured multiple designated areas, including those for Northern Jiaxuan, Northern Zhongjiate, the Rare Earth Products Exchange, and the National Innovation Center. These comprehensive displays effectively highlighted the Company's significant advancements in rare earth permanent magnet motors and high-end rare earth applications, thereby enhancing its brand recognition and influence in the industry.





People Centered Growth in Love 04

The Company is committed to integrating its business operations with a strong sense of social responsibility. Internally, it embraces a human resources philosophy that emphasizes the importance of character development and talent cultivation, with the goal of empowering individuals to achieve personal fulfillment while strengthening the enterprise and benefiting its employees. Externally, the Company adheres to a harmonious development approach that focuses on accountability, fulfilling societal obligations, and actively giving back to the community. This strategy not only serves the industry and local area but also fosters win-win cooperation and collective progress, thereby enhancing synergy between the enterprise, its employees, and society at large.

Performance Highlights in 2024

Total employees
9,867

Total training expenditure
4.8511 million yuan

Occupational health examination coverage
100%

Employee care and assistance expense
1.2584million yuan

Contribution to UN SDGs

Rights and Interests of Employees

The Company prioritizes the protection of employees' rights and interests, continuously enhancing its salary and benefits system to ensure fair compensation for employees' contributions. By actively implementing democratic management practices, the Company effectively safeguards employees' legally entitled rights while fostering a collaborative environment. This commitment not only promotes individual well-being but also drives the sustained and stable development of the Company.

Legal Employment

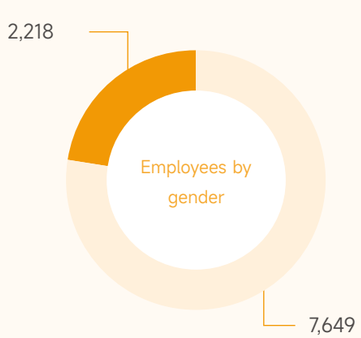
The Company demonstrates rigorous compliance with labor laws and ethical employment practices, ensuring adherence to the Labor Law and Labor Contract Law of the People's Republic of China. It firmly upholds core employment principles, prioritizing equality, diversity, and inclusion in all human resources practices. Non-discrimination policies are enforced throughout the recruitment, employment, and promotion processes, ensuring equal rights and development opportunities for every employee.

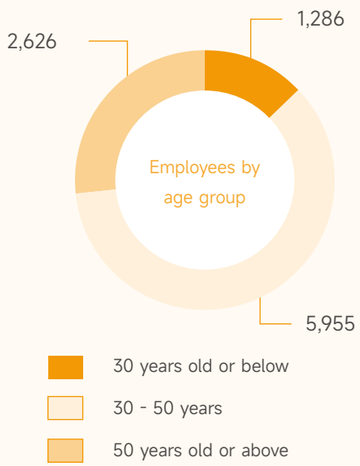
The ethical compliance framework incorporates a strict zero-tolerance policy for child labor and forced labor, guarantees equal pay for equal work regardless of gender, and mandates employment contracts for all employees. In 2024, the Company reported zero violations regarding child or forced labor and achieved full contract coverage for its workforce.

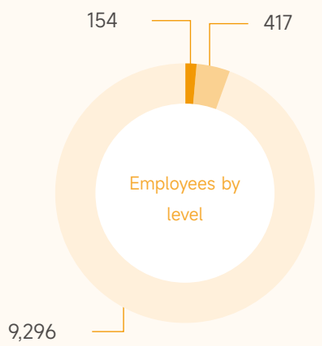
Staff Composition

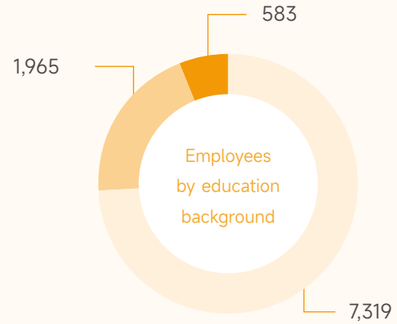
Total employees
9,867

Employees with special needs
Employees with disabilities
208









Mainland China
9,867

New employees
1,284

Employees turnover rate
0.83%

Employment contract rate
100%

Percentage of local employees
99.14%

Social security rate
100%

Remuneration and Benefits

The Company is committed to establishing a comprehensive, equitable, and scientifically-designed compensation and benefits system. This system effectively aligns rewards with corporate performance and individual contributions while allowing for flexible adjustments to total compensation through rigorous evaluation and control. By fostering a transparent and appealing remuneration environment, the Company ensures market-competitive pay structures, performance-linked incentive mechanisms, and sustainable compensation governance. Ultimately, this strategic approach not only supports long-term organizational stability but also enhances talent retention and motivation, thereby driving shared success for both employees and the Company.

Types of Employee Benefits

Basic Benefits	• Statutory social insurance (pension, medical, work injury, maternity, unemployment), housing provident fund, enterprise annuity, and supplementary medical insurance. • Paid leaves (national holidays, full annual leave, sick leave, maternity/paternity leave, nursing leave)

Additional Benefits	• Employee accident mutual aid insurance, and supplementary medical coverage • Allowances (meal, transportation, winter heating), and festival/birthday gifts
Incentive Programs	• Term-based performance incentives, General Manager Reward Fund, employee innovation improvement awards, management innovation prizes and so on. • Monetary awards for model workers (all levels), outstanding Communist Party members, master craftsmen, advanced production workers, Top Ten Outstanding Youths, outstanding female employees, and “Five-Virtue Civilized Family”

Trade Union

The Company prioritizes employee welfare, leveraging the labor union to meticulously design and implement targeted welfare programs. Through a range of initiatives, the Company significantly enhances employees’ sense of value and satisfaction, thereby providing robust support for their holistic development. This commitment not only fosters a positive workplace culture but also promotes overall success.

Trade Union Performance

Total trade union members
9,867

Full-time trade union staff
23

Number of trade union
24

Trade union satisfaction
99.23%

Rate of requests resolved by trade union
100%

The Company is committed to enhancing its employee-centered democratic management system, with implementation primarily facilitated through the Workers’ Congress and the Open Factory Affairs Disclosure. Key initiatives include regular operational briefings, which promote transparency, and an efficient proposal handling process via the Workers’ Congress. Additionally, the establishment of multi-channel communication platforms empowers employees while safeguarding their rights to information, participation, and oversight.

Performance metrics are ambitious, targeting a 100% satisfaction rate in proposal responses, strengthened quality control through enhanced worker inspections, and increased employee satisfaction through participatory management practices.

Case Study

The Third Session of the Third Workers’ Representative Congress and the Fifth Session of the Third Members’ Congress

The Company successfully conducted the third session of the third Workers’ Representative Congress and the fifth session of the third Members’ Congress, where representatives engaged in a thorough evaluation of the Company’s leadership and the development of the Workers’ Home. Empowered by a profound sense of responsibility, worker representatives actively contributed by sharing their experiences, providing suggestions, and offering effective strategies tailored to their specific roles. This collaborative effort reflects a commitment to advancing the collective goals of the Company as they embark on a promising new journey together.

Employee Development

The Company effectively implements a strategy centered on strengthening the enterprise with talents, thereby aligning its efforts with the objectives of the 14th Five-Year Plan and the pursuit of high-quality development. By prioritizing the meticulous introduction, cultivation, retention, and utilization of talent, the Company is committed to fostering a robust talent system and mechanism. This approach not only enhances the Company’s operational capabilities but also ensures a strong talent backbone essential for establishing itself as a world-class leader within the rare earth industry. Furthermore, it positions the Company as a key contributor to the construction of the Two Rare Earth Bases.

Talent Acquisition and Cultivation

Global Inclusion, Collective Brilliance

In 2024, the Company successfully recruited a total of **42** high-level talents, comprising two doctoral degree holders, **20** master’s graduates, and **20** undergraduates. Notably, the influx of graduates from Double First-Class universities has doubled.

Sound Environment, Talent Blossoming

The Company has developed robust talent cultivation, employment, and incentive mechanisms. By fostering an environment of genuine support and implementing practical measures, it effectively empowers a diverse range of talents, providing them with expansive opportunities for innovation and creativity.

Special Actions for Talent Cultivation

Special Action for Improving Educational Attainment	We enhance collaboration with prestigious domestic higher education institution. By jointly offering master's degree programs in key disciplines and facilitating the pursuit of doctoral degrees for exceptional technical personnel, we will continuously elevate the knowledge and educational qualifications of our workforce.
Special Action for Improving Innovation Ability	We are committed to the principle of bringing in experts and sending out employees for learning. By implementing diverse strategies, we will facilitate knowledge renewal and expand the perspectives of talent at all levels.
Special Action for "Head Geese Navigation"	We develop and implement robust selection, cultivation, and training mechanisms for Baiyun Scholars, Chief Rare Earth Scientists, Professional Scientists, and Rare Earth Craftsmen. This initiative will significantly enhance the development of local top-tier talent.
Special Action for Cultivating Outstanding Engineers	We enhance the cultivation of key talents, reinforcing the core competencies of R&D and technical professionals to establish a powerful driving effect.
Special Action for Multi-dimensional Practical Training of Outstanding Talents	We implement systematic job attachments and practical training that foster strong connections between the Company and its branches/subsidiaries, as well as between research institutions and production teams. This approach facilitates meaningful engagement between upstream and downstream technical processes. Consequently, it enables young professionals to expand their perspectives, refine their skills, and develop holistically across various domains.

Talent Cultivation Initiatives

Management Talent Empowerment Project

The Innovation-Driven Leadership Enhancement Program is designed to expand our talent pipeline through foundational training. The Colt Program focuses on identifying and nurturing promising young high-potential individuals. A robust Secondment Reserve Program ensures we have a rotation-ready talent pool. Furthermore, the Steed Program aims to develop a strong core of middle management, while the Stallion Program cultivates expertise among subject-matter specialists. Together, these initiatives create a comprehensive framework for leadership development within our Company.

Technical Talent Revitalization Project

We optimize the professional technical tack to ensure comprehensive coverage for all technical career paths. We implement robust accountability systems that include responsibility contracts, a merit-based Challenge List for assignments, and military-style commitment pledges. Additionally, a dual-contract compensation model is established, combining a base salary with performance-based incentives and project-completion bonuses. This strategic approach fosters accountability and excellence within our technical workforce.

Emerging Talent Pipeline Project

We strive to build an emerging talent ecosystem which comprises a dynamic reserve database tailored for young professionals. It features customized growth roadmaps, a technical competency mining system, and a talent-friendly culture that actively fosters rapid advancement. These components are designed to optimize the development and success of emerging talent.

The Company demonstrates a strong commitment to recognizing and promoting exceptional professionals through various prestigious awards at multiple levels, including national, autonomous region, and municipal levels.

In 2024, notable achievements in talent cultivation included the selection of one expert for the National Master Craftsman Development Program at the national level. At the autonomous region level, accolades included one Outstanding Contribution Expert, one Young Innovation Talent, one Western Light Visiting Scholar, and one candidate for the Baotou Craftsman Development Initiative. Furthermore, there are pending nominations for four candidates for the Leading Innovation Talent Awards, two for the Young Elite Talent Awards, three for the Government Special Allowance, and **18** specialists within the Key Advanced Materials Field.

Case Study

The Company Released the Vocational Skill Standard Filling a Gap in the Industry

To effectively address the demands of establishing a world-class leader in the rare earth industry and to advance the development of the Two Rare Earth Bases, the Company has developed and published the Vocational Skill Standard of Northern Rare Earth for the first time. This bridges a significant gap in vocational skill standards within China's rare earth sector, offering essential support for the cultivation and evaluation of skilled professionals in rare earth enterprises.

Case Study

The Company Has Become an Autonomous Region-level High-skilled Talent Training Base

In April 2024, the Department of Human Resources and Social Security, along with the Department of Finance of the Inner Mongolia Autonomous Region, announced the List of Entities for the Construction of Autonomous Region-Level High-Skilled Talent Training Bases and Skill Master Studios. The Company is proud to be designated as a high-skilled talent training base at the regional level. With a focus on developing the Two Rare Earth Bases, we are committed to cultivating a highly skilled workforce and enhancing our employee education and training programs to optimize operational effectiveness.

Precision Deployment, Better Growth

Promotion Channels

The Company has implemented a comprehensive Employee Career Pathway System designed to optimize the potential and expertise of every individual. This initiative fosters an environment where all talents are effectively utilized, and specialized skills are strategically aligned to enhance overall success.

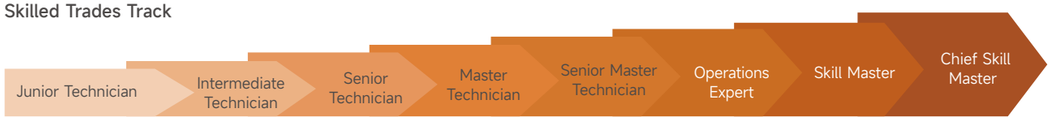
Management Track (Sequential promotion levels)

Technical Track

R&D Track

Business Track

Skilled Trades Track



Talent Reserve

The Company has instituted the Reserve Talent Cultivation and Selection Management Procedures to develop a robust, multi-layered talent pipeline. This initiative incorporates a comprehensive selection mechanism, comprising bottom-up nominations from business units and open merit-based competitions for specialized roles. The talent pool is structured in tiers by organizational level, complemented by specialized cohorts in various professional fields. Our cultivation methodology emphasizes early-stage identification, multi-channel development through rotations and mentoring, and dynamic assessment via regular performance reviews. The strategic outcomes of this approach include a balanced talent structure across generations and a sustainable leadership pipeline that ensures continuity from junior to senior roles.

Employee Training

The Company firmly adheres to the principles of hierarchical and needs-based training. It implements a comprehensive employee training program that encompasses diverse formats while establishing a standardized training management system, thereby creating a distinctive training framework. It also intensifies its focus on training and certification for skilled personnel, which leads to a gradual increase in the overall number of high-skilled professionals. This proactive approach accelerates the knowledge renewal process for these individuals, equipping them to meet the demands of production, operational efficiency, technological innovation, process transformation, and industrial optimization.

To further enhance learning motivation and maximize training effectiveness, the Company employs various methods, including the Cloud Classroom platform, partnerships with educational institutions, on-site developmental assignment, benchmarking with leading enterprises, the mentor-apprentice system, and targeted single-point lessons. These initiatives collectively foster a culture of continuous learning and skill enhancement.

Employee training performance

Total training expenditure
4.8511 million yuan

Total training sessions
336

Total participation
32,988

Average training duration per employee
117 Hours

Average training duration per senior manager
182 Hours

Average training duration per middle manager
90 Hours

Average training duration per average employee
79 Hours

Percentage of employees covered by training programs
98%

Case Study Special Training Sessions for Improving the Competencies of Middle and Senior Management Personnel

From July to December 2024, the Company successfully conducted 13 specialized training sessions aimed at enhancing the competencies of middle and senior management personnel. These sessions featured esteemed external experts and notable scholars, alongside key personnel from various professional disciplines within the Company. The curriculum covered a wide range of important topics, including policy interpretation, trends in the rare earth industry, strategic planning, leadership in Party building, corporate culture, human resource management, managerial philosophy, lean management, risk control, the integration of business and finance, digital transformation, and rare earth production processes. A total of 1,950 participants engaged in this training, resulting in significant improvements in the management team's capabilities. This initiative not only elevated work quality and efficiency but also broadened perspectives, thereby fostering the high-quality development of the enterprise.

The Company is committed to fostering professional growth among its employees by encouraging the attainment of various professional credentials. These include vocational skill certifications, professional title qualifications, and practitioner licenses. Our strategic focus centers on the continuous enhancement of technical competencies and the holistic development of professionals.

Case Study **The Vocational Skill Level Assessment Examination in 2024**

From July to October 2024, the Company successfully hosted the 2024 Vocational Skill Level Assessment Examination, with over 800 employees participating. The examination encompassed 40 distinct occupations, including roles such as rare earth extraction workers, rare earth permanent magnet material workers, industrial wastewater treatment specialists, and safety officers. Notably, the overall pass rate reached an impressive 71.62%. During this period, the Company also provided proactive support to ensure that each unit efficiently accessed subsidies for skill level enhancement, thereby streamlining the vocational skill level assessment process across the Company.

Occupational Health

The Company is unwavering in its commitment to safeguarding the occupational health of its employees. It continuously enhances its occupational health management policies and has established a comprehensive system for safety and health management. By cultivating a safe, healthy, and comfortable working environment, the Company effectively promotes its occupational health initiatives and ensures the physical and mental well-being of all staff members. In 2024, the Company allocated a dedicated fund of 3.0621 million yuan toward advancing occupational health initiatives.

Occupational Health System

The Company rigorously complies with pertinent laws and regulations, notably the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases. It has developed the Implementation Rules for Safety Management (Occupational Health) to continuously enhance and refine its occupational health and safety management system. This commitment has led to the establishment of a comprehensive occupational health protection framework and the formation of a dedicated committee for the prevention and control of occupational diseases, ensuring the effective execution of preventive measures.

In 2024, the Company successfully passed an external audit for its occupational health and safety management system certification. Notably, the Company and its 19 affiliates at a rate of 83.3% are covered by ISO 45001:2018 certification.

Certificate of Occupational Health and Safety Management System

Mental and Health Wellbeing

The Company implements a comprehensive employee health and safety program that underscores its commitment to workplace safety and employee well-being. This program includes a robust health monitoring system featuring annual routine health checkups for all employees and specialized occupational hazard examinations for high-risk positions, achieving a 100% compliance rate in workplace hazard factor testing. To ensure safety, the Company regularly distributes certified protective equipment and maintains on-site emergency medical resources, including CPR training manikins and essential emergency medications. Additionally, wellness initiatives such as mental health workshops and confidential counseling services provide essential support for employees. The strategic outcomes of this program include enhanced self-rescue capabilities among employees, comprehensive support for both physical and mental well-being, and a strengthened foundation for sustainable operations.

Standards for Wearing PPEs

Occupational Hazard Warning Signs

Case Study **Special Training on Improving the Work-related Injury Prevention**

In May 2024, the Company conducted two specialized training sessions aimed at enhancing the capability of employees to prevent work-related injuries. These sessions focused on critical aspects, including pertinent laws and regulations related to workplace safety, comprehensive understanding of work-related injury prevention, identification of occupational hazards, and effective emergency response measures for handling injuries. The training also included practical instruction on essential skills such as cardiopulmonary resuscitation (CPR), the Heimlich maneuver, and wound care. By integrating theoretical knowledge with hands-on practice, this initiative significantly improved employees' awareness and competence in injury prevention. Consequently, this proactive approach effectively mitigated the occurrence of workplace accidents at their source, thereby fortifying the "safety net" for employees and establishing a robust foundation for achieving excellence in the rare earth industry.

Case Study **Stress Relief and Emotional Adjustment - Mental Health Workshop**

In October 2024, the Company successfully organized a mental health workshop centered on stress management and emotional regulation, employing interactive strategies to promote employee well-being. The workshop featured visual discussion sessions with image-based activities, personalized psychological assessments to evaluate stress levels, and practical sharing of coping strategies for emotional adjustment. As a result, participants demonstrated improved skills in stress identification, enhanced self-regulation capabilities, and a significantly strengthened workplace culture.

Occupational Health Performance

Occupational health examination coverage rate	Incidence rate of occupational health problems	Work safety liability insurance coverage rate
100%	0%	100%

Employee Life

The Company is dedicated to fostering a supportive and harmonious workplace environment. It prioritizes the well-being of employees, particularly in safeguarding the rights and interests of female staff. Additionally, the Company regularly implements diverse cultural and athletic activities, significantly enhancing employees' sense of happiness and belonging within the Company.

Employee Care

The Company is unequivocally committed to ensuring the welfare of its employees by fostering an environment that prioritizes their quality of life. It places significant emphasis on supporting vulnerable groups and those facing difficulties, thereby enhancing employees' sense of identity, belonging, and overall well-being. Through tangible initiatives, the Company conveys its dedication to employee care.

Notably, it consistently promotes programs such as Doing Practical Things for People and You Propose, I Do. In 2024, the Company disbursed over 6 million yuan to successfully execute more than 200 "good deeds". Furthermore, it has allocated more than 1 million yuan to improve the production and living environments of its workforce.

Employee Care Performance

Employee care and assistance	Employees covered by assistance per 100 million-yuan of revenue
1.2584 million yuan	0.39

Case Study **Sending Care during the Spring Festival**

During the Spring Festival, Company leaders actively engaged with various teams to convey their support to numerous cadres and employees across Baotou. These included personnel from the Xi'aoke, Ruixin, Tianjiao Qingmei, Northern Jiaxuan, Huaxing Rare Earth, Jinmeng, Jingrui, Hefa, the Production Dispatching Command Center, and the International Trading. Furthermore, the leaders extended their well-wishes to exemplary workers, distinguished individuals, and those facing hardships, affirming the Company's commitment to its staff and offering heartfelt Spring Festival blessings.

Case Study **Combating Heat, Delivering Care, Boosting Morale**

In July 2024, Company executives conducted a visit to Hefa and Ruixin to distribute summer cooling supplies. This initiative not only provided essential relief but also recognized the dedication of frontline workers who persistently endure extreme high temperatures. The executives' engagement underscores the Company's commitment to employee well-being and operational excellence.

Case Study **Doing "Food-related" Things for Employees**

In October 2024, the Smelting Branch (Huamei) undertook a comprehensive upgrade of its staff cafeteria, enhancing both the menu and service quality. This initiative was driven by a commitment to address employees' nutritional, safety, health, and culinary preferences in accordance with seasonal demands. Additionally, the cafeteria implemented the Two Frees and One Subsidy policy, which includes complimentary porridge and pickled vegetables for all employees at breakfast. For those in need, lunch subsidy coupons were distributed, and a Convenient Kitchen was established to support single employees and those working overtime, thereby reinforcing the Company's dedication to employee welfare and fostering a sense of communal care.

Female Staff Protection

The Company prioritizes the protection of female employees' rights and interests by rigorously adhering to the Special Collective Contract for the Protection of Female Employees' Special Rights and Interests. Compliance with the state-mandated policy is meticulously enforced, ensuring that female employees receive essential benefits, including maternity leave, breastfeeding leave, and regular gynecological examinations, as stipulated by law. Additionally, the Company actively fosters an equitable and inclusive workplace by hosting events for female employees on International Women's Day, thereby reinforcing its commitment to creating a supportive and friendly environment for all.

Theme Activities on International Women's Day

Employee Activities

The Company systematically organizes a diverse range of cultural and sports activities aimed at enhancing enterprise cohesion and cultivating a strong sense of belonging among employees. In 2024, a total of 63 activities of varying levels and types were successfully implemented to achieve these objectives.

Number of Employee Activities

Number of sports and cultural activities for employees

63

Number of employee activities of other types

75

Case Study **Strengthening National Unity and Advancing Dual Rare Earth Bases - Wellness Walk**

In June 2024, the Company successfully organized a themed wellness walk aimed at promoting awareness of Chinese national community consciousness and reinforcing our pivotal role as fundamental builders of China's Two Rare Earth Bases. The event yielded several key outcomes: it enhanced cross-ethnic collaboration among employees, revitalized team morale and mental focus, and strengthened engagement in production operations. These results underscore our commitment to fostering a cohesive and motivated workforce.

Case Study **Mid-Autumn Festival Networking Activity**

In September 2024, the Company held the Mid-Autumn Festival networking activity themed Full Moon Brings People Together. It built a platform for young employees to showcase themselves, make friends and seek romantic relationships. This activity fully demonstrated the vibrant, healthy and positive spiritual outlook of young employees in the Company, enhanced the young employees' sense of gain and happiness, and enabled them to contribute their youthful strength to the high-quality development of the enterprise.

Case Study **Themed Fun Sports Meeting**

In November 2024, the Company organized the themed fun sports meeting titled Gathering Hearts, Forging the Soul, Demonstrating Responsibility, and Pooling Strength for the Fourth - Quarter Push. Over 100 employees from 11 units enthusiastically joined in. This event served a dual purpose. It provided employees with a chance to unwind physically and mentally while simultaneously reigniting their fighting spirit and elevating their morale. As a result, they are now primed to fully immerse themselves in production, operation, and construction endeavors, armed with a more passionate work ethic and a harmonious, stable work mindset.

05 Social Responsibility in Common Prosperity

The Company robustly embraces core socialist values and aligns its initiatives with the rural revitalization strategy, engaging in social welfare activities. As it advances its own growth, the Company commits to societal contributions, equitably distributing its developmental gains, and fulfilling its social responsibilities, thereby exemplifying the ethos of a state-owned enterprise.

Performance Highlights in 2024

Rural revitalization expenditure
5.3941 million yuan

Public welfare expenditure
1.2245 million yuan

Volunteering duration
3,128 Hours

Contribution to UN SDGs

Rural Revitalization Support

The Company is fully committed to advancing the rural revitalization strategy, focusing on infrastructure improvement, industrial support, and the modernization of agriculture. By tailoring initiatives to local conditions, we promote rural economic revitalization and livelihood improvement, actively supporting sustainable rural development through a range of diversified efforts. In 2024, the Company disbursed a total of 5.3941 million yuan in rural revitalization initiatives.

Rural Revitalization Performance

Rural revitalization expenditure
5.3941 million yuan

Number of people covered by assistance
9,141

Number of people covered by assistance per 100-million yuan of revenue
28

The Company is deeply committed to rural revitalization and enhancing farmer income through an array of strategic initiatives. Key components include continuous rural infrastructure improvement, multi-faceted poverty alleviation efforts encompassing industrial support projects and employment assistance programs, and measures for sustainable economic stabilization. Additionally, the talent support program facilitates the annual deployment of elite cadres to villages, focusing on industrial revitalization, environmental enhancements, and Party building initiatives that foster agricultural development.

Rural Revitalization Measures

Northern Rare Earth	A new 26.3-kilometer high-voltage line (10kV) and a 5.14-kilometer low-voltage line (0.4kV) have been successfully constructed for Bayin Hala Gacha, located in Mandula Town, Darhan Muminggan Joint Qi, which is situated over 20 kilometers from the national border. Additionally, 13 transformers were installed to adequately meet the electricity demands of 16 herdsmen households.
Huamei	The company conducted a themed initiative entitled Advancing Hand in Hand to Build a New Rural Dream: Internet-based Joint Event for Rural Revitalization. This initiative included the procurement of essential goods and educational materials, which were subsequently donated to local schools and families in need. Such efforts significantly enhance the educational opportunities and daily living conditions for rural children.
Gansu Rare Earth	The company has implemented a robust labor initiative, arranging for ten individuals from three supported natural villages to gain employment in its metal workshop. In a decisive move towards consumption-based assistance, the company demonstrated its commitment during the New Year's Day and National Day holidays by purchasing over 1,435 kilograms of mutton and 12,500 kilograms of potatoes from these villages, amounting to a substantial total value of 111,000 yuan. Additionally, the company's employees facilitated the acquisition of agricultural and sideline products worth 38,000 yuan through the resident working teams in the villages. These efforts have effectively enhanced sales channels for local produce, thereby increasing farmers' incomes and bolstering their motivation for agricultural activities. Furthermore, the donation of 60 high-quality solar streetlamps to Zhangli Village has significantly improved rural road lighting, contributing to a safer and more welcoming environment for elderly residents, women, and children.

Public Welfare

The Company actively advances social welfare initiatives through charitable programs and volunteer services. Charitable donations help people in need, and on-going volunteer services help strengthen community resilience. These measures promote social welfare, support community development and demonstrate the Company's SOE leadership in social responsibility.

Social Welfare Performance

Social contribution events
94

Public contribution event participation
637

Social contribution duration
1,688 Hours

Number of volunteer services
326

Volunteer service participation
3,697

Volunteer service duration
3,128 Hours

Public welfare expenditure
1.2245 million yuan

Case Study

Delivering Warmth and Compassion

In March 2024, the Company successfully conducted a charity visit to the Baotou Welfare Center, where it provided essential supplies. Additionally, it implemented targeted support to address children's specific needs and offered emotional care programs featuring interactive activities and companionship. The Company actively champions the Lei Feng spirit, effectively encouraging Party members and young members of the Communist Youth League to develop a profound sense of social responsibility. It inspires these individuals to translate their lofty ideals and moral pursuits into tangible actions, positioning them as engaged participants, advocates, and disseminators of social welfare initiatives.

Case Study

Sustaining Life and Conveying Goodness

An employee from Zibo Lingzhi has successfully donated hematopoietic stem cells to an overseas Chinese. This selfless act exemplifies the commitment and sense of responsibility displayed by young professionals within the rare earth industry in the contemporary era. Moreover, it underscores the company's robust support and proactive engagement in social welfare initiatives.

Case Study

Regular Public Welfare Service in the Paired Community

In 2024, the Company consistently engaged in public welfare initiatives within its partnered community. Each month, over 100 volunteer employees dedicated their efforts to services such as community clean-up and promoting civic awareness in the 15th Neighborhood of Tuanjie Community, Kunqu District, Baotou City. Their contributions significantly advanced the establishment of a civilized city, clearly demonstrating the social responsibilities inherent to a state-owned enterprise through tangible actions.

The Company has effectively promoted the volunteer service brand Turn to 'Xiaoxi' When in Need by establishing a robust and sustainable framework for volunteer initiatives. This effort has expanded the scope and significance of volunteer services while increasing the brand's recognition and popularity. Currently, the Company has eight volunteer service sites, 25 dedicated teams, and over 1,100 committed volunteers, demonstrating its strong commitment to community engagement and social responsibility.

Volunteer Service Performance

Number of volunteer services	Volunteering duration	Volunteer service participation
326	3,128 Hours	3,697

中国北方稀土志愿者
VOLUNTEERS FROM CNRE

Turn to 'Xiaoxi' When in Need - Volunteering Service Brand

Case Study

Welcoming the 70th Anniversary of the Company, Demonstrating Responsibility through Youth Volunteer Service

In March 2024, the Company executed a themed volunteer service initiative titled Welcoming the 70th Anniversary of the Company, Demonstrating Responsibility through Youth Volunteer Service by Bringing Fire Safety into the Community. This initiative involved the donation of essential fire-fighting equipment to the community, accompanied by educational sessions that outlined usage protocols and pertinent safety information. Furthermore, practical drills on emergency self-rescue techniques were implemented. This multifaceted approach not only fostered deeper communication and connection with the community but also significantly enhanced the Company's corporate image.

Case Study

All Ethnic Groups as One Unified Family, Aspiring to be Like Pomegranate Seeds

In September 2024, the Company conducted a volunteer service activity titled All Ethnic Groups as One Unified Family, Aspiring to be Like Pomegranate Seeds within the framework of civilized practice. Volunteers engaged with passers-by, community residents, and students in a Party building-themed park by distributing posters that promoted ethnic unity. This initiative significantly strengthened the bonds among employees from diverse ethnic backgrounds by highlighting exemplary instances of ethnic solidarity. Furthermore, it effectively encouraged both employees and community members to unite and support one another, thereby enhancing their collective sense of identity and pride in the Chinese nation.

Outlook

In 2025, we will align Company's operations with Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, ensuring a comprehensive implementation of national policies pertaining to the rare earth industry and other major strategic initiatives. Committed to a new trajectory of high-quality development, we will prioritize ecological protection and green development. By taking a proactive leadership role, we will serve as a model for the green transformation and high-quality advancement of the rare earth sector, setting a benchmark for sustainable practices. We will capitalize on the historic opportunities offered by the "dual carbon" goals. By strategically leveraging our competitive advantages and driving innovation through technological advancements, we will expedite the development of high-quality productive forces. Furthermore, we are committed to advancing high-quality green technologies to provide low carbon choices in climate change responses. We are dedicated to enhancing resource utilization, markedly decreasing energy consumption and pollutant emissions. Through these efforts, we are guiding the rare earth industry toward elevated, intelligent, and sustainable development. This strategic direction provides robust support for the nation's pursuit of its "dual carbon" objectives, reinforcing our commitment to environmental stewardship.

We remain steadfast in fulfilling our social responsibilities by emphasizing employee well-being and continually enhancing our talent development ecosystem. We actively participate in public welfare initiatives, including rural revitalization and community co-development. These efforts reflect our dedication as a state-owned enterprise to the principle of serving the people. Through these initiatives, we are contributing to the establishment of a harmonious society and demonstrating our commitment to sustainable development.

We are committed to advancing the reform of state-owned enterprises by refining a modern corporate structure tailored to Chinese characteristics and enhancing governance practices to uphold standardized operations and promote market value increase. We will reinforce the integration of Party leadership within corporate governance, implementing robust internal control systems that adhere to elevated standards. Furthermore, we will drive innovations in management to bolster our compliance capabilities. Through these initiatives, we assure that decision-making processes are well-informed and grounded, execution remains resolute and effective, and oversight is comprehensive and meticulous. This strategic approach will create more value for shareholders.

Looking forward, we will collaborate with partner to promote technological innovation and industrial reform to pioneer a new era of sustainable development within the rare earth industry, demonstrating even greater determination and a more pragmatic approach in our endeavors. We are committed to delivering exceptional products and services that positively impact society, yield remarkable returns for our shareholders, and engage collaboratively with stakeholders to fully integrate ESG principles. By enhancing our management standards and performance accountability, we aspire to achieve new milestones in our mission to build the Two Rare Earth Bases, propel our transformation into a world-leader in the rare earth sector, and drive high-quality development. This endeavor represents a significant milestone and a transformative advancement in our journey toward excellence.

Appendix

Index ofIndicators

Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report (Trial)

Dimension	Number	Topic	Section in this Report
Environment	1	Climate change tackling	Climate Change
	2	Pollutant discharge	Pollution Prevention and Control
	3	Waste disposal	Pollution Prevention and Control
	4	Ecosystem and biodiversity protection	Green Living
	5	Environmental compliance management	Ecological Environment Management
	6	Energy usage	Resource Efficiency
	7	Usage of water resources	Resource Efficiency
	8	Circular economy	Resource Efficiency
Society	9	Rural revitalization	Rural Revitalization Support
	10	Contributions to the society	Public Welfare
	11	Innovation-driven	Technological Innovation
	12	Ethics of science and technology	/
	13	Supply chain security	Green Procurement Practices
	14	Equal treatment to small and medium-sized enterprises	Compliant Operations
	15	Safety and quality of products and services	Product Quality
	16	Data security and customer privacy protection	Responsibility for Customers
	17	Employees	People Centered Growth in Love Safety Bottom Line
Sustainability related governance	18	Due diligence	Management
	19	Communications with stakeholders	Management
	20	Anti-commercial bribery and anti-corruption	Corruption-free Organization Business Ethics
	21	Anti- unfair competition	Business Ethics

Index of GRI Sustainability Reporting Standards issued by Global Sustainability Standards Board (GSSB)

GRI Standard	Disclosure	Section in this Report
GRI2:General Disclosures		
2-1	Organization details	About Northern Rare Earth
2-2	Entities included in the organization's sustainability reporting	About this Report
2-3	Reporting period，frequency and contact	About this Report
2-4	Restatements of information	/
2-5	External assurance	/
2-6	Activities, value chain and other business relationships	About Northern Rare Earth
2-7	Employees	Rights and Interests of Employees
2-8	Workers who are not employees	/
2-9	Governance structure and composition	Governance Effectiveness
2-10	Nomination and selection of the highest governance body	Governance Effectiveness
2-11	Chair of the highest governance body	Governance Effectiveness
2-12	Role of the highest governance body in overseeing the management of impacts	Governance Effectiveness
2-13	Delegation of responsibility for managing impacts	Governance Effectiveness
2-14	Role of the highest governance body in sustainability reporting	ESG Management
2-15	Conflicts of interest	/
2-16	Communication of critical concerns	Rights and Interests of Shareholders
2-17	Collective knowledge of the highest governance body	ESG Management
2-18	Evaluation of the performance of the highest governance body	/
2-19	Remuneration policies	/
2-20	Process to determine remuneration	/
2-21	Annual total compensation ratio	/
2-22	Statement on sustainable development strategy	ESG Managemen
2-23	Policy commitments	ESG Managemen
2-24	Embedding policy commitments	/
2-25	Processes to remediate negative impacts	/

GRI Standard	Disclosure	Section in this Report
2-26	Mechanisms for seeking advice and raising concerns	/
2-27	Compliance with laws and regulations	Compliant Operations
2-28	Membership associations	/
2-29	Approach to stakeholder engagement	ESG Management
2-30	Collective bargaining agreements	/
3-1	Process to determine material topics	ESG Management
3-2	List of material topics	ESG Management
3-3	Management of material topics	ESG Management
201-1	Direct economic value generated and distributed	About Northern Rare Earth
201-2	Financial implications and other risks and opportunities due to climate change	Climate Change
201-3	Defined benefit plan obligations and other retirement plans	Rights and Interests of Employees
201-4	Financial assistance received from government	/
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	/
202-2	Proportion of senior management hired from the local community	/
203-1	Infrastructure investments and services supported	/
203-2	Significant indirect economic impacts	Rural Revitalization Support
204-1	Proportion of spending on local suppliers	/
205-1	Operations assessed for risks related to corruption	/
205-2	Communication and training about anti-corruption policies and procedures	/
205-3	Confirmed incidents of corruption and actions taken	/
GRI206:Anti-competitive behaviour		
206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	Compliant Operations
207-1	Approach to tax	Compliant Operations
207-2	Tax governance, control, and risk management	Compliant Operations
207-3	Stakeholder engagement and management of concerns related to tax	/
207-4	Country-by-country reporting	/

GRI Standard	Disclosure	Section in this Report
301-1	Materials used by weight or volume	/
301-2	Recycled input materials used	Resource Efficiency
301-3	Renewable products and their packaging materials	Resource Efficiency
302-1	Energy consumption within the organization	Resource Efficiency
302-2	Energy consumption outside the organization	/
302-3	Energy intensity	Resource Efficiency
302-4	Reduction of energy consumption	/
302-5	Reductions in energy requirements of products and services	Resource Efficiency
303-1	Interactions with water as a shared resource	Resource Efficiency
303-2	Management of water discharge-related impacts	Resource Efficiency
303-3	Water withdrawal	Resource Efficiency
303-4	Water discharge	Resource Efficiency
303-5	Water consumption	Resource Efficiency
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Green Living
304-2	Significant impacts of activities, products and services on biodiversity	/
304-3	Habitats protected or restored	Resource Efficiency
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operation	/
305-1	Direct /Scope 1 GHG emissions	Climate Change
305-2	Energy indirect /Scope 2 GHG emissions	Climate Change
305-3	Other indirect /Scope 3 GHG emissions	Climate Change
305-4	Intensity of GHG emissions	Climate Change
305-5	Reduction of GHG emissions	/
305-6	Emissions of ozone-depleting substances /ODS	/
305-7	Nitrogen oxides /NOX, Sulfur oxides /SOX, and other significant air emissions	Pollution Prevention and Control

GRI Standard	Disclosure	Section in this Report
306-1	Waste generation and significant waste-related impacts	/
306-2	Management of significant waste-related impacts	Pollution Prevention and Control
306-3	Waste generated	Pollution Prevention and Control
306-4	Waste diverted from disposal	Pollution Prevention and Control
306-5	Waste directed to disposal	Pollution Prevention and Control
308-1	New suppliers that were screened by using environmental criteria	Green Procurement Practices
308-2	Negative impacts of the supply chain on the environment and actions taken	/
401-1	New employee hires and employee turnover	Rights and Interests of Employees
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Rights and Interests of Employees
401-3	Parental leave	Rights and Interests of Employees
402-1	The shortest notice periods regarding operational changes	/
403-1	Occupational health and safety management system	Occupational Health
403-2	Hazard identification, risk assessment, and incident investigation	Safety Bottom Line
403-3	Occupational health services	Occupational Health
403-4	Worker participation, consultation, and communication on occupational health and safety	Occupational Health
403-5	Worker training on occupational health and safety	Safety Bottom Line
403-6	Promotion of worker health	Occupational Health
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	/
404-1	Average hours of training per year per employee	Employee Development
404-2	Programs for upgrading employee skills and transition assistance programs	Employee Development
404-3	Percentage of employees receiving regular performance and career development reviews	/
405-1	Diversity of governance bodies and employees	Governance Effectiveness Rights and Interests of Employees
405-2	Ratio of basic salary and remuneration of women to men	/

GRI Standard	Disclosure	Section in this Report
406-1	Incidents of discrimination and corrective actions taken	/
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	/
408-1	Operations and suppliers at significant risk for incidents of child labour	/
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	/
410-1	Security personnel trained in human rights policies or procedures	/
411-1	Incidents of violations involving rights of indigenous peoples	/
413-1	Operations with local community engagement, impact assessments, and development programs	Topic
413-2	Operations with significant actual and potential negative impacts on local communities	/
414-1	New suppliers that were screened using social criteria	Green Procurement Practices
414-2	Negative social impacts in the supply chain and actions taken	/
415-1	Political contributions	/
416-1	Assessment of the health and safety impacts of product and service categories	Product Quality
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	/
417-1	Requirements for product and service information and labelling	Technological Innovation
417-2	Incidents of non-compliance concerning product and service information and labelling	/
417-3	Incidents of non-compliance concerning marketing communications	/
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	/

Reference of ESG Indicators System for ESG Reports of Listed Companies Controlled by Central State-owned Enterprises issued by State-owned Assets Supervision and Administration Commission of the State Council

Tier 1 Indicator	Tier 2 Indicator	Tier 3 Indicator	Section in this Report
Environmental			
E.1Resources consumption	E.1.1Water resources	E.1.1.1Fresh water consumption	Resource Efficiency
		E.1.1.2Recycled water consumption	Resource Efficiency
		E.1.1.3 Proportion of recycled water consumption	/
		E.1.1.4Intensity of water consumption	/
	E.1.2Materials	E.1.2.1Non-renewable materials consumption	/
		E.1.2.2Toxic and hazardous materials consumption	/
		E.1.2.3Intensity of materials consumption	/
	E.1.3Energy	E.1.3.1Fossil energy consumption	Resource Efficiency
		E.1.3.2Non-fossil energy consumption	Resource Efficiency
		E.1.3.3Proportion of non-fossil energy usage	/
		E.1.3.4Total energy consumption	/
		E.1.3.5Intensify of energy consumption	Resource Efficiency
	E.1.4Packaging materials	E.1.4.1Packaging materials usage	/
		E.1.4.2Lightweigt and minimization of packaging materials	/
E.2Pollution prevention and treatment	E.2.1Wastewater	E.2.1.1Wastewater discharge compliance	Pollution Prevention and Control
		E.2.1.2Wastewater management and emissions reduction measures	Pollution Prevention and Control
		E.2.1.3Wastewater discharge	Pollution Prevention and Control
		E.2.1.4Wastewater and pollutants discharge	Pollution Prevention and Control
		E.2.1.5Discharge concentration of wastewater and pollutants	Pollution Prevention and Control
	E.2.2Waste gas	E.2.2.1Waster gas emissions compliance	Pollution Prevention and Control
		E.2.2.2Waster gas and pollutants discharge	Pollution Prevention and Control
		E.2.2.3Discharge concentration of waste gas and pollutants	Pollution Prevention and Control
	E.2.3Solid waste	E.2.3.1Solid waste disposal compliance with laws and regulations	Pollution Prevention and Control
		E.2.3.2Management of general industrial solid waste	Pollution Prevention and Control
		E.2.3.3General industrial solid waste disposal	Pollution Prevention and Control
		E.2.3.4Management of hazardous waste	Pollution Prevention and Control
		E.2.3.5Hazardous waste disposal	Pollution Prevention and Control
E.3Climate change	E.3.1GHG emissions	E.3.1.1GHG sources and types	Climate Change
		E.3.1.2Management of GHG emissions	Climate Change
		E.3.1.3Scope 1 emissions	Climate Change
		E.3.1.4Scope 2 emissions	Climate Change
		E.3.1.5Scope 3 emissions	Climate Change
		E.3.1.6Intensity of GHG emissions	Climate Change
	E.3.2Reduction management	E.3.2.1Reduction management of GHG emissions	Climate Change
		E.3.2.2Reduction of GHG emissions	/
	E.3.3Environmental rights trading	E.3.3.1Participation in the Carbon Emissions Trading Exchange	/
		E.3.3.2Participation in usage rights , water rights and pollution discharge rights trading exchange	/
		E.3.3.3Participation in green power trading	/
	E.3.4Climate risks management	E.3.4.1Climate risks management	Climate Change
E.4Biodiversity	E.4.1Impacts of activities, products and services on biodiversity	E.4.1.1Impacts of activities, products and services on biodiversity	Green Living
E.5System for resource and environmental management	E.5.1Formulation of low-carbon development goals and strategic measures	E.5.1.1Formulation of low-carbon development goals and strategic measures	Climate Change
	E.5.2Measures for resource management	E.5.2.1Management of water usage	Resource Efficiency
		E.5.2.2Management of materials usage	Resource Efficiency
		E.5.2.3Energy usage and energy conservation management	Resource Efficiency

Tier 1 Indicator	Tier 2 Indicator	Tier 3 Indicator	Section in this Report
E.5System for resource and environmental management	E.5.3Energy conservation and carbon reduction statistical monitoring and systems for assessment , rewards and punishments	E.5.3.1Energy conservation and carbon reduction monitoring, statistical reporting and assessment system	Resource Efficiency
	E.5.4Green environmental protection actions and measures	E.5.4.1Clean production	Pollution Prevention and Control
		E.5.4.2Green technological transformation and recycling use	Pollution Prevention and Control
		E.5.4.3Green Building Renovation	/
		E.5.4.4Green offices and operations	Green Living
		E.5.4.5Green procurement and green supply chain management	Green Procurement Practices
		E.5.4.6Environmental protection public interest activities	Green Living
	E.5.5Green and low-carbon certification	E.5.5.1Environmental Management System Certification	Ecological Environment Management
		E.5.5.2Green and low-carbon enterprise certification	/
		E.5.5.3Green and low-carbon products and services certification	/
	E.5.6Environmental compliance with laws and regulations	E.5.6.1Emergency response plans for environmental emergencies	Ecological Environment Management
		E.5.6.2Violations of laws and regulations in environmental sector	/
Social			
S1Employee rights and interests	S1.1Recruitment and employment	S1.1.1Enterprise recruitment polices and executions	Rights and Interests of Employees
		S1.1.2Employee structure	Rights and Interests of Employees
		S1.1.3Avoid employing child labor or compulsory labor	Rights and Interests of Employees
	S1.2Remuneration and benefits	S1.2.1Remuneration concepts and policies	Rights and Interests of Employees
		S1.2.2Working time, rest and vocation	Rights and Interests of Employees
		S1.2.3Remuneration and benefits guarantees	Rights and Interests of Employees
		S1.2.4Employee democratic management	Rights and Interests of Employees
	S1.3Employee health and safety	S1.3.1Employee occupational health and safety management	Occupational Health
		S1.3.2Risk prevention and control for employee safety	Safety Bottom Line
		S1.3.3Safety incidents and occupational injury measures	Safety Bottom Line
		S1.3.4Employee caring and assistance	Employee Life
S1Employee rights and interests	S1.4Employee development and training	S1.4.1Employee stimulations and promotion policies	Employee Development
		S1.4.2Employee education and training	Employee Development
		S1.4.3Employee career development and job changes support	Employee Development
	S1.5Employee satisfaction	S1.5.1Employee satisfaction survey	/
		S1.5.2Labor disputes	/
		S1.5.3Employee turnover	Rights and Interests of Employees
S2Products and services management	S2.1Products safety and quality	S2.1.1Policies and measures for manufacture practices	Product Quality
		S2.1.2Quality management	Product Quality
		S2.1.3Product recall and withdrawal	Product Quality
		S2.1.4Negative events on products or services	/
	S2.2Customer services and benefits	S2.2.1Customer satisfaction	Responsibility for Customers
		S2.2.2Customer complaints and handle	Responsibility for Customers
		S2.2.3Customer information and privacy protection	Responsibility for Customers
	S2.3Innovation development	S2.3.1R&D and innovation management system	Technological Innovation
		S2.3.2R&D expenditure	Technological Innovation
		S2.3.3Innovation achievements	Technological Innovation
		S2.3.4IPR protection	Technological Innovation
S3Supply chain safety and management	S3.1Supplier management	S3.1.1Supplier selection and management	Green Procurement Practices
		S3.1.2Supplier amount and distribution	/
	S3.2Supply chain management	S3.2.1Supply chain management policies and measures	Green Procurement Practices
		S3.2.2Supply chain safety guarantee and emergency response plans	/
		S3.2.3Major risks and impacts (supply chain)	/
S4Social contributions	S4.1Tax payment	S4.1.1Tax paymen	Bottom Line of Compliance
	S4.2Community co-construction	S4.2.1Policies and measures for participation in local community construction	Rural Revitalization Support
		S4.2.2Contribution and impacts for local community	Rural Revitalization Support

Tier 1 Indicator	Tier 2 Indicator	Tier 3 Indicator	Section in this Report
S4Social contributions	S4.3社会公益活动	Policies and measure for participation in public interest activities	Public Welfare
		S4.3.2Investment and effectiveness of participation in public interest activities	Public Welfare
		S4.3.3Barrier-free environment construction	/
	S4.4Response to national strategies	S4.4.1Industrial transformation	Topic
		S4.4.2Rural revitalization and regional coordinated development	Rural Revitalization Support
		S4.4.3The Belt and Road and overseas duties performance	/
		S4.4.4Industrial characteristics and other social duties performance	Topic
Governance			
G1Governance strategy and organizational structure	G1.1Governance strategy and process	G1.1.1Governance strategy implementation	Governance Effectiveness
		G1.1.2Process to supervise governance strategy	Governance Effectiveness
		G1.1.3Process to approve and review governance strategy	Governance Effectiveness
		G1.1.4Party leadership	/
	G1.2Structure and function	G1.2.1Ownership duties	Governance Effectiveness
		G1.2.2rganizational structure and functions of the Board of Directors, the Supervision Committee and the management	Governance Effectiveness
		G1.2.3Process to appoint the Board of Directors, the Supervisory Committee and the management and its structure	Governance Effectiveness
	G1.3Remuneration management	G1.3.1Remuneration plan of directors and supervisors	/
		G1.3.2Remuneration transparency of the Board of Directors	/
		G1.3.3Remuneration reasonability of the management	/

Tier 1 Indicator	Tier 2 Indicator	Tier 3 Indicator	Section in this Report
G2Normative governance	G2.1Internal control	G2.1.1Internal audit	Compliant Operations
		G2.1.2Internal control structure, mechanism and process	Compliant Operations
	G2.2Integrity construction	G2.2.1Integrity construction criterion	/
		G2.2.2Effectiveness of integrity construction measures	/
	G2.3Fair competition	G2.3.1Fair competition criterion	Compliant Operations
		G2.3.2Effectiveness of fair competition measures	Compliant Operations
G3Investor relations management and shareholder equity	G3.1Investor relations management	G3.1.1Investor relations management strategy	Rights and Interests of Shareholders
		G3.1.2Investor communication	Rights and Interests of Shareholders
		G3.1.3Construction of investor relations management department	Rights and Interests of Shareholders
	G3.2Shareholder equity	G3.2.1General meeting	Governance Effectiveness
		G3.2.2Shareholder communication	Governance Effectiveness
		G3.2.3Information, participation and determination rights of shareholders	Governance Effectiveness
	G3.3Creditor equity	G3.3.1Credit information	/
		G3.3.2Performance in bond market	/
G4Information disclosure transparency	G4.1 Information disclosure system	G4.1.1Financial information disclosure	About Northern Rare Earth
		G4.1.2Non-financial information disclosure	About Northern Rare Earth
	G4.2Information disclosure quality	G4.2.1Regularly supervision, audit and assessment on information disclosure	Rights and Interests of Shareholders
G5Compliance management and risk management	G5.1Compliance management	G5.1.1Compliance management system	Compliant Operations
		G5.1.2Compliance system construction	Compliant Operations
		G5.1.3Compliance review process	Compliant Operations
	G5.2Risk management	G5.2.1Risk identification and early-warning	Compliant Operations
		G5.2.2Risk control and trace	Compliant Operations
		G5.2.3Risk reporting and management	Compliant Operations

Reader Feedback Form

Respected readers:

Thank you for reading this Report. We appreciate and look forward to your feedback to provide more valuable information for you and stakeholders, and effectively advance our ESG management and practices to improve our disclosure level on ESG.

1. Your overall assessment of our ESG performance is:

☐ Excellent ☐ good ☐ average ☐ bad ☐ very bad

2. Your overall assessment of this Report is:

☐ Excellent ☐ good ☐ average ☐ bad ☐ very bad

3. What do you think of our performance in communication with stakeholders?

☐ Excellent ☐ good ☐ average ☐ bad ☐ very bad

4. What do you think of our performance in corporate governance?

☐ Excellent ☐ good ☐ average ☐ bad ☐ very bad

5. What do you think of our performance in environmental management?

☐ Excellent ☐ good ☐ average ☐ bad ☐ very bad

6. What do you think of our performance in social responsibilities?

☐ Excellent ☐ good ☐ average ☐ bad ☐ very bad

7. What do you think of our performance in ESG?

☐ Excellent ☐ good ☐ average ☐ bad ☐ very bad

8. What are your opinions and suggestions for our ESG performance and this Report?

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