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# 2024 ENVIRONMENTAL SOCIAL AND CORPORATE GOVERNANCE REPORT


Shanghai Putailai New Energy Technology Co., Ltd

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- Company Overview
- 2024 Key Performance

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Shanghai Putailai New Energy Technology Co.,Ltd.

# About PTL

## Company Overview

Established in 2012 and headquartered in Shanghai, PTL was listed on the Shanghai Stock Exchange in 2017 (stock code SH.603659). The company is committed to becoming a world-class integrated solution provider of critical materials and automation equipment for new energy batteries. By the end of 2024, PTL had established more than 40 wholly-owned and controlled subsidiaries.

### Basic Information

| | |
|---|---|
| Name | Shanghai Putailai New Energy Technology Co., Ltd. (PTL) |
| Headquarters Address | No. 116, Lane 456, Dieqiao Road, Pudong New Area, Shanghai |
| Main Business | covers anode materials, separator and coating, PVDF and binders, composite current collectors, aluminum plastic films, nano alumina and boehmite, and provides automated process equipment and intelligent manufacturing system solutions for new energy battery and battery material industries |
| Operating Locations | Shanghai, Jiangxi, Guangdong, Fujian, Jiangsu, Shandong, Inner Mongolia, Sichuan, etc. |

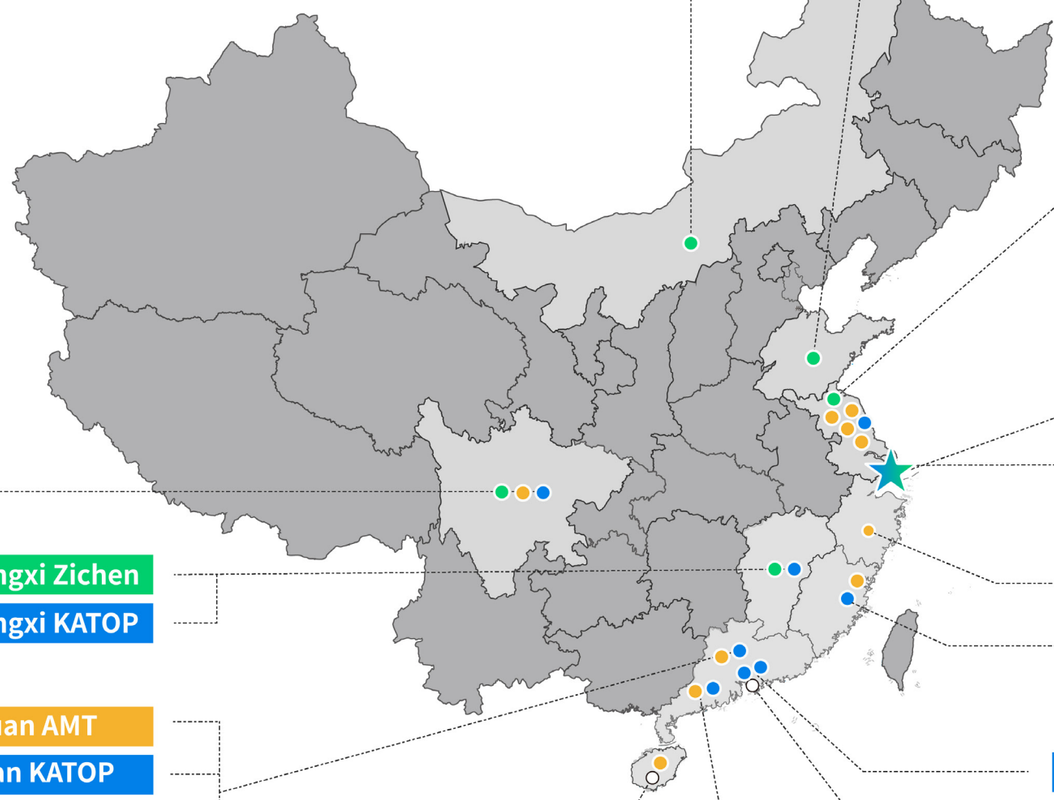
Registered Capital
CNY **2.14** billion

Total Assets
CNY **42.10** billion

Operating Revenue
CNY **13.45** billion

Total Employees
**10,331**

- Anode Materials and Graphitization
- Separator Materials and Coating
- Automation Equipments



Liyang Zichen
Jiangsu AET
Liyang Keaton
Liyang AMT
Liyang TNS
Jiangsu ACT
Jiangsu KATOP
Wuxi KATOP

Shandong Xingfeng

Inner Mongolia Zichen

PTL Technic
Lufeng Capital

Shanghai Putailai Headquarters

Sichuan Zichen
Sichuan AET
Sichuan Indigo
Sichuan KATOP

Zhejiang Keaton
Zhejiang Like

Jiangxi Zichen
Jiangxi KATOP

Ningde AET
NingDe KATOP

Dongguan AMT
Dongguan KATOP
Dongguan Chaohong
SongShanHu KATOP
KATOP RiSheng

Shenzhen New KATOP
Hongkong KATOP
Hongkong PTL

Hainan Pujin
Hainan PTL

Guangdong AET
Ruyuan Fluororesin
Guangdong KATOP

PTL North America PTL Singapore Europe KATOP

# 2024 Key Performance

## Economic Performance

Total Operating Revenue (CNY)

**13.45** billion

Net Profit Attributable to Shareholders of the Listed Company

**1.19** billion

R&D Expenditure (CNY)

**743.38** million

Cumulative Granted Patents

**1,207**

Invention patents

**213**

## Environmental Performance

Total Greenhouse Gas Emissions

**696,362.47**

**tons of carbon dioxide equivalent**

Annual Environmental Investment(CNY)

**88.60** million

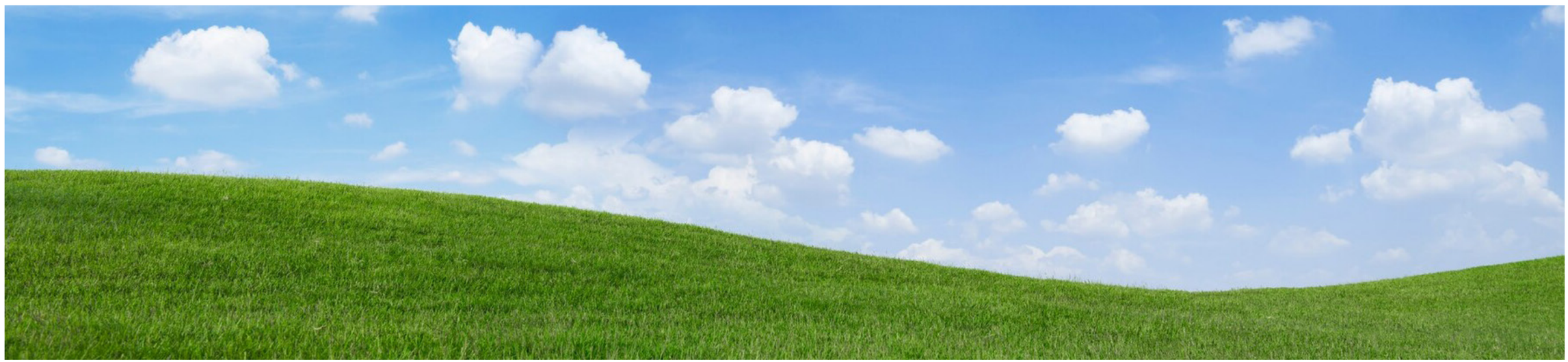
## Social Performance

Average Training Durtion(Hours) per Employee

**34.77** hours

Community Public Welfare(CNY)

**1.04** million



02

# ESG Governance

- ESG Governance Structure
- ESG Governance Practices
- Stakeholder Engagement

# ESG Governance

## ESG Governance Structure

In 2024, PTL continued to further refined the *Working Guidelines for the Environmental, Social, and Governance (ESG) Management Committee*, clarifying the responsibilities of the ESG Management Committee and guiding the formulation and implementation of ESG action plans. Working Guidelines for the Environmental, Social and Governance (ESG) Management Committee, clearly defining the Committee' s responsibilities and guiding the development and implementation of ESG action plans. Authorized by the Board of Directors and the Strategy and Sustainability Committee, the ESG Management Committee oversees ESG governance across the Company.

Subordinate to the ESG Management Committee are ESG special task forces and professional sub-committees, which are authorized to carry out daily management of ESG affairs and specialized chemical management, establishing an ESG implementation network that covers the entire group. Under this Committee, ESG task forces and professional sub-committees are empowered to manage daily ESG affairs and specialized chemical-related matters, forming a group-wide ESG implementation network

### ESG Management Committee

Formulate PTL's ESG governance policies, objectives, strategies, and frameworks, and regularly evaluate the performance against ESG goals;

Identify and assess ESG risks and opportunities, determine material issues, review the effectiveness of management systems, and integrate ESG factors into management and business decision-making processes;

Promote a top-down ESG culture across the Company, ensuring ESG considerations are embedded in operations and strategic planning;

Regularly evaluate the communication channels and engagement methods with stakeholders, ensure policy effectiveness, and enhance the quality of ESG disclosure;

Assess the performance and scope of responsibilities of the ESG Management Committee, and recommend changes for Board approval;

Leadership at all levels is responsible for their respective work: leaders of business divisions and subsidiaries are accountable for ESG efforts at the divisional and subsidiary levels, respectively. Leaders at each level are accountable for their respective areas: business division and subsidiary heads are responsible for ESG implementation at the corresponding levels.

## ESG Governance Practices

PTL continuously improves its ESG data indicator system, actively promotes digital transformation, and has established a digital platform for ESG data management. The company effectively ensures the integrity, confidentiality, and availability of ESG data, providing a reliable foundation for ESG governance and decision-making.

**Case: Construction of PTL ESG Data Digital Management Platform**

In 2024, PTL brought together leaders from headquarters and business divisions to develop a comprehensive ESG Data Digital Management Platform. The platform covers key aspects including parameter design, data collection, storage management, and review processes.

The platform covers over 700 key indicators across more than 20 core ESG topics, including climate change mitigation, resource efficiency, environmental compliance, emissions and waste management, employee development, product innovation, customer and supply chain management, and business ethics. It enables standardized data collection, intelligent, and visualized reporting, significantly improving data management efficiency and the quality of ESG disclosure.

To ensure the effective operation of the system, the Company conducted six specialized training sessions on ESG theoretical knowledge, including Q&A sessions, for all responsible personnel and data reporters.

## Issue Importance Analysis

In 2024, the Company identified a total of 23 ESG issues, including 3 issues with only financial materiality, 12 issues with only impact materiality, and 4 issues with dual materiality. Based on the identified issue list, the Company developed a comprehensive materiality issue matrix, where ESG issues within the same quadrant are not prioritized in sequence.

Compared with 2023, the Company adjusted the wording of 7 existing issues such as "energy management" and "environmental management system" based on the 21 issues outlined in the *Guidelines*, split the issue of "emissions and waste management," and added 3 new issues such as "circular economy."

## Stakeholder Engagement

PTL integrates ESG considerations into the daily operations, places strong emphasis on maintaining effective stakeholder engagement, and fully considers their long-term interests.

Aligned with its development strategy and social responsibilities, PTL has identified six major stakeholder groups: investors, customers, employees, government and regulatory authorities, suppliers and partners, and the public and communities. The Company actively engages with each group through diverse communication channels to understand and respond to their concerns and expectations.

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# Annual Focus Topics (1): Addressing Climate Change

# Annual Focus Topics (1): Addressing Climate Change

As a key enterprise in the new energy industry, PTL actively addresses the global challenge of climate change by establishing its own carbon neutrality goals----aiming to peak carbon emissions by 2030 and achieve carbon neutrality by 2060.

## Governance

PTL has established a "Dual Carbon" Joint Task Force, forming a three-tier organizational structure encompassing decision-making, planning, and operational execution. The Joint Task Force integrates cross-departmental resources for climate actions, makes decisions and deployments for major projects, and reports to the Board of Directors. In terms of planning and implementation, the Clean Energy and Energy Conservation & Emissions Reduction Department coordinates functional departments of subsidiaries to implement relevant decisions.

Additionally, PTL incorporates interim performance on carbon reduction goals into the performance evaluations of relevant department heads, establishing a comprehensive assessment and evaluation system. Those who meet expectations are rewarded, while targeted training is provided for those with underperformance.

### PTL Climate Change Governance Structure

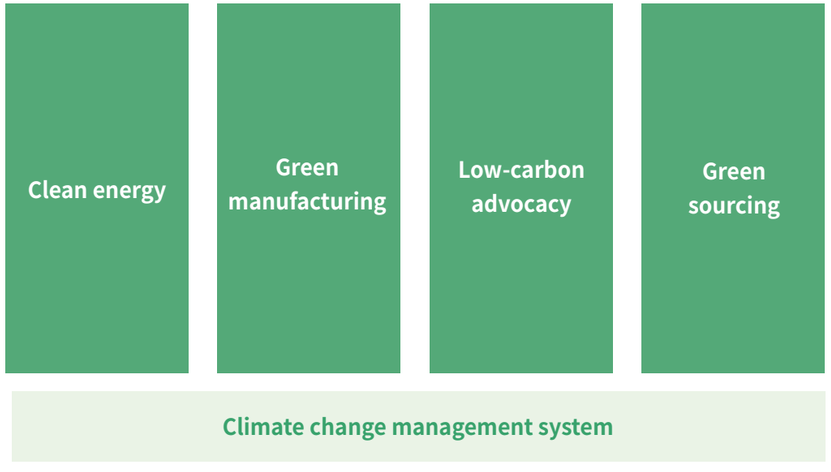
| | |
|---|---|
| Leading Group | Oversee the company’s “dual carbon” efforts, set strategic directions, and approve green industry plans and carbon neutrality strategies. |
| Energy Conservation & Emission Reduction Department | Implement the company’s industrial development framework and carbon neutrality strategies/plans, and plan, guide, and execute carbon neutrality efforts across industrial development and construction. |
| Functional Departments of Subsidiaries | Study and resolve key challenges in “dual carbon” efforts, and specifically implement carbon neutrality work plans across the company’s development and construction. |

## Strategy

Considering industry and regional operational characteristics, the Company systematically identifies and assesses climate-related risks and opportunities, through a comprehensive risk-opportunity matrix. By quantifying likelihood and potential impact, it prioritizes and develops targeted strategies and action plans.

PTL has established a comprehensive climate strategy, promoting greenhouse gas reduction through multiple pathways including clean energy, green manufacturing, low-carbon advocacy, and sustainable procurement.

### PTL Climate Change Strategy Model




## Impact, Risk, and Opportunity Management

PTL has established a robust risk and opportunity management process, aligned with the TCFD (Task Force on Climate-related Financial Disclosures) framework. The process is systematically advances through four dimensions—identification, assessment, prioritization, and management—to address climate change challenges and capitalize on transition opportunities.

## Clean energy

Aligned with the philosophy of green development, PTL regards energy management as a key approach to reducing operational emissions continuously improves its energy mix and enhances energy efficiency. In 2024, the Company's primary energy sources included natural gas, gasoline, diesel, electricity, and steam.

### Main energy types and usage scenarios

| Direct energy | | |
|---|---|---|
| Natural gas<br>Manufacturing | Gasoline<br>Company vehicle operations | Diesel oil<br>Transportation vehicles and backup generators in plants |
| **Indirect energy** | | |
| Photovoltaic self-<br>Manufacturing | Purchased power<br>Manufacturing and office operations | Purchased steam<br>Manufacturing |

In 2024, five PTL subsidiaries newly obtained ISO 50001 Energy Management Certification, achieving full coverage of eligible subsidiaries. With third-party support, the company conducted 7 energy audits— 4 specialized, 3 comprehensive—during the year. A total of 18 improvement measures were proposed, of which 10 were completed and eight were in progress by year-end.

Expanding renewable energy is a key focus of the carbon reduction strategy. By the end of 2024, PTL had launched 12 rooftop PV projects (operational, under construction, or planned) with a total capacity of 96.1 MW. Once fully operational, these projects are expected to generate 95.39 million kWh annually and avoid 56,681 tons of $CO_2$ emissions.

Leveraging digitalization, PTL developed an "Energy Online Monitoring System" and a "Carbon Management System," both of which have been successfully implemented across multiple production bases to reduce energy-related GHG emissions.

### Case: Digital Technology Powers De-carbonization in Energy Management

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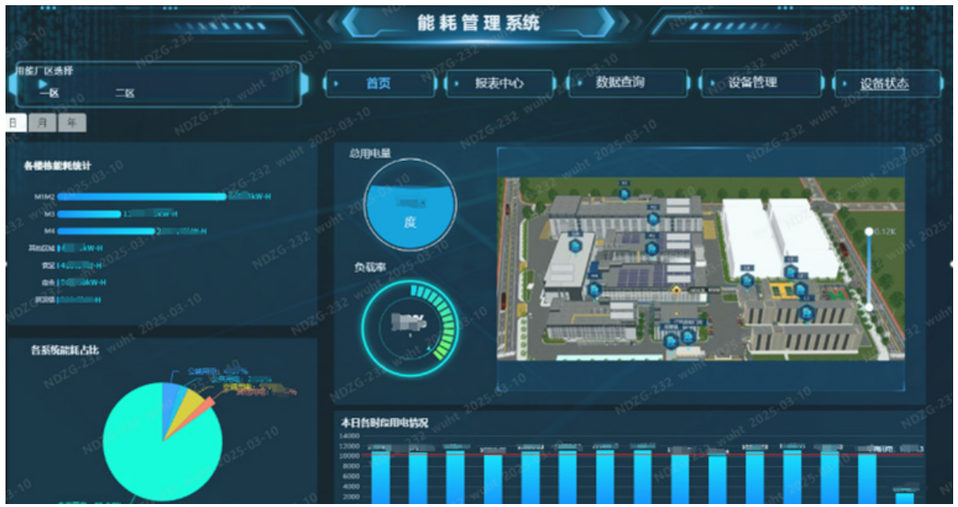

## Green Manufacturing

PTL continues to implement energy efficiency measures in manufacturing operations to improve energy utilization. In 2024, it carried out multiple energy-saving optimization projects for process and utility equipment to further reduce energy loss and carbon emissions during production. Additionally, the Company requires that all newly supplied equipment from vendors meet high energy-efficiency standards to support energy conservation and emission reduction during the production phase.

| Key Projects | | Project Implementation Status |
|---|---|---|
| Process Equipment Upgrades | Speed-increasing upgrades and renovations for coating machines and slitting machines | By optimizing the mechanical design of coating and slitting machines to improve operational efficiency, the project avoids 594 tons of $CO^2$ equivalent emissions annually. |
| | Addition of pre-carbonization processes and furnace renovations | By introducing a pre-carbonization step for raw materials and upgrading chamber furnace structures, the project annually avoids emissions of 6,812 tons of $CO^2$ equivalent. |
| | Oven upgrades and renovations | By optimizing the heating programs of ovens to enhance heating efficiency, the project annually avoids 65 tons of $CO^2$ equivalent emission. |
| Utility Equipment Upgrades | Furnace Head Electrode Cooling Water System & Water-Source Heat Pump Winter Heating Retrofit | Utilizing the circulating hot water from workshop furnace heads and geothermal energy, the project employs heat pump technology for high-level heat energy conversion, converting low-grade heat into high-temperature output for indoor heating, which avoids 1,307 tons of $CO^2$ equivalent emissions annually. |
| | Heat Transfer Oil Boiler Flue Gas Waste Heat Recovery | By effectively recovering and reusing heat from the flue gas of heat transfer oil boilers, the project saves 152,000 cubic meters of natural gas annually, avoiding 286 tons of $CO^2$ equivalent emissions. |
| | Air Compressor Energy Efficiency Retrofit | Through the installation of intelligent control systems, this retrofit reduces the load rate of air compressors, saving 120,000 kilowatt-hours of electricity annually and avoiding 71 tons of $CO^2$ equivalent emissions. |

By the end of 2024, PTL continued to advance the construction of "Green Factories" and "Carbon Neutral Factories," successfully obtaining certification for four Green Factories and three Carbon Neutral Factories in accordance with the PAS 2060:2014 standard.

### Case: Green Manufacturing Practice – Jiangsu AET “Carbon Neutral Factory” Constructio.1

PUTAILAI actively supports China’ s strategic direction toward high-end, intelligent, and green manufacturing, by accelerating the development of its green manufacturing system. In 2024, its subsidiary Jiangsu AET achieved operational carbon neutrality and received a PAS 2060 Carbon Neutrality Declaration from an internationally recognized certification body.

#### Core Highlights of Jiangsu AET “Net-Zero Factory”

Green Buildings and Infrastructure: The factory was constructed according to green design standards, using energy-efficient and low-carbon building materials. It optimizes natural lighting, ventilation, and thermal insulation to reduce operational energy consumption, while supporting green infrastructure---- such as rainwater recycling systems and distributed energy facilities ---- to enhances resource utilization efficiency.

Carbon Emission Data Verification: The Company engaged TÜV Rheinland, a leading third-party authority, to verify its annual carbon emissions, identify key emission sources, and recommend pathways for future decarbonization.

Energy Mix Optimization: A 13.4-megawatt (MW) distributed photovoltaic (PV) system was installed on the factory rooftop. Once fully grid-connected, it is expected to generate approximately 12.77 million kilowatt-hours (kWh) of electricity annually, reducing emissions by 7,588 tons of carbon dioxide equivalent.


组织碳中和达成核查声明

Jiangsu AET Carbon Neutrality

Aerial View of Jiangsu AET Phase I and II

## Low-carbon advocacy

To support the achievement of the “dual carbon” goals (carbon peaking and carbon neutrality) and enhance energy conservation and carbon reduction management, PTL has organized a range of training activities—including online lectures, conference sharing sessions, and on-site professional training at production bases. These initiatives aim to cultivate specialized "double dual carbon" talent, establish an efficient energy management system, and promote the creation of green factories.

### 2024 PTL Energy Conservation and Carbon Reduction Training Implementation Overview

| | |
|---|---|
| External training | PTL organized three employees to participate in the electricity and carbon trading training hosted by the China Energy Economics Research Institute. All participants obtained training certificates. |
| Internal training | PTL held an online “dual carbon” forum conference to discuss multiple topics, including progress and development plans in its “dual carbon” initiatives, the construction of energy management systems, and the development of green factories.<br>PTL held an online seminar for the Industrial Energy Saving and Low-Carbon Forum, inviting experts in the energy-saving field to deliver a course titled “Sharing of Key Technologies in Energy Saving” and a special lecture on “Adaptive Control-Core Life Cycle Management for High-Efficiency Machine Rooms.”<br>PTL conducted 10 professional training sessions for each production base, including Ningde AET, Jiangsu AET, Sichuan Zichen, Inner Mongolia Zichen, Jiangxi Zichen etc, and trained six full-time energy management professionals. |

## Green sourcing

PTL is committed to exploring green and sustainable supply chain management models to mitigate the climate impact of procurement activities. Based on the supplier structure and internal needs, PTL classifies and defines low-carbon procurement goals through a tiered and categorized approach and has established a green procurement evaluation system. PTL scientifically formulates green procurement workflows, continuously improves its management system, fosters close collaboration with suppliers, and works together to build a low-carbon and sustainable value chain ecosystem.

## Indicators and targets

PTL conducts annual greenhouse gas verification and product carbon footprint assessments for the subsidiaries in accordance with the GHG Protocol and ISO 14064-1:2018. In 2024, PTL completed 17 third-party carbon emission certification projects, including 10 greenhouse gas verifications, six product carbon footprint certifications, and one Life Cycle Assessment (LCA) of a product.

PTL comprehensively strengthens the carbon reduction efforts, increases the proportion of renewable energy and green electricity used, and advances the realization of its own carbon neutrality goals. In 2024, newly installed rooftop photovoltaic projects are expected to generate 41.26 million kilowatt-hours of electricity annually, avoiding 24,517 tons of carbon dioxide equivalent emissions.

### PTL 2024 climate change indicators and targets

**PTL Climate Change Goals**

By 2025, renewable and green electricity will account for 50% of total power consumption; reaching 100% by 2030.

By 2030, greenhouse gas emissions from its own operations will peak, and some subsidiaries will take the lead in achieving carbon neutrality.

By 2030, the company aims to reduce carbon emissions per unit of product by more than 50% compared to 2024 levels.

**PTL 2024 Climate Change Mitigation Management Indicators**

| Management Indicators | 2023 | 2024 |
|---|---|---|
| Photovoltaic power generation output[1] | 17.11million kWh | 41.90million kWh |
| Proportion of renewable energy usage | 11.50% | 14.73 % |
| Proportion of green electricity usage | 14.06% | 18.31% |

Note: [1] The "photovoltaic power generation output" herein refers to the power generation during the operational phase of existing projects.

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04

# Annual Focus (2): Chemical Substance Management

# Annual Focus (2): Chemical Substance Management

PTL has comprehensively strengthened chemical lifecycle management and established a chemical management system covering the entire process from research and development to manufacturing.

## Governance

PTL has established a robust chemical management structure by forming a Chemical Management Sub-Committee under its ESG Management Committee, which takes full responsibility for chemical safety. The company has developed the Working Guidelines for the ESG Chemical Sub-Committee, clearly outlining its management policies and objectives.

The company complies strictly with the Regulations on the Safety Management of Hazardous Chemicals, the List of Priority-Controlled Chemicals, the EU's Restriction of Hazardous Substances Directive (RoHS), the EU's Registration, Evaluation, Authorization and Restriction of Chemicals Regulation (REACH), and other conventions, laws, and regulations. It has formulated institutional documents such as the Prohibited Substances Management Regulations and Hazardous Substances Management Procedures to standardize chemical usage. In 2024, the company revised its Hazardous Chemicals Safety Management System to further improve relevant management details.

## Strategy

Chemical safety management is a critical component of PTL's sustainable development efforts. The company systematically identifies and analyzes relevant risks and opportunities to support the development of sound management strategies.

PTL's chemical safety management strategy is centered on the principles of "Safety First, Environmental Protection Priority, Prevention-Oriented and Full Participation." The company strengthens compliance oversight, improves its safety management systems, standardizes operating procedures, promotes technological innovation, and reinforces supervision and continuous improvement. These efforts enable the company to comprehensively manages compliance, safety, and operational risks to ensure the safe and compliant use of chemicals and support company's long-term sustainable development.

## Impacts, Risks, and Opportunities Management

PTL has established a dedicated team responsible for identifying, recording, and reporting issues related to prohibited and hazardous substances. It formulates PTL's *Controlled Chemicals List* based on the Catalogue of Hazardous Chemicals and the EU REACH regulation. In 2024, the company completed an update to its *Controlled Chemicals List*, integrating the EU REACH SVHC List (a total 240 categories of chemicals) with the original controlled chemicals list, while also incorporating entries from the national hazardous chemicals catalog. This update comprehensively ensures alignment with both the EU and domestic regulations on chemical management. In addition, for the precursor chemicals used, PTL complies with public security regulations by filing information and registering usage records on the national precursor chemicals service platform.

In response to the classified management and control requirements for hazardous and prohibited substances in the production process, the company has established a closed-loop management system for chemical substances that covers the entire product lifecycle, including development, procurement, production, shipment, and testing.

## Closed-Loop Management Process for Chemical Substances Across the Entire Lifecycle

| | Anode Materials Business | Separator and Coating Business |
|---|---|---|
| Management System | Prohibited Substances Management Regulations | Hazardous Substances Management Procedure |
| Product Development | An independent research institute has been established to conduct hazardous substances compliance assessments during product design, ensuring non-compliant hazardous substancesare exclude;<br>The concept of environmentally friendly product design has been introduced, continuously optimizing, embedding procedures for integrating environmental impact factors into product design and development activities. | Established Polymer Membrane Synthesis Laboratory, Polymer Membrane Coating Laboratory, Optical Film Laboratory, and Materials Analysis Center to support product research and development, production, and quality testing;<br>Conduct Advanced Product Quality Planning (APQP) or reviews based on customer requirements for environmental management substances.For products using exempt materials, PTL requires a clear action plan for the reduction or phase-out of hazardous substances |
| Raw Materials Procurement | Require raw material suppliers to sign the Hazardous Substances Management Agreement and the Certificate of Non-Use of Prohibited Substances;<br>Conduct regular audits of suppliers regarding hazardous substances control to prevent non-environmentally friendly materials from entering the company' s product chain.0 | Require suppliers to provide a Certificate of Non-Use of Hazardous Substances, Material Composition List, and third-party test report on compliance with hazardous substances content limits for new materials or rectified materials (rectified materials refer to those that require an 8D Corrective Action Report and have passed acceptance inspection) before delivery. |
| Production Process | Provide training on "Hazardous Substances Management Requirements" to personnel in storage and production areas;<br>Utilize environmentally friendly facilities and equipment;<br>Conduct compliance verification of hazardous substances for raw materials, auxiliary materials, and packaging materials. | Conduct full-process quality control in accordance with procedure documents such as the Production Process Control Procedure, Monitoring and Measurement Control Procedure, Nonconforming Product Control Procedure, and Product Release Control Procedure |
| Product Shipment | Upon product shipment, provide customers with product substance composition information and hazardous substances test reports. | Verify the "Restricted Substances Composition Survey Form" and test reports on hazardous substances content. |
| Hazardous Substances Testing | Annually commission third-party testing institutions to test the compliance of finished products with hazardous substances requirements, minimizing environmental risks associated with materials to the greatest extent. | Conduct semi-annual and annual third-party testing to verify compliance with type testing requirements. |

In response to environmental policies, the company actively implements controlled chemicals reduction and substitution programs. Through process and management optimizations, it aims to reduce the usage and inventory of controlled chemicals, or adopt safer materials to lower environmental and health risks, thereby promoting green and sustainable development.

## Implementation Status of Chemicals Reduction and Substitution Programs

| Improvement Cases | Improvement Results |
|---|---|
| Liyang Zichen has improved the batching process by using new water-based materials to replace organic solvents. | reduced organic solvent usage by approximately 20 metric tons monthly, over 250 metric tons annually. |
| Ruyuan Fluororesin has developed a surfactant that replaces perfluorooctanoic acid (PFOA, an ether-based compound) in PVDF resin reactions through process improvements at the polymerization batching stage. | reduced PFOA usage by approximately 0.002 metric tons per ton of product, with an annual savings of over 50 metric tons. |
| Ningde AET Second Plant has replaced high-toxicity methanol with low-toxicity ethanol in the batching process. | reduced methanol usage by 1 metric ton monthly, totaling approximately 12 metric tons annually. |
| Jiangxi Katop introduced weld seam cleaning equipment to replace the original stainless steel electropolishing solution containing controlled chemical sulfuric acid. By the end of 2024, the company had largely completed the substitution. | Reduced annual usage of electro polishing solution by approximately 8,051 liters. |

To ensure products are free of prohibited substances and hazardous substances in products complies with relevant domestic and international regulations, PTL has signed chemical substance management commitments with major customers and suppliers. The company engages qualified third-party institutions to test relevant chemicals in its products in accordance with the RoHS Directive, the REACH Regulation, and customer requirements. In 2024, the company' s major products complied with all domestic chemical substance management policies, as well as the REACH, and RoHS requirements.

## Indicators and Objectives

In alignment with its chemical management objectives, the company actively promotes comprehensive reviews of controlled chemicals usage and product compliance with REACH and RoHS testing requirements, continuously improving the coverage rate of RoHS and REACH testing for its products. In 2024, the company completed an inventory of 2023' s controlled chemicals usage and types, and analyzed the status of its products' RoHS and REACH testing compliance.

### Chemical Substance Management Indicators and Objectives

| Objectives | Indicators | 2024 Progress |
|---|---|---|
| Strictly regulate chemical management, adhere to the bottom line of legal and regulatory compliance throughout the "procurement-storage-usage-disposal" lifecycle, ensure no chemical-related non-compliance incidents occur, and continuously reduce both the total usage and usage per unit product of controlled chemicals. | Types of Controlled Chemicals Used | An inventory of controlled chemicals used in 2023 revealed a total of 73 types. |
| | Quantity of Hazardous Chemicals Used | Precursor chemicals included hydrochloric acid, sulfuric acid, acetone, methyl ethyl ketone (MEK), etc.;Explosive precursor chemicals included lithium metal, nitric acid, etc.<br>With the exception of hydrochloric acid and MEK, the usage of other substances was minimal, less than 1 metric ton annually. |
| | Frequency of REACH and RoHS Testing for Products | REACH and RoHS testing is conducted annually. |
| | Coverage Rate of RoHS and REACH Testing for Products | The anode materials and separator business cover over 90% of products; the equipment business conducts testing for some component products. |

05

# Environment

- Environmental Compliance Management
- Water Resources Utilization
- Pollutant Emissions
- Solid Waste Treatment

# Environment

## Environmental Compliance Management

PTL strictly complies with national and local laws and regulations such as the Environmental Protection Law of the People's Republic of China, and has established and maintained an effective Environmental Management System (EMS). The company has established a Safety and Environmental Protection Committee, the highest leading body for safety, environmental protection, and occupational health management, with the General Manager serving as the primary person responsible for environmental management and its implementation across the organization.

To strengthen the EMS framework, the company has formed a Professional Technical Sub-Committee under the Safety and Environmental Protection Committee. This sub-committee develops specialized and general checklists, technical guidelines, and professional training programs, thereby empowering all subsidiaries to strengthen their systems and improve environmental management practices.

PTL has formulated the Safety, Environmental Protection, and Occupational Health Management Manual and the Environmental Protection Management System, both of which explicitly incorporate environmental inspections into its annual internal audits. The company conducts environmental-focused internal audits and follow-up reviews for 100% of its operational subsidiaries, issues audit reports, and monitors the implementation of corrective actions based on audit findings, thereby advancing toward its management objective of "zero environmental pollution incidents".

In 2024, 100% of PTL’ s eligible production subsidiaries successfully obtained ISO 14001:2015 Environmental Management System certification. Newly built or recently completed facilities are also proactively establishing environmental management systems in alignment with ISO 14001 requirements.

In terms of environmental emergency preparedness, each subsidiary has developed an Emergency Response Plan for Sudden Environmental Incidents and established a sound emergency response mechanism. These measures ensure the Company’ s ability to response swiftly, efficiently and in an organized manner to potential environmental incidents, --effectively controlling, mitigating, and eliminating environmental risks, minimizing casualties and economic losses, and supporting PTL’ s commitment to comprehensive, coordinated, and sustainable development.

In 2024, PTL invested a total of RMB 88,599,300 in environmental compliance, environmental technology R&D, upgrades to energy-efficient environmental protection equipment, and the construction/operation of environmental facilities. The company also fully paid all environmental protection-related taxes and fees.

No major environmental incidents occurred throughout the year, and no administrative penalties or criminal liabilities were imposed by ecological and environmental authorities or any other relevant agencies in connection with environmental matters.

# Water Resources Utilization

PTL’ s water resources are sourced from municipal water supply and rainwater harvesting, primarily used for production processes, office operations, and employee daily use. The company has established a three-tier water governance framework of "strategy-coordination-implementation":

The Board of Directors sets strategic water management goals;

The ESG Management Committee, in collaboration with the Environmental and Safety Department, develops water-saving plans and emergency response strategies;

Production bases conduct real-time water usage monitoring and implement on-the-ground water efficiency projects.

PTL actively implements water conservation projects, tailoring water-saving solutions for different bases to local conditions by considering local water stress levels, production line characteristics, and the current status of on-site equipment. In 2024, the company launched water reduction projects at all production bases where implementation was feasible.

### PTL 2024 Water Resources Recycling and Utilization Highlight Cases

| Measures | Achievements |
| --- | --- |
| Copper Foil Washing Recycled Water System | The Jiangsu ACT copper foil washing recycled water system treats copper-containing wastewater through separator treatment to produce fresh water, which is then electrolyzed to generate pure water for workshop use. The water system recovery rate reaches 95%. |
| Hot Water Recycling in Gas-Liquid Phase Recovery Units | At Sichuan AET, the gas-liquid phase recovery unit incorporates a retrofitted water tank. Steam condensate is used to transfer water from the tank to the condensate recovery zone, where it is reused as make-up water for steam boilers. This initiative saves 1,600 metric tons of 90°C hot water annually. |
| Wastewater Recycling and Utilization | At Ningde AET, wastewater generated from filter cloth washing in filter presses is recycled multiple times, saving approximately 14,000 tons of water annually;Ruyuan Fluororesin implements reclaimed water reuse, with 6,985 tons of wastewater recycled annually. |

In 2024, Sichuan AET and Ningde AET were recognized as water-saving enterprises, setting a benchmark for the company’ s water resources conservation efforts.

### Case: Sichuan AET Recognized as a Water-Saving Enterprise, Practicing Efficient Water Management

In March 2024, Sichuan AET passed the inspection and acceptance organized by the water authority of Qionglai and was awarded the title of Qionglai "Water-Saving Enterprise". The company has incorporated water conservation into its daily management, established a leading group for water-saving initiatives, and actively implemented measures to maximize water efficiency potential.

Sichuan AET Water-Saving Measures:

Optimized production processes to enhance water usage efficiency and reduce equipment water consumption;

Introduced condensate recovery technology to recycle steam condensate generated during production for reuse;

Established a rainwater reuse system to collect outdoor rainwater for irrigation water in greenery, achieving circular water utilization.

Sichuan AET Steam Condensate Recovery

# Pollutant Emissions

PTL strictly complies with laws and regulations including the Law of the People's Republic of China on Prevention and Control of Water Pollution, Law of the People's Republic of China on Prevention and Control of Atmospheric Pollution, and Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste. It has established internal systems and management procedures such as the Environmental Protection Management System and Waste Gas, Wastewater, and Noise Management Procedures, and set pollutant emission targets. Based on different pollutant types (industrial wastewater, domestic sewage, waste gas), the Company conducts preliminary treatment on pollutants from all production bases and ensures they are discharged after meeting the standards.

**Pollutant Emissions Targets**

In 2025, PTL total emissions for all categories of pollutants will be kept below 90% of the total allowable emissions approved in the environmental impact assessment (EIA).

## Pollutant Emissions Management Requirements and Treatment Methods

| Categories | | Treatment Methods |
|---|---|---|
| **Wastewater** | | |
| **Industrial Wastewater** | Chemical Oxygen Demand (COD)、Biochemical Oxygen Demand (BOD)、Ammonia Nitrogen ($NH_3$-N)、Suspended Solids (SS)、Fluoride、Dichloromethane | After being treated to meet the connection standards for the municipal pipeline network, the wastewater is connected to the network for centralized treatment and then discharged after meeting the discharge standards. |
| **Domestic Sewage** | Chemical Oxygen Demand (COD)、Biochemical Oxygen Demand (BOD)、Ammonia Nitrogen ($NH_3$-N)、Suspended Solids (SS) | |
| **Waste Gas** | | |
| **Waste Gas** | Dust | Negative Pressure Dust Collection<br>Cartridge Filter Dust Removal<br>Bag Filter Dust Collector |
| | Sulfur Dioxide ($SO_2$) | Gypsum Process Desulfurization |
| | Volatile Organic Compounds (VOCs)、Asphalt Fumes、Toluene、Xylene | Indirect Water Cooling + Activated Carbon Adsorption Technology;<br>Electrostatic Tar Precipitator;<br>RTO (Regenerative Thermal Oxidizer) Incineration |
| | Sulfuric Acid Mist | Alkali Wash Tower Technology |
| | Fluorides | Water and Alkali Wash Spraying |
| **Noise** | | |
| Noise reduction is achieved through multiple methods, including installing acoustic insulation on equipment surfaces, sealing equipment, and relocating air ducts. | | |

PTL continuously optimizes environmental protection equipment and processes, implementing pollutant emission reduction initiatives across all production bases. In 2024, subsidiary Liyang Zichen undertook renovations to its material dumping collection system platform and installed a new dust collector, reducing particulate matter emissions by 9 tons annually. Sichuan AET upgraded its oil-containing cooling water treatment system, centralizing collection to effectively reduce oil-based pollution, and carried out a retrofit of its online flue gas monitoring system to minimize pollutant adsorption in pipelines, ensuring 100% compliance with emission standards.

PTL strictly controls the generation of pollution sources, ensures the normal operation of environmental protection facilities, and guarantees the compliant discharge and disposal of wastewater, waste gas, and solid waste. It has advanced the improvement of environmental monitoring programs and risk management measures, with no major deficiencies identified. In 2024, the Company’ s production and operations caused no significant adverse impacts on employees, local community residents, or other groups, and it did not incur administrative penalties or criminal liability related to pollutant emissions.

## Solid Waste Treatment

PTL strictly complies with the Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste, and other applicable laws and regulations. The company has established a comprehensive solid waste management system to ensure that all types of waste are disposed of in a standardized and environmentally safe manner.

### Solid Waste Categories and Treatment Methods

| Categories | | Treatment Methods |
|---|---|---|
| Non-Hazardous Waste | Domestic waste | Transferred to the municipal sanitation department for centralized collection and disposal. |
| | General Industrial Solid Waste | Handed over to qualified third-party handlers for treatment and recycling. |
| Hazardous Waste | Used Transformer Oil、Waste Tar、Spent Activated Carbon、Used Glue Containers、Passivation Tank Residue、Wastewater Treatment Sludge、Wastewater Evaporation Residue | Transferred to licensed third-party hazardous waste handlers for compliant and regulated disposal. |

PTL is committed to achieving the goals of waste reduction and resource utilization. By optimizing production processes and strengthening source control, the Company continuously reduces the generation of waste.

### Key Measures for Waste Reduction

| Categories | Specific Measures |
|---|---|
| Process Optimization and Improvement | Improve production processes and equipment to reduce waste generation.<br>Implement stricter material management and in-process controls to reduce waste at the source. |
| Source Control | Effectively reduce the generation of hazardous waste by selecting high-quality raw materials or more environmentally friendly alternatives. |

In 2024, subsidiary Ruyuan Fluororesin continued its hazardous waste recycling initiatives, recycling an annual total of 740 tons of waste acid, 14,046 tons of spent resin, 3 tons of used paint containers, and 9.79 tons of waste lubricating oil. These efforts effectively advanced waste resource utilization and environmental sustainability.

06

# Society

- Innovation-Driven
- Product Safety and Quality
- Customer Service Management
- Supply Chain Management
- Employee Rights and Benefits
- Workplace Safety and Occupational Health
- Employee Development and Training
- Social Contribution and Rural Revitalization

# Society

## Innovation-Driven

### Governance

PTL regards product innovation as the core driver of its sustainable development, has built a comprehensive innovation governance system that integrates strategic decision-making, R&D execution, and the transformation of results. The Board' s Strategy and Sustainability Committee plays an active role in shaping innovation strategies, conducting in-depth research and providing recommendations on the company' s technological and product leadership by aligning with global trends in the new energy industry. This ensures its R&D directions closely align with market demands and sector evolution.

Within its three major business divisions—anode materials, membrane materials & coatings, and automated equipment—PTL has established specialized R&D units that focused on achieving breakthroughs in niche technical areas. This forms an innovation management framework of "strategic oversight - divisional collaboration - focused breakthroughs", significantly enhancing innovation efficiency.

### Strategy

Innovation-driven development serves as a key engine for PTL' s sustainable growth. The Company provides strong support for the formulation of scientific development strategies by comprehensively identifying potential risks and opportunities and conducting in-depth analyses.

PTL proactively addresses the risks and opportunities associated with innovation-driven development. Adhering to its mission of "R&D-led, quality-focused, and customer-oriented through differentiated products" the company gains deep insights into trends in the new energy industry and evolving market demands. Closely aligned with corporate strategy, PTL remains committed to excellence and continuous innovation in the research and development of new materials, new processes, and new products.

**PTL Innovation-Driven Strategic Planning**

| | |
|---|---|
| Technological Innovation and Industrial-ization | Focus on the innovative applications of composite current collectors in lithium-ion batteries to drive the commercialization of technologies.<br>Deepen collaboration among industry, academia and research institutions in core technical areas to accelerate the R&D and industrialization of new products. |
| International Expansion | Strengthen partnerships with overseas OEMs and battery manufacturers to en-hance international market share.<br>Advance overseas investments strategies to establish a global footprint and un-lock new opportunities for overseas business collaboration. |

### Impact, Risk, and Opportunity Management

#### Product Technical Breakthroughs

PTL continues to solidify its leading position in new energy materials and equipment through technical breakthroughs and industrial applications. The Company has built a high-caliber R&D team of over 1,700 professionals, focusing on cutting-edge research and innovation in anode materials, membrane coating, and automated equipment.

To enhance R&D efficiency, PTL has implemented a Product Lifecycle Management (PLM) system covering core modules such as data infrastructure, basic management, project management, and OA integration. This system enables efficient collaboration and end-to-end digital management of R&D projects, significantly improving R&D quality and efficiency of innovation, and providing a solid foundation for technical breakthroughs and product upgrades.

In its R&D model, PTL adopts a R&D model that combines in-house innovation with external collaboration, leveraging its deep industry expertise while partnering closely with universities and research institutions. This approach to accelerates technology development and R&D outcomes transformation. Through continuous innovation, the Company not only provides customers with more competitive and differentiated products and services but also empowers

upstream raw material suppliers, driving collaborative development across the entire industrial chain and contributing to the progress in the new energy sector.

In 2024, PTL served as a lead drafting unit, PTL for the standard T/DCB 011-2024 Technical Specification for Artificial Graphite Anode Material Production Processes, reaffirming the Company’ s role as an industry leader. By promoting capability enhancement among upstream and downstream enterprises, the company supports the steady upgrading of the sector’ s industrial ecosystem.

## PTL Leading Technological Edge and Applied Achievements

| Business Categories | Innovative Achievements |
| --- | --- |
| Anode Materials Business | PTL new fast-charging anode products meet 6C charging rate requirements, and 8-10C performance can be achieved when used with in-house developed adhesives. These products have passed technical certifications by multiple customers and are gradually entering mass production; high-capacity, long-cycle innovative products have gained strong customer recognition, with active efforts underway to promote their mass production in power and energy storage applications. Meanwhile, PTL has developed a new generation of high-performance graphite for consumer batteries and can flexibly optimize natural graphite products to enhance fast-charging and cycling performance.<br>PTL new silicon-carbon anode materials exhibit high performance in high capacity, low expansion, and long cycle life, making PTL one of the few domestic enterprises capable of mass production. In addition to applications in high-end consumer lithium-ion batteries, these materials are compatible with semi-solid/solid-state batteries. Currently, CVD (Chemical Vapor Deposition) silicon-carbon anode products are being smoothly introduced to consumer clients, with small-scale shipments achieved.<br>In new materials development, PTL is advancing pilot-scale trials for porous carbon materials, lithium-ion hard carbon, sodium-ion hard carbon, and single-walled carbon nanotubes; continuously improving the electrochemical structure and kinetic performance of biomass graphite, high-rate graphite, and 3D lithium metal anodes; and researching and deploying new materials such as novel graphite for dry electrode fabrication and conductive nanotubes, focusing on forward-looking product and process technology innovation. |
| Separator and Coating Business | PTL continuously enhances the performance of coating equipment and automation rates, actively promoting localization substitution and continuous improvement of coating materials and adhesives. This enables it to provide downstream customers with sustained integrated product solutions, maintaining long-term competitive advantages.<br>The “Dark Factory” for separator coating has been successfully commissioned, featuring industry-leading automated production capabilities and achieving new breakthroughs in high efficiency, energy conservation, and smart manufacturing. Process optimization in coating has significantly reduced energy consumption.<br>PTL collaborates with top domestic research institutions, battery manufacturers, and end-user automakers to develop composite coated separator for semi-solid electrolytes, forming unique innovative products and intellectual property that enrich and strengthen its competitive edge in separator coating. Through the establishment of a post-doctoral workstation, the Company deepens industry-university-research collaboration on key core technologies, accelerating new product R&D and industrialization. |
| Separator Materials and Binders Business | PTL has the capability to independently integrate separator production equipment, breaking through the industry bottleneck of relying on overseas integration for advanced separator production lines. Localized development of stretching, extraction, and oven processes has been completed. Meanwhile, PTL successfully developed and mass-produced the second-generation ultra-thin high-strength 5μm separator, meeting downstream customers’ upgraded requirements.<br>In coating materials, PTL has developed, and mass-produced next-generation ceramic materials for ultra-thin separator coatings, including ultrafine alumina, ultrafine boehmite, and fibrous boehmite. These materials expand the application of boehmite and alumina products to areas such as edge-coating boehmite for cathodes, low-radioactivity alumina for semiconductors, and mesoporous alumina for coatings, enriching the product portfolio and downstream application scenarios.<br>•In the PVDF segment, PTL was among the first enterprises to achieve localized production of lithium-ion battery-grade PVDF, with leading product performance and market share. The separator and cathode binder products exhibit strong performance advantages. PTL has made breakthroughs in ternary binder technology, circumventing foreign patents while achieving product performance comparable to international counterparts, thus realizing localized substitution of ternary PVDF. |

## PTL Leading Technological Edge and Applied Achievements

| Business Categories | Innovative Achievements |
| --- | --- |
| New Energy Automated Equipment and Services | In lithium-ion battery material equipment, the self-developed wet-process lithium-ion separator production equipment has achieved domestic substitution, breaking the monopoly of Japanese and European equipment. PTL continuously upgrades the separator production lines toward high-strength, high-speed, high-width, high-permeability, and high shut-down performance in response to customer and market demands, helping achieve significant improvements in battery safety and fast-charging performance. |

### Case Study: PTL Deepens Research on Silicon-Carbon Anode Materials

Silicon-based anode materials offer a theoretical specific capacity of up to 4,200 mAh/g, far exceeding traditional graphite anodes, and can significantly enhance battery energy density. However, the volume expansion issue in conventional silicon anodes has limited their commercial application. PTL’s next-generation CVD Chemical Vapor Deposition (CVD)silicon-carbon composite materials address this challenge through optimized structural design, delivering improved cycle life, higher cycle counts, and improved practical performance.

The Company masters two core technologies: “silicon-carbon composite engineering” and “chemical vapor deposition”. By employing optimized porous carbon structures, precise morphology control, and carbon coating technology, PTL enhances electrical conductivity, stabilizes the chemical/electrochemical reaction interface, and strengthens structural stability—achieving high capacity, low expansion, and long cycle life. Compared with traditional prelithiation techniques, PTL’s approach offers higher safety, greater processability and stronger suitability for large-scale industrialization.

PTL ‘s production base in Wuhu, Anhui, is designed with an annual capacity of 12,000 tons, with partial operations expected to commence in 2025. This will accelerates the adoption of silicon-carbon anodes in power battery applications, contributing to the sustainable development of the new energy industry.

## Product Green Innovation

PTL continuously strengthens the R&D capabilities in clean technology, following the principles of green chemistry to build a green innovation development strategy across multiple dimensions: product development, material research, production process optimization, and waste reduction. This effort helps establish an environmentally friendly image for both the Company and customers.

PTL adopts Life Cycle Assessment (LCA) in accordance with ISO 14044:2006 to evaluate the cradle-to-grave environmental impacts of its products, identifying high-impact stages and implementing targeted actions to mitigate environmental effects.

In 2024, PTL made significant progress in the development of green, eco-safe new products, achieving mass production and commercialization of non-fluorinated PMMA materials, energy-efficient boehmite, and ultra-thin separators. At the same time, it advanced the development of solid-state electrolyte membranes for lithium metal batteries, earning recognition from industry-leading clients.

### PTL Key Achievements in Product Green Innovation in 2024

| | |
|---|---|
| **Low-Temperature Hydrothermal Recrystallization Technology** | In the production of alumina, traditional calcination processes typically require high-temperature environments above 1300°C to obtain high-purity alumina. The Company uses low-temperature hydrothermal recrystallization technology to convert alumina into boehmite (γ-AlOOH), significantly reducing the reaction temperature to 180°C and cutting energy consumption by approximately 60%. |
| **Non-Fluorinated Material Substitution** | PTL achieved mass production of PMMA materials and continued to promote their application, with usage exceeding 500 tons in 2024—replacing about 23% of PVDF in relevant applications. |
| **High-Precision Coating Technology** | Through the introduction of high-precision coating technology and functional polymer materials, the energy density of batteries is further enhanced while reducing the use of polyethylene (PE) membranes. This technology enables a thickness reduction of 2–4μm for PE membranes per square meter, equivalent to a 1.2–2.5g/㎡ reduction in PE consumption, effectively improving battery performance and lowering the carbon footprint. |
| **Biomass Aramid Substitution for Alumina** | Biomass aramid, derived from renewable materials such as plant cellulose, offers green and eco-friendly advantages. After being processed into aqueous nanoparticles, it can replace part of the alumina in slurries, enhancing the electrolyte wettability of separators to improve battery performance while minimizing environmental impact. |

## Indicators and Goals

PTL formulates forward-looking product innovation goals, continuously increasing increases R&D investments, strengthensing and expandsing its R&D team, enhancinges overall R&D capabilities, and drivinges technological breakthroughs and product upgrades.

| Goals | Indicators | 2024 Annual Progress |
|---|---|---|
| Through comprehensive leadership in cutting-edge R&D technologies, PTL has built full-spectrum service capabilities to deliver integrated solutions to its customers. | R&D Investment | CNY 743.38 million |
| | Number of R&D Personnel | 1,768 |
| | Number of Authorized Patents in 2024 | 186 |
| | Total Number of Patents Granted in 2024 | 1,207 |
| | Proportion of Core Business Revenue from Industrial Automation Technology | 28.21% |

# Product Safety and Quality

## Governance

PTL has established a four-tier quality management framework consisting of Group General Manager, Business Unit General Manager, Business Unit Quality Control Department, and Site Quality Control Department, ensuring the efficient implementation of product quality management. At the group level, the framework provides strategic oversight; business units are responsible for execution and supervision; and site-level quality control departments manage day-to-day implementation, together forming a top-down, end-to-end quality management system.

## Strategy

Product quality management is a key pillar of PTL' s core competitiveness. The Company systematically identifies and thoroughly analyzes potential risks and opportunities to inform the development of sound, quality management strategies.

PTL proactively addresses risks and opportunities related to product safety and quality, in line with its quality policy of "customer-centricity, quality-first, innovative service, and the pursuit of excellence". Through end-to-end quality control, technology-driven innovation, and cultivation of a strong quality culture, the Company ensures product safety and reliability, delivers high-quality solutions, builds market trust through superior quality, and lays a solid foundation for sustainable business growth and industry advancement.

## Impacts, Risks, and Opportunities Management

### Enhance the Quality Management System

PTL actively employs modern tools and methodologies for quality management, establishing a robust total lifecycle quality management system in compliance with international standards such as ISO 9001:2015 Quality Management System, IATF 16949:2016 Automotive Quality Management System, and QC 080000 IEQC-HSPM Hazardous Substances Process Management System. By leveraging the five core quality management tools—Advanced Product Quality Planning (APQP), Statistical Process Control (SPC), Failure Mode and Effects Analysis (FMEA), Measurement System Analysis (MSA), and Production Part Approval Process (PPAP)—the Company implements structured planning and process controls to mitigate quality risks in critical stages of product design, development, and manufacturing, ensuring its products meet the high-quality standards of markets and customers.

PTL regularly undergoes audits of the product quality management system. In 2024, a total of 18 subsidiaries of PTL were certified under the ISO 9001:2015 Quality Management System, 11 subsidiaries achieved certification to the IATF 16949:2016 Automotive Quality Management System, and 2 subsidiaries obtained ISO 22301:2012 Business Continuity Management Certification.

### Enhance Quality Performance

The laboratory conducts testing in strict accordance with the ISO 17025:2017 Laboratory Management System, performing quality inspections on all incoming materials, semi-finished products, and finished products in line with the Product Inspection and Testing Procedures. Non-conforming products are identified, isolated, reviewed, and disposed of in accordance with the Non-Conforming Product Control Procedures.

The Company has established management regulations such as the Internal/External Audit Management Regulations, regularly conducting laboratory 5S inspections and internal audits to evaluate the laboratory environment, documentation, testing personnel, instruments, and quality control of testing projects. This includes analyzing and rectifying issues, as well as providing daily training for testing projects. Additionally, the laboratory undergoes regular supervision and audits by customers and third parties to ensure effective operations in compliance with quality management requirements. In 2024, the laboratory upgraded its equipment with high-precision instruments such as an Energy Dispersive X-ray Spectrometer (EDS), further enhancing testing capabilities and precision to meet higher-standard quality control demands.

| Digital Systems | Management Content |
| --- | --- |
| Laboratory Information Management System | Used for laboratory testing, the system aids in sample identification, tracking, storage, allocation, and disposal management, records experimental data and analysis results, and generates reports and charts to enhance laboratory testing efficiency. |
| Warehouse Management System | Designed for inbound and outbound management, the system enables warehouse personnel to accurately record goods, track inventory, and schedule inventory movements, achieving comprehensive monitoring and management of warehouse operations. |
| Manufacturing Execution System | Applied to production process management, the system supports automated data analysis across the entire workflow—including incoming material inspection, warehousing, material requisition, stage-by-stage assembly, routine maintenance, process transfer, Factory Acceptance Test (FAT), and finished product non-conformance review—to enable effective traceability. |

### Foster a Quality Culture

PTL is committed to fostering a quality culture with company-wide participation, leveraging performance evaluations, employee incentives, quality training and promotion acitivities, and initiatives such as Quality Culture Month to promote cross-departmental learning and collaboration and to cultivate a strong culture of quality.

PTL continuously strengthens the management of its quality teams by linking quality objectives to Key Performance Indicators under the Quality Objectives and KPI Data Statistics Management

Regulations, thereby enhancing employee motivation and efficiency. Additionally, the Company has established a project bonus policy and incentive mechanisms, such as project awards, providing financial rewards to outstanding teams to further enhance employee awareness of quality management and raise the overall quality management standards.

### Case: Guangdong Katop Establishes Manufacturing Center Training Room

Case: Guangdong Katop Establishes a Training Room at Its Manufacturing Center

The Company has established a Training Room at its Manufacturing Center Training Room to, adopting a combination of theoretical and practical training methods, aiming to enhance employees' individual skills and cultivate multi-skilled personnel. As a public platform, the Training Room supports refresher courses training for operators and critical issue training, significantly improving trainees' assembly theory and hands-on skills. Meanwhile, the Company regularly collects frontline feedback to continuously improve training content driving rapid and steady development of assembly personnel' s skills and effectively enhancing product quality.


Trainees' Training Completion at a Training Room at Its Manufacturing Center

Additionally, the Company has established a continuous improvement platform to carry out various quality improvement activities. In 2024, through this platform, the Company cumulatively organized over ten training sessions at all levels, completed over 60 improvement projects, and mobilized over 200 employees to actively participate in skills competitions, thereby enhancing their production skills.

### Indicators and Objectives

Guided by the objectives of "enhancing product quality, ensuring production safety, and optimizing management processes", the Company establishes and implements various management indicators to drive the execution of quality management initiatives, striving for a comprehensive enhancement of its product quality management system. In 2024, there were no major safety or quality liability incidents related to its products or services.

| Indicators | Objectives | 2024 Progress |
|---|---|---|
| Anode Division Product Shipment Pass Rate | 98% | 100% |
| Separator Materials Division Product Shipment Pass Rate | 99.60% | 100% |
| Equipment Division Product Shipment Pass Rate | 100% | 100% |
| Quality Training Department Coverage Rate | 100% | 100% |

## Customer Service Management

Guided by the service philosophy of enhancing customer satisfaction, PTL has established a rigorous and comprehensive service system. The Company promotes the service concepts of "company-wide customer relationship management" and "full product lifecycle customer management", aiming to elevate the refined management of customer service and address the technical challenges raised by customers based on their needs at different stages.

### PTL Pre-Sales, During-Sales, and After-Sales Customer Service Processes

| | |
|---|---|
| Pre-Sales | Identify and review customer requirements related to products;<br>Establish a project team system and regular customer meeting system, with four communication cycles—weekly, bi-weekly, monthly, and quarterly meetings—to periodically collect customer needs and promote refined service and production;<br>Form one-on-one customer service teams dedicated to conducting pre-sales technical communication and evaluation with customers, and translating customer needs into internal product requirements; |
| During-Sales | Select appropriate transportation methods to ensure on-time delivery of products to customers;<br>Establish customer service teams to address issues and concerns arising during product use; |
| After-Sales | Handle correspondence, calls, and visits regarding product quality, and be responsible for replacement and return of defective products;<br>Form customer complaint teams to proactively collaborate with customers in complaint resolution, prioritize replenishment and returns to meet customer needs, and resolve issues related to obsolete inventory afterward;<br>Assign on-site customer service engineers for each of the customer' s factories, who will reside long-term at the customer' s premises to address issues encountered during product use. |

PTL continuously improves the service system and attaches great importance to customer satisfaction and feedback. It primarily uses annual customer surveys to gather opinions and suggestions, and conducts comprehensive evaluations of customer satisfaction by integrating corporate performance evaluations, aiming to continuously optimize service solutions and enhance service quality.

Additionally, PTL places significant emphasis on customer privacy protection in its customer service management, establishing a comprehensive and rigorous privacy protection system that strictly adheres to relevant national laws and regulations, industry standards, and best practices. It employs multiple technical measures to ensure the security and confidentiality of customer information. Each division regularly or ad-hoc conducts privacy protection training and internal reviews to ensure the effective implementation and continuous improvement of these policies. During the reporting period, no customer privacy breaches occurred.

# Supply Chain Management

## Supply Chain Security

In modern corporate operations, supply chain risk management is a critical component of ensuring business continuity and stability. To address the increasingly complex market environment and global uncertainties, PTL has established a comprehensive supply chain risk management system. Through effective prevention, identification, assessment, and response measures, the Company ensures the stable supply of raw materials, production components, and logistics, mitigates the negative impacts of supply chain disruptions, transportation delays, quality fluctuations, and other incidents on its operations, and safeguards the security of its supply chain.

### PTL Supply Chain Risks and Mitigation Measures

| Supply Chain Disruption | Risk of Transportation Delay | Risk of Quality Fluctuations |
|---|---|---|
| Diversify supplier structure by selecting multiple primary and alternative suppliers, and signing emergency response agreements with key suppliers to ensure the ability to swiftly switch suppliers during supply chain disruptions, minimizing production downtime. | Implement a supplier localization strategy, prioritizing local or regional suppliers to reduce the impact of long-haul transportation, lower logistics costs and timeliness risks, and mitigate supply disruptions caused by policy changes. | Establish rigorous supplier screening and quality control systems, conducting regular audits and evaluations to ensure suppliers' production capabilities and quality management systems remain compliant with standards. |

## Supply Chain Quality Management

Upholding the principles of fairness and transparency in its sunshine procurement policy, PTL has established a comprehensive supplier management system that covers qualification assessment, full process quality supervision, and dynamic performance evaluation to ensure supply chain security and operational efficiency. PTL has formulated institutional documents such as the Supplier Management Regulations and Procurement and Supplier Management Control Procedures, which systematically standardizing key processes including supplier development, cooperation evaluation, and product acceptance. By continuously optimizing its supplier structure, PTL ensures the stability of raw material quality and timely procurement and delivery, effectively meeting the diverse needs of its customers.

## PTL Supplier Comprehensive Management Process

### Supplier Qualification Review

Suppliers submit the Supplier Information Questionnaire and qualification documents. The company evaluates product conformance, historical customer feedback, delivery capabilities, and quality management systems (e.g., ISO 9001/IATF 16949), and preliminarily screens suppliers that meet procurement requirements based on written information.

The review team conducts on-site factory audits to assess the supplier' s operational status, production processes, and quality management system. For non-compliant suppliers, corrective actions are issued, followed by a re-audit after rectification is completed.

Material suppliers must pass sample testing, pilot production, and production validation processes to verify stability and performance.

Based on a comprehensive assessment of qualifications, on-site audit results, and sample evaluations, approved suppliers are determined and added to the Approved Supplier List.

### Supplier Quality Management and Control

Require approved suppliers to sign a Quality Assurance Agreement to clarify quality standards, delivery criteria, procedures for handling quality issues, allocation of quality responsibilities, and mechanisms for quality claims and penalties, thereby mitigating risks associated with product quality.

### Supplier Performance Evaluation

Formulate the "Supplier Performance Evaluation Management Regulations" to conduct monthly, quarterly, and annual performance evaluations of suppliers. Evaluation criteria include pass rate, process capability, supply price, on-time delivery rate, and quality management system operation. Results are, assessed the company' s Supplier Performance Evaluation Team. Based on evaluation results, suppliers are classified into grades, and corresponding incentives and penalties are applied to enhance supplier motivation and improve quality.

| Grades | Management Measures |
|---|---|
| A | Excellent Suppliers: Increase purchase volume to strengthen cooperation. |
| B | Good Suppliers: Maintain normal procurement levels. |
| C | Improvement-Needed Suppliers: Maintain the current order volume and provide on-site audit and coaching for improvements. |
| D | on-Conforming Suppliers: If they fail to complete rectification in a timely manner after coaching, purchase orders will be terminated and they will be removed from the Approved Supplier List. |

### Supplier Corrective Actions and Exit

For the above Grade D Suppliers, the Quality Assurance Department provides focused coaching. If there is no quality t improvement or lack of cooperation within three months, a Supplier Disposition Notice will be issued. After review, the supplier will be downgraded to a Provisional Supplier or directly permanently removed from the supplier roster. If a supplier under provisional status demonstrates effective improvements, it may be re-evaluated and reinstated into the Approved Supplier List.

In order to further meet the procurement quality requirements and strengthen supply chain quality management, PTL has established a Supplier Audit and Coaching Management System and formed a Supplier Audit & Coaching Team. The Team is responsible for conducting regular audits of key material suppliers and suppliers requiring rectification, and providing continuous ongoing process and quality improvement coaching to suppliers with low product pass rates recent quality issues. The procurement department coordinates the submission of supplier coaching needs, and relevant departments such as process, quality, and procurement ----jointly provide online coaching to suppliers. When necessary, the Company will conduct on-site follow-up audits and coaching sessions.

### Supply Chain Sustainable Development Management

PTL is committed to collaborating with its suppliers to build a sustainable supply chain by, promoting improvements in business ethics, environmental protection, and labor rights protection. PTL has established a "Supplier ESG Risk Assessment and Management Procedure integrating a range of environmental and social responsibility measures and performance indicators into its supplier management processes to proactively manage implement ESG -related risks. In 2024, Jiangsu Katop (a PTL subsidiary) obtained certification under the Responsible Business Alliance' s Validated Assessment Program (RBA VAP), further strengthening the Company' s requirements for sustainable supply chain management.

The Company enters into Anti-Corruption Agreement, Environmental Protection Agreement, Social Responsibility Commitment, Safety, Environmental Protection, and Civilized Service Agreement, Contractor EHS Management Regulations, Contractor Safety Liability Notice, and Supplier Environmental and Social Legal Liability Management Agreement with suppliers. These agreements aim to ensure mutual consensus on promoting sustainable supply chain development and establish a positive cooperation model.

## Employee Rights and Benefits

### Employee Rights Protection

A high-quality talent pool serves as the core driving force and strategic resource for the Company' s sustainable development. PTL strictly complies with laws and regulations such as the Labor Law of the People' s Republic of China, Employment Contract Law of the People' s Republic of China, and Social Insurance Law of the People' s Republic of China, establishing legal, compliant, and harmonious employment relationships with employees.

PTL enters into employment contracts with employees in accordance with the law, implementing a universal employment contract system. Upholding the principle of equal employment opportunity, the Company strictly prohibits any form of employment discrimination, workplace harassment, child labor, or forced labor. Adhering to the compensation philosophy of "equal pay for equal work, fairness, and impartiality", the Company provides every employee with equitable growth opportunities and development space, fostering shared growth between employees and the enterprise.

**Overview of PTL's Employee Employment System**

| | |
|---|---|
| **Employment and Dismissal** | Employment: Recruit employees on the basis of equality. Prohibit forced labor and child labor, prohibit any form of discriminatory and sign labor contracts or documents with all types of employees;<br>Dismissal: Establish the process for handling resignation procedures and make specific provisions for the termination of labor contracts in the Employee Handbook. |
| **Promotion and Developmen** | Promotion: Using the annual performance evaluation results of employees as an important basis for promotion; Develop employee promotion proposals and submit them to the Assessment Committee. |
| **Working hours and vacation** | Working hours: Standard working hours: Employees work 40 hours per week; Employees can reasonably adjust their commuting times with a certain degree of flexibility;<br>Overtime: Control overtime and arrange work and rest time reasonably;<br>Vacation: Paid annual leave, marriage leave, funeral leave, maternity leave, parental leave, sick leave, etc. shall be implemented in accordance with national regulations. |

## Employee welfare system

PTL pays attention to the well-being of its employees, establishes a comprehensive welfare system to reward their hard work, and enhances their sense of belonging and happiness.

### PTL Employee Welfare System (Part)

- Performance bonus
- Social insurance
- Commercial insurance
- Employee physical examination
- Staff Motivation Scheme
- R&D rewards
- Team building activities
- Festival condolences
- Communication subsidy
- Transportation allowance
- Catering subsidy
- Birthday gift voucher

### PTL 2024 Employee Activities (Part)

In order to encourage employees to enjoy the joy of healthy exercise and promote communication between employees from different business units, the Company organized the “Unity in Action, Win-Win Collaboration” 2nd Annual Sports Meeting and a series of sports activities including basketball, badminton, football, and yoga. These initiatives enriched employees’ leisure lives, enhanced their physical fitness, and jointly fostered a positive and dynamic corporate culture with employees, embodying the spirit of collective progress and shared vitality.

The Company organizes the “Welcome Back to Katop” event to care for frontline colleagues stationed at customer sites, facilitating communication between customers, frontline teams, and Katop—both on-site and off-site. The event aims to share first-hand experiences from the field, promote corporate capability enhancement and team building, and ultimately elevate the level and quality of customer service.

The Company regularly organizes tourism team-building activities in destinations such as Huangshan, promoting communication and collaboration among employees through enriching outdoor experiences. These activities not only allow employees to relax physically and mentally but also strengthen team cohesion, enhancing their sense of belonging and corporate identity.

### Employee Communication and Exchange

PTL places great importance on employees' opinions and suggestions, having established company-wide communication mechanisms to ensure smooth information flow and timely feedback across all levels of the organization.

PTL utilizes a real-name authenticated online office platform, sets up suggestion boxes in public areas of the workplace, and publicizes the employee complaint and suggestion email, adopting a multi-faceted, multi-channel approach to comprehensively understand employees' needs and feedback.

PTL has established a regular cross-level communication management system and irregular employee forums to ensure smooth communication channels and effective feedback on employee concerns.

**PTL Employee Communication Channels**

PTL encourages employees to engage in constructive dialogue with the organization on issues related to work environment and conditions, providing smooth communication and feedback channels through internal publications and other forms.

PTL opens the email address of the Head of Administration and Human Resources to all employees, further enriching channels for employees to express their concerns.

## Workplace Safety and Occupational Health

### Workplace Safety

PTL firmly upholds the safety, environmental protection, and occupational health policy of "Safety First, Environmental Priority, Prevention Oriented, and Full Employee Engagement striving to achieve the management goals of "zero workplace safety incidents, zero environmental pollution incidents, and zero occupational injury incidents" to safeguard employees' health and safety.

PTL has established a Safety and Environmental Protection Committee (SEPC) as the highest decision-making body for EHS management, appointing the General Manager as the Director of SEPC and the primary responsible person for workplace safety to comprehensively manage, lead, and oversee the safety, environmental protection, and occupational health efforts. Composed of leaders from each business unit and subsidiary, the SEPC collaboratively participates in major EHS decisions and guides/supervises the implementation of EHS initiatives across branches and subsidiaries.

Additionally, the PTL has set up a Technical Sub-Committee under the SEPC, tasked with developing specialized and general EHS checklists, formulating technical guidelines, and designing professional training programs. This sub-committee provides technical support and standard-improvement guidance to subsidiaries, ensuring the effective operation and continuous improvement of the EHS management system.

PTL actively pursues ISO 45001 Occupational Health and Safety Management System certification and safety standardization certification. In 2024, 100% of the Company's production subsidiaries eligible for certification successfully obtained the ISO 45001 certification, demonstrating full compliance with international occupational health and safety management standards.

#### 2024 PTL ISO 45001 Management System Certification and Safety Standardization Certification

| Type of Management System Certification | Subsidiaries with Certification | Eligible Subsidiaries for Certification* | Coverage Rate |
|---|---|---|---|
| ISO 45001 Management System Certification | 17 | 17 | 100% |
| Safety Standardization Certification | 13 | 17 | 76.47% |

Note: Companies ineligible for certification include those under construction, not fully approved, or pending relocation. Additionally, relocated or under-construction companies are not included in the statistics, with the scope limited to subsidiaries engaging in substantial business operations.

To ensure workplace safety, PTL regularly conducts various safety inspections, including daily inspections, specialized inspections, and holiday inspections, carrying out a total of 2,499 safety inspections with a safety hazard rectification rate exceeding 95%. Additionally, the Company has developed workplace safety incident emergency plans to standardize emergency To ensure workplace safety, PTL regularly conducts various safety inspections, including daily inspections, specialized inspections, and holiday inspections, carrying out a total of 2,499 safety inspections with a safety hazard rectification rate exceeding 95%. Additionally, the Company has developed workplace safety incident emergency plans to standardize emergency management, continuously improving the speed and coordination of emergency response to production safety incidents, and effectively preventing and reducing their occurrence. In 2024, the Company organized 315 emergency drills covering scenarios such as fire accidents and confined space incidents, involving 7,471 employee participations.

In 2024, PTL set and achieved a workplace safety management target of monthly average safety incident rate ⩽ 1.5‰ (for bases with a monthly average workforce < 1,000) or 1‰ (for bases with a monthly average workforce ⩾ 1,000), reinforcing safety awareness and advancing sustainable development goals. Throughout the year, no penalties were imposed on the Company for violations of occupational health and safety laws and regulations.

## Occupational Health

PTL always prioritizes the health and safety of its employees, strictly complying with laws and regulations such as the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases. Combined with its business characteristics, the Company continuously enhances the PTL Safety, Environmental Protection, and Occupational Health Management Manual to improve the effectiveness and applicability of its occupational health and safety management system, striving to provide employees with a safe and healthy workplace and continuously reduce occupational health risks.

The Company has established a systematic Environmental, Health, and Safety (EHS) management audit mechanism. In 2024, PTL conducted EHS internal audits for all operational subsidiaries, reviewing environmental, health, and safety elements across audited units and issuing audit reports to drive headquarters and subsidiaries to improve their EHS performance as required.

PTL regularly commissions professional third-party institutions to conduct occupational hazard factor testing in workplaces, identifying hazards such as dust, high temperature, and noise. Targeted protective measures are implemented to address these hazards, ensuring the health and safety of employees.

### Occupational Hazard Factors and Control Measures

| Occupational hazard factors |
| --- |
| dust, noise, high temperature, etc. |

| Measures for Occupational Disease Prevention and Control |
| --- |
| Regularly conduct detection of occupational hazard factors in workplaces with hazard risks. |
| Carry out occupational health examinations for employees in hazardous positions. |
| Provide employees in dust-exposed positions with necessary dust-proof masks; supply employees in noise-exposed positions with earplugs and earmuffs; and equip employees in high-temperature positions with protective gear such as heat-resistant gloves and heat-insulating suits. |
| Based on on-site conditions, adopt engineering and technical measures such as enclosure and ventilation to reduce dust hazards; implement measures like isolation and intrinsic noise reduction of equipment to mitigate noise risks; and adopt management strategies such as shortening working hours and rotating shifts among multiple workers to minimize high-temperature hazards. |
| Regularly organize and conduct training on work safety and occupational health. |
| Post occupational disease hazard information cards at the workplace. |

PTL continues to implement a pre-employment, on-the-job, and post-employment medical examination system for employees exposed to occupational hazard factors (hazard-exposed employees), regularly arranging occupational health examinations for those in hazard-exposed positions. For employees with abnormal findings, the company transfers them to non-contraindicated positions to ensure that hazard-exposed employees have no occupational contraindications. In 2024, 100% of the company's hazard-exposed employees completed specialized occupational disease health examinations. Meanwhile, the company regularly provides routine health check-ups for all employees and implements measures such as shift rotation and capped overtime hours at production bases to safeguard employee health.

The EHS information management system developed by PTL integrates modules such as hazard management, compliance management, and training management, improving the timeliness of EHS management and ensuring traceability of all tasks. In 2024, the company continued to iterate on the system's functionality, developing over 50 EHS best practice projects and sharing training course resources for internal use, effectively enhancing environmental and safety management efficiency and standards. The subsidiary Ruyuan Fluororesin built a "Smart 6+5 Platform," which has achieved functions including intelligent patrols, basic safety management, special operation management, a double prevention mechanism, major hazard source management, and work safety training.

PTL conducts various forms of occupational health training and publicity to enhance employees' work safety awareness and capabilities, including specialized occupational health training, promotional campaigns, posting posters and banners, and distributing educational brochures. In 2024, the company organized approximately 853 environmental, health, and safety (EHS)-related training sessions, covering 22,944 employees.

### 2024 PTL Selected Occupational Health Training Cases

| | |
|---|---|
| **Occupational Hygiene Training** | Facing over 400 employees in hazard-exposed positions, Sichuan AET popularized occupational health knowledge, including the classification and uses of labor protective equipment, as well as the correct wearing and maintenance of such equipment. This strengthened employees' awareness of the proper use of protective gear and reduced the likelihood of work-related injuries. |
| **Emergency First Aid Skill Training** | Guangdong AET invited personnel from the local Red Cross Society to conduct "Emergency First Aid Skills" training, comprehensively explaining emergency knowledge such as cardiopulmonary resuscitation (CPR), the use of AED devices, and handling of sudden incidents and common accidental injuries. It distributed first aid kits, emergency first aid manuals, and practice tools, and organized on-site "one-on-one" practical exercises and assessments for skills like CPR and trauma care. Fifteen department representatives and EHS team members participated in the training, with 100% passing the practical exam and obtaining "first aider certificates" issued by the Red Cross Society. |
| **Occupational Health Week Promotional Campaign** | Katop launched its annual Occupational Health Week campaign, distributing over 300 pieces of promotional materials, including videos, posters, and courseware, to enhance employees' overall awareness of occupational health. |

# Employee Development and Training

## Governance

The Human Resources Department, as the management and execution department for employee development, is responsible for formulating and revising employee development management systems, defining the competencies, capabilities, and skills required for each job position, organizing and implementing employee promotion evaluations, and continuously improving the employee training system. In addition, the heads of employees' respective departments form a support team, which is tasked with submitting employee promotion lists and evaluation materials, identifying employee training needs, and providing career development advice for department staff.

## Strategy

PTL adheres to the management philosophy of "talent-first, people-oriented," striving to build a team of highly qualified professionals with strong expertise, innovation, and enterprising spirit to provide a solid talent foundation for the company's development.

PTL has formulated and implemented a systematic talent development strategy. Through comprehensive and efficient talent identification, diversified talent retention measures, targeted talent recruitment, systematic training platforms, and digital talent management tools, it aims to optimize human resource allocation, enhance employee competencies, and support the company's sustained growth and long-term development.

## Impact, Risk and Opportunity Management

### Talent Pipeline Building

Through systematic talent inventory, construction of a job grading system, optimization of promotion and cross-functional management mechanisms, and effective implementation of performance evaluations, PTL comprehensively enhances talent management efficiency and provides sustained support for employee development.

PTL has established a sound job grading system and promotion channels, clarifying qualification requirements and promotion criteria to motivate employees to achieve vertical career development through self-improvement, aligning with corporate strategic needs. Promotion channels are divided into managerial and professional tracks, allowing employees to choose their development direction based on personal performance, capabilities, and career plans. Additionally, PTL implements a "Succession Plan" based on talent inventory results, making the cultivation of job successors a prerequisite for middle and senior manager promotions to strengthen employee development awareness among managers at all levels.

### Talent Development Mechanism

PTL has established diversified talent development mechanisms, covering models such as horizontal development, management trainee programs, and off-campus collaborative training, to provide employees with comprehensive career development paths and ensure that talent development remains highly aligned with the company's strategic objectives.

PTL has established a learning expense subsidy system and partners with external educational institutions to launch employee academic advancement programs, providing subsidies of varying degrees for all employees at headquarters and subsidiaries pursuing academic or professional studies. This initiative encourages and supports employees to pursue diverse learning and development opportunities outside of work to continuously enhance their capabilities.

### Employee Performance and Compensation Management

PTL uses a reasonable and effective performance evaluation system to conduct comprehensive assessments of employees' work achievements, capabilities, and attitudes, ensuring that compensation is aligned with employees' contributions and value. This motivates employees to improve performance and promotes the realization of the company's overall goals. Additionally, during daily operations, supervisors actively provide employees with performance coaching and resource support to ensure that goals are achievable.

### Employee Training Management

Based on its development plan, industry trends, job requirements, and employees' growth needs, PTL invests substantial software and hardware resources to establish a comprehensive and diverse employee training system. This system aims to enhance employees' professional skills and comprehensive competencies, facilitating their personal career development and shared growth with the company.

PTL offers various training programs for all employees, including corporate-level and department-level courses, and encourages active participation in external training opportunities.

### Indicators and Goals

PTL is committed to building a scientific and robust talent development system to fully unleash talent effectiveness; through sustained learning and innovation mechanisms, it empowers team growth and personal development; promotes a pragmatic and efficient work style, strengthens team collaboration, and continuously enhances organizational effectiveness.

| Indicators | 2024 Progress |
|---|---|
| Percentage of Employees Covered by Mid-to-Senior Talent Inventory | 100% |
| Intern Conversion Rate to Full-Time Employees | 100% |
| Employee Training Coverage Rate | 100% |

## Social Contribution and Rural Revitalization

PTL is attentive to societal needs and actively participates in public welfare and charity initiatives. Leveraging its development characteristics and resource advantages, the company provides infrastructure support to communities, creates employment opportunities in regions where it operates, and actively supports educational public welfare. In 2024, the total public welfare investment reached RMB 1.0377 million (including RMB 0.2838 million for the employee mutual aid fund).

In 2024, PTL actively fulfilled the social responsibility and continued to advance rural revitalization efforts, with a focus on supporting the educational development of rural children. It invested a total of RMB 0.6892 million in education funding throughout the year to assist students from disadvantaged backgrounds and improve rural educational conditions.

The headquarters and subsidiaries collaborated on educational assistance programs. Subsidiaries in Ningde, Zhaoqing, Jiangxi, and other regions provided learning support to rural children by establishing scholarships and grants, as well as donating activity funds and supplies to schools.

07

# Governance

- Corporate Governance
- Risk Management
- Business Ethics
- Intellectual Property Protection

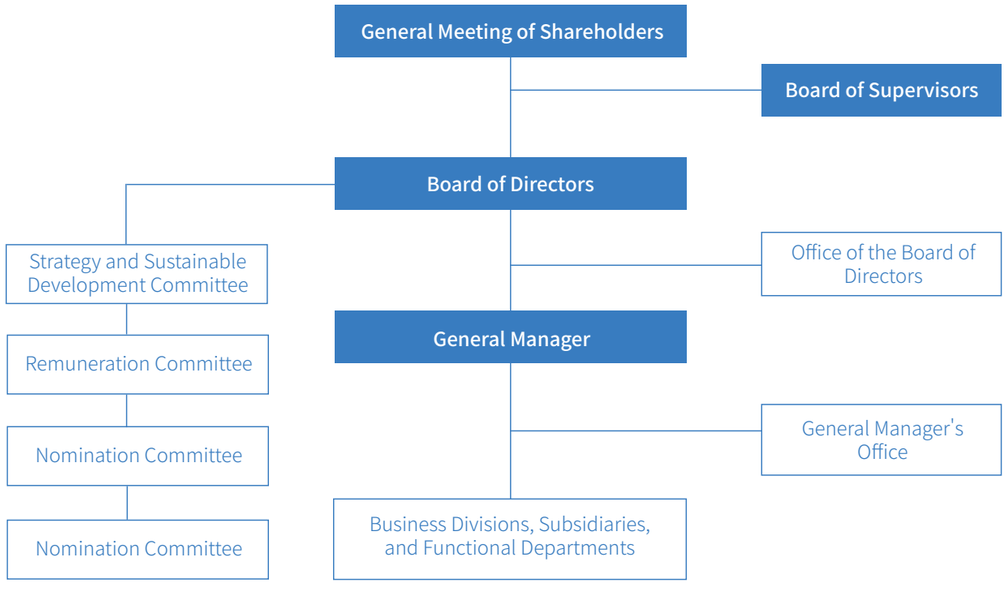
# Corporate Governance

## Corporate Governance

### Corporate Governance Structure

PTL is dedicated to establishing a high-standard corporate governance structure, continuously enhancing corporate governance standards and risk management capabilities to create value for shareholders and society. It has established a sound checks and balances mechanism comprising the General Meeting of Shareholders, Board of Directors, and Board of Supervisors, optimizing collaboration among authoritative, decision-making, supervisory, and executive bodies to achieve the management objectives of "scientific decision-making, effective supervision, and stable operations.

### PTL Corporate Governance Structure Chart




PTL attaches great importance to the composition of the Board of Directors, ensuring that the composition of its members complies with regulatory requirements and that Board members possess the professional capabilities and management experience necessary to guide the Company's development. The PTL Board of Directors consists of five directors, two of whom are independent directors, meeting the regulatory requirement of Chinese regulatory authorities that independent directors should account for at least one-third of the Board of Directors of listed companies. Background information on Board members, including their resumes and other corporate positions they hold, has been disclosed on the designated disclosure website of the stock exchange.

### PTL Composition of the Board of Directors and Board of Supervisors and Details of Relevant Meetings Held

#### Composition

5 Directors of the Board of Directors

2 Independent Directors

3 Supervisors of the Board of Supervisors, including 1 Employee Supervisor

#### Details of Meetings Held

2 sessions of the General Meeting of Shareholders, a total of 13 proposals reviewed

9 sessions of the Board of Directors Meetings, a total of 45 proposals reviewed Of these, 4 sessions of Independent Directors' Special Meetings were held, reviewing 4 proposals in total

7 sessions of the Board of Supervisors Meetings, a total of 28 proposals reviewed

## PTL Board of Directors Members and Their Professional Backgrounds

| Name | Title | Professional Competencies | | |
|---|---|---|---|---|
| | | Industry Experience | Risk Management | Financial Management |
| **Liang Feng** | Chairman of the Board | ✓ | ✓ | ✓ |
| **Chen Wei** | Director | ✓ | ✓ | ✓ |
| **Han Zhongwei** | Director | ✓ | ✓ | ✓ |
| **Huang Yong** | Independent Director | ✓ | ✓ | |
| **Pang Jinwei** | Independent Director | | ✓ | ✓ |

Note: The Company draws on the MSCI corporate governance rating methodology and combines factors such as the educational backgrounds, professional experience, and years of industry service of Board members to comprehensively assess the alignment of their professional backgrounds.

## Related-Party Transactions Management

To continuously improve PTL standardized operations and protect the legitimate rights and interests of the Company and all shareholders, the Company has formulated the Related-Party Transactions Decision-Making System to strictly regulate related-party transactions and clearly specify the handling of relevant amounts in the transaction procedures. PTL Audit Committee is responsible for confirming the list of related parties, including directors, supervisors, senior management, and shareholders holding more than 5% of the shares, and filing their information for record. When any of these parties has a related-party relationship with the Company, the Audit Committee promptly reports to the Board of Directors and the Board of Supervisors and ensures timely disclosure of relevant information.

## Performance and Remuneration of Directors, Supervisors, and Senior Management

PTL has established a strict remuneration decision-making process to ensure that the compensation for its directors, supervisors, and senior management complies with the decision-making procedures. The remuneration plans for directors and senior management are formulated by the Remuneration and Appraisal Committee and can only be implemented after review and approval by the Board of Directors and the General Meeting of Shareholders. Meanwhile, as oversight bodies, the Board of Supervisors and independent directors have the authority to provide opinions on remuneration plans.

Sustainable development management is a key component of PTL management system. To ensure effective supervision and management of the ESG (Environmental, Social, and Governance) efforts, environmental management and business ethics have been integrated into the regulatory responsibilities of the Board of Directors. Furthermore, to further refine the Board' s oversight and review responsibilities for ESG and the management responsibilities of senior executives, the Company has established ESG-related performance evaluation indicators for Board members and senior management. The remuneration of the aforementioned personnel is linked to their annual ESG performance, ensuring continuous improvement in ESG management standards.

## PTL Remuneration and Performance Management System for Directors, Supervisors, and Senior Management

| | |
|---|---|
| Performance Appraisal | TL has established systematic and scientific performance evaluation management methods to conduct performance evaluations for management personnel based on the company' s operational performance and individual work performance, providing an evaluation basis for the remuneration distribution of directors, supervisors, and senior management. |
| Salary Structure | Fixed Salary + Short-Term Incentives + Long-Term Incentives |

### Investor Relations Management

PTL is committed to maintaining active interaction and communication with various types of investors to ensure transparent information disclosure and timely responses to investor needs. For Qualified Foreign Institutional Investors (QFII), PTL regularly hosts and organizes research activities for domestic and foreign institutions, actively participates in Hong Kong and overseas roadshows organized by institutions such as J.P. Morgan, and showcases the company's development strategies and market prospects to global investors. For retail and small-to-medium investors, the Company receives over 120 phone inquiries throughout the year and responds to 75 investor queries on the "Shanghai Stock Exchange e-Interaction" platform designated by the China Securities Regulatory Commission. Additionally, the Company holds 3 online performance briefings, answering a total of 143 investor questions, further enhancing investors’ understanding of and trust in the company’s operations.

# Risk Management

## Governance

Sound risk management is core to ensuring the stable operations and sustainable development. PTL has established a risk management mechanism that supports strategic implementation and integrity building, defining the philosophy and principles of risk management and establishing a multi-layered accountability system.

PTL has formulated corporate regulations such as the *Articles of Association*, *Rules of Procedure for the General Meeting of Shareholders*, *Rules of Procedure for the Board of Directors*, and *Detailed Rules for the General Manager’s Work*, which clarify the review and execution authorities of the General Meeting of Shareholders, Board of Directors, and General Manager’s Office in daily operations, including financial management, fund management, related-party transactions, information disclosure management, and investor relations management. The Company has also developed risk management policies such as the *Internal Control System* and continuously improves its internal control management system to effectively address and manage internal and external risks, ensuring PTL achieves high-quality sustainable development.

## Strategy

PTL places great emphasis on risk management, upholds compliant operations, and conducts all business in accordance with the principle that **"external regulations should be internalized into corporate rules, and internal rules should conform to external regulations"**. Through risk assessments, the Company has identified that inadequate risk management may lead to compliance costs and resource allocation risks, while robust risk management can help improve decision-making quality and enhance brand reputation.

Based on the identification of risks and opportunities, the Company formulates response measures to ensure stable operations in an ever-evolving market environment and drive long-term sustainable development.

## Impact, Risk, and Opportunity Management

### Risk Management Process

PTL strictly complies with laws and regulations such as the *Company Law of the People's Republic of China* and the *Securities Law of the People's Republic of China*, attaches great importance to risk management, and is committed to building a comprehensive risk prevention and control system. Through its robust risk management processes, the Company can systematically identify, hierarchically assess, and effectively address various potential risks, significantly enhancing its overall risk management capabilities and resilience to external changes. By maintaining strong defenses, PTL ensures sustainable and stable development.

### Internal Control

To further enhance the risk management capabilities and strengthen internal control, PTL implements risk management by establishing an Internal Control Evaluation System composed of five key elements: internal environment, risk assessment, control activities, information and communication, and internal supervision.

**In 2024, PTL key focus areas for internal control include:**

Leveraging system platforms to embed internal controls into information systems, implementing pre-emptive control measures, and achieving standardized and routine internal control processes;

Enhancing the internal control system and deepening business process optimization to ensure legal and regulatory compliance in operations, asset security, truthful/complete/reliable financial data, and improved operational efficiency and effectiveness;

Conducting risk-oriented audit and evaluation of the rationality of internal control design and the effectiveness of implementation for key business processes and critical matters, to promote the establishment of sound risk management mechanisms;

Providing specialized training on risk identification, hierarchical assessment, internal control, and compliance management for key departments involved in risk management—including audit, finance, sales, procurement, capital construction, production and materials control, human resources, safety and environmental protection—to enhance risk management and compliance awareness among employees in management departments.

### Regular Audit

PTL conducts regular audits, and during routine and special audits, implements special audit procedures for business ethics-related issues such as anti-fraud, related-party relationships, employee business ethics, and supplier management/evaluation. In 2024, the Company completed a total of 59 audits, including 21 routine audits, 22 special audits, and 16 capital construction audits, covering the Company and its 26 subsidiaries. Additionally, in compliance with listing rules and the code of business ethics, the Company adopts standards higher than regulatory requirements for managing employee related-party relationships. It conducts comprehensive investigative audits into whether employees in key positions (finance, procurement, sales, engineering, capital construction, quality, R&D, etc.) and employees at the managerial level and above, as well as their close relatives, have related-party transactions with the Company's customers and suppliers. This ensures transparency in all transaction relationships between employees and the Company, preventing potential conflicts of interest and inappropriate conduct.

### Indicators and Objectives

PTL is committed to implementing comprehensive risk management to identify, assess, and address potential risks in business operations, ensuring the company's stable and sustainable development.

| Indicators | 2024 Progress |
|---|---|
| Risk-Based Audit Coverage and Frequency | Covering PTL and the 26 subsidiaries, a total of 59 audits were completed. |
| Internal Control Training Coverage and Frequency | PTL conducted 35 specialized internal control training sessions for nearly 10,000 employees in key departments—including finance, procurement, sales, warehousing, and capital construction—across three major business divisions. |

## Business Ethics

### Governance

The Board of Directors oversees internal business ethics and anti-corruption issues. The Audit Committee of the Board and its executive body, the Internal Control and Audit Center, are responsible for implementing related management tasks. By strictly enforcing pre-event prevention, conducting regular reviews of business ethics standards, providing unobstructed reporting channels, and cultivating employees' awareness against corruption and bribery, the Company establishes a sound business ethics environment internally.

### Strategy

PTL places great emphasis on the development and advancement of business ethics, continuously enhancing the standardization and transparency of its business ethics management. The Company ensures that its operations worldwide comply with high ethical standards and continues to promote the establishment and implementation of a culture of integrity.

## Impact, Risk, and Opportunity Management

### Business Ethics Standards and Practices

The Company strictly complies with laws and regulations such as the Anti-Unfair Competition Law of the People's Republic of China and the Interim Provisions on the Prohibition of Commercial Bribery, and continuously improves the PTL Code of Business Ethics to clarify management norms for business ethics.

Whistleblowing and Complaint Management

PTL actively communicates its principles of transparent, integrity-driven, and credible operations to customers. It does not exaggerate product performance, features, or quality; does not engage in false advertising; and does not fabricate or disseminate false or misleading information to customers. The Company publishes an anti-fraud reporting email for customers, suppliers, internal employees, and other stakeholders, and has established anti-corruption supervision and whistleblowing procedures to ensure closed-loop processing of reports.

**PTL Reporting Email**

Reporting Email: afi@putailai.com

Reporting Address: Internal Control and Audit Center, No. 116, Lane 456 (Chuangyan Zhizao), Di-eqiao Road, Pudong New Area, Shanghai

Anti-Corruption Supervision and Whistleblowing Handling Procedures

The Company prioritizes whistleblower protection, covering personal rights, property rights, employment rights, democratic rights, reputational rights, and other legal rights and interests to ensure the confidentiality of whistleblowers' identities and protection from retaliation. The PTL Code of Business Ethics explicitly outlines legally protected rules for anonymous whistleblowing, stipulating that whistleblowers' information, tips, and materials are managed by dedicated personnel and kept strictly confidential.

In 2024, no negative incidents related to business ethics occurred at the Company.

### Building a Culture of Integrity

he Company actively promotes the building of a culture of integrity by regularly conducting integrity training, awareness campaigns, and other initiatives to strengthen employees' legal and compliance awareness. In 2024, the Company organized training and assessments on business ethics standards for board members and all employees to enhance and reinforce their awareness and capabilities in adhering to these standards.

Additionally, the Company provides business ethics training and anti-fraud briefings to suppliers. In response to gaps in suppliers' anti-corruption policy development and periodic review management, it plans to optimize relevant management policies, mandating that all suppliers establish anti-corruption policies. When necessary, PTL will audit suppliers' anti-corruption management systems or invite external third-party agencies to conduct independent audits to ensure effective policy implementation and compliance.

### Objectives and Indicators

The Company is committed to fostering an honest, fair business environment free of corruption or bribery, continuously elevating the business ethics standards of the Company and its employees. It establishes management objectives and indicators for business ethics audits and training to achieve these goals.

| Objectives | 2024 Progress |
|---|---|
| Frequency of Business Ethics Audits and Business Coverage | The Company conducted the 2024 annual audit, covering over 80% of the business operations at the headquarters and its subsidiaries. |
| Number of Business Ethics Training Sessions and Employee Coverage Ratio | The Company conducted 6 business ethics training sessions for all employees. |

# Intellectual Property Protection

TL has established the Patent Management Regulations at the corporate level. While complying with these regulations, each subsidiary formulates relevant systems such as the Intellectual Property Management System and R&D Management Standards within its own management framework based on specific operational needs, ensuring the proper implementation of intellectual property (IP) protection across the Company and its subsidiaries.

The Company has defined workflows covering patent application procedures, requirements for patent documentation, case-rating criteria, patent incentive mechanisms, overseas patent portfolio planning, procedures to prevent infringement of third-party rights, and risk management mechanisms. Integrating these with its IP-related policies, PTL has established a centralized IP management system covering over 40 subsidiaries across the organization. Leveraging an IP information system, the Company enables cross-regional and cross-division information-based management of its intellectual property assets.

## 2024 PTL Intellectual Property Protection Measures

### Intellectual Property Protection for Innovative Achievements

PTL actively promotes technological innovation and the protection of its own intellectual property, making intellectual property risk investigations for new products a preliminary step in R&D management. It closely monitors patent applications and protection for new technological innovations throughout the R&D process.

### Intellectual Property Infringement Risk Assessment

PTL commissions professional third-party agencies to conduct intellectual property infringement risk assessments for its key products and prepares comparative analysis reports on potential infringements. For the outcomes and products of critical projects, it conducts two independent "back-to-back" evaluations—internal and external—to ensure thoroughness.

### Employee Agreement Signing

PTL signs confidentiality agreements with every new employee. In the due diligence process for R&D, supply chain, and certain functional positions, it includes inquiries about intellectual property compliance and the signing of non-compete agreements.

### Intellectual Property Training

PTL provides annual intellectual property training to its R&D and process departments. In 2024, it organized 4 training sessions, covering over 140 participants.

In 2024, the Company detected no legal or regulatory violations related to intellectual property, nor were there any litigation cases arising from such matters. By the end of 2024, the Company had obtained 1,207 granted patents and 123 software copyrights.

# ESG Data Sheets and Notes

## Environmental Performance

### Energy management performance

| Index | Unit | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| **Energy use** | | | | |
| comprehensive energy consumptio[1] | Tons of standard coal | 233,772.90 | 241,750.86 | 192,522.84 |
| Direct energy consumption[1] | Tons of standard coal | 13,268.19 | 23,944.74 | 26,083.12 |
| Indirect energy consumption[1] | Tons of standard coal | 220,504.71 | 217,806.12 | 166,439.72 |
| Energy intensity[2] | Tons of standard coal /10 thousand CNY | 0.15 | 0.16 | 0.14 |
| Nonrenewable power consumption[3] | MWh | 1,510,935.06 | 1,345,822.30 | 871,543.27 |
| Renewable power usage[3] | MWh | 131,461.82 | 225,706.09 | 193,531.01 |
| Steam consumption | GJ | 541,802.67 | 717,940.04 | 1,010,130.65 |
| Natural gas consumption | $M^3$ | 9,293,350.00 | 17,457,374.00 | 20,964,436.37 |
| Gasoline consumption | L | 179,640.00 | 155,205.00 | 115,323.35 |
| **Clean energy use by energy type** | | | | |
| Clean energy consumption | MWh (equivalent electricity) | 231,960.11 | 414,490.13 | 343,028.41 |
| Natural gas | MWh (equivalent electricity | 100,498.29 | 188,784.04 | 149,497.40 |
| Natural gas ratio | % | 43.33 | 45.55 | 43.58 |
| Renewable power usage | MWh (equivalent electricity) | 131,461.82 | 225,706.09 | 193,531.01 |
| Proportion of renewable power consumption | % | 56.67 | 54.45 | 56.42 |

Note 1: the calculation of comprehensive energy consumption refers to the general rules for the calculation of comprehensive energy consumption (GB/T 2589-2020), covering energy types including natural gas, gasoline, diesel, electricity, steam, etc. Direct energy includes natural gas, gasoline and diesel; Indirect energy sources include electricity and steam.

Note 2: energy use intensity=comprehensive energy consumption/operating income, the same below.

Note 3: since 2023, the company has disclosed additional renewable power consumption, including photovoltaic self generation, green power and green certificate.

### Greenhouse gas emissions performance

| Index | Unit | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Range 1 greenhouse gas emissions[1] | Ton carbon dioxide equivalent | 47,729.21 | 68,538.98 | 67,377.09 |
| Range 2 greenhouse gas emissions[2] | Ton carbon dioxide equivalent | 921,284.56 | 846,495.86 | 628,985.38 |
| Total greenhouse gas emissions (range 1+range 2) | Ton carbon dioxide equivalent | 969,013.77 | 915,034.84 | 696,362.47 |
| Greenhouse gas intensity (range 1+range 2) | Ton carbon dioxide equivalent /10 thousand CNY | 0.63 | 0.60 | 0.52 |

Note 1: refer to ISO 14064-1: 2018 and general rules for accounting and reporting of greenhouse gas emissions from industrial enterprises (GB/T 32150-2015) to calculate the combustion emissions of natural gas, gasoline and diesel from fixed combustion equipment, self owned official vehicles and mobile vehicles in the plant. The greenhouse gas included is CO2. Among them, the calculation of emission factors refers to the guidelines for accounting methods and reporting of greenhouse gas emissions by enterprises in other industries in industry (Trial) (2015), and the calorific value and other parameters take the corresponding default values in the guidelines.

Note 2: refer to ISO 14064-1: 2018 and general rules for accounting and reporting of greenhouse gas emissions from industrial enterprises (GB/T 32150-2015) to calculate the indirect emissions of purchased electricity and purchased steam; The greenhouse gas included is CO2. Among them, the emission factors of purchased power in 2022 and 2023 refer to 0.5703 tco2e/MWh in the notice on the management of greenhouse gas emission reports of power generation enterprises from 2023 to 2025 (2023) of the Ministry of ecology and environment, and the emission factors of purchased power in 2024 refer to 0.5942 tco2e/MWh in the announcement on Issuing carbon dioxide emission factors of power in 2021 of the Ministry of ecology and environment; For the emission factor of purchased steam, refer to the guidelines for accounting methods and reporting of greenhouse gas emissions by enterprises in other industries in industry (Trial) (2015) and take 0.11 tCO2/GJ.

## Water management performance

| Index | Unit | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Total water consumption[1] | 10000 tons | 247.94 | 259.94 | 359.64 |
| Water consumption by water source: municipal water supply | 10000 tons | 247.94 | 259.82 | 283.66 |
| Water consumption by water source: groundwater | 10000 tons | 0 | 0 | 0.31 |
| Water consumption by water source: rainwater collected and stored directly by enterprises | 10000 tons | 0 | 0.12 | 0.01 |
| Water intake by source: others | 10000 tons | 0 | 0 | 75.66 |
| Water intensity | Ton/10 thousand CNY | 1.60 | 1.69 | 2.67 |
| Total recycled water[2] | 10000 tons | 105.78 | 112.25 | 3,927.88 |

Note 1: in 2024, the company additionally disclosed groundwater and other sources of water intake. Other water sources mainly include the water supply of enterprises inside and outside the production base park.
Note 2: in 2024, the company adjusted the statistical method of circulating water consumption to take the product of circulating water volume and circulation times as the total amount of circulation, so the total amount of circulating water consumption increased.

## Packaging management performance

| Index | Unit | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Total use of packaging materials for finished products[1] | 10000 tons | 1.84 | 1.53 | 2.85 |
| Total recyclable packaging materials[2] | 10000 tons | 0.28 | 0.67 | 2.14 |
| Total disposable packaging materials[3] | 10000 tons | 1.30 | 0.86 | 0.71 |

Note 1: in 2024, the use of packaging materials increased, mainly due to the expansion of production by internal subsidiaries during the reporting period.
Note 2: recyclable packaging materials mainly include recyclable drums, trays, etc.
Note 3: disposable packaging materials mainly include disposable woven bags, cartons, etc.

## Emissions and waste management performance

| Index | Unit | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Total wastewater discharge[1] | 10000 tons | 64.16 | 99.44 | 160.19 |
| Industrial wastewater discharge | 10000 tons | 36.57 | 53.66 | 101.49 |
| Domestic wastewater discharge | 10000 tons | 27.59 | 45.78 | 58.70 |
| Chemical oxygen demand (COD) emissions | ton | 44.95 | 70.06 | 110.68 |
| Ammonia nitrogen (NH3-N) emissions[1] | ton | 0.21 | 7.23 | 13.25 |
| Particulate emissions[2] | ton | 37.33 | 96.51 | 33.46 |
| Nitrogen oxide emissions[2] | ton | 85.30 | 64.19 | 39.74 |
| Sulfur oxide emissions[2] | ton | 33.24 | 59.53 | 17.76 |
| Volatile organic compounds (VOCs) emissions[3] | ton | 7.84 | 13.94 | 18.11 |
| Total noxious waste[4] | 10000 tons | 2.35 | 4.32 | 2.89 |
| Total hazardous waste[4] | 10000 tons | 0.41 | 0.38 | 0.47 |
| Innocuous waste density | ton/million CNY | 1.52 | 2.82 | 2.15 |
| Hazardous waste density | ton/million CNY | 0.27 | 0.25 | 0.35 |

Note 1: wastewater discharge in 2024 increased compared with the previous year, mainly due to the completion and operation of production bases of internal subsidiaries and the expansion of production capacity during the reporting period.
Note 2: waste gas emissions in 2024 decreased compared with previous years, mainly due to the adjustment of production capacity of major waste gas emission subsidiaries during the reporting period.
Note 3: VOCs mainly counts organic substances such as alkane hydrocarbons, aromatic hydrocarbons, esters, aldehydes and dichloromethane, mainly from anode pelletizing, graphitization, base film coating processing and other links, and the emission has increased compared with the previous year, mainly due to the gradual production of internal subsidiaries during the reporting period.
Note 4: the total amount of harmless waste mainly includes solid waste such as domestic waste, packaging materials and waste anode materials; The total amount of hazardous waste mainly includes hazardous waste such as waste engine oil, waste engine oil barrel and waste R&D products.

# Social Performance

## Innovation Driven Performance

| Index | Unit | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| R&D investment | 10 thousand CNY | 92,144.46 | 96,064.95 | 74,338.44 |
| Proportion of R&D expenses to operating income | % | 5.96 | 6.26 | 5.53 |
| Number of R&D personnel | person | 900 | 1,342 | 1,768 |
| Proportion of R&D personnel | % | 7.98 | 11.54 | 17.11 |
| Cumulative number of authorized patents | | 972 | 1,044 | 1,207 |
| Number of patent applications during the reporting period | | 237 | 279 | 433 |
| Number of patents authorized during the reporting period | | 214 | 179 | 186 |
| Number of software copyright registrations during the reporting period | | 11 | 12 | 39 |

## Supply Chain Management Performance

| Index | 2024 |
|---|---|
| Total suppliers | 8,078 |
| Number of suppliers in mainland China | 8,055 |
| Number of suppliers in Hong Kong, Macao, Taiwan and overseas | 23 |
| Number of new suppliers screened using environmental standards | 252 |
| Number of new suppliers screened using social criteria | 441 |
| Number of suppliers conducting environmental impact assessments | 2,104 |
| Number of suppliers conducting social impact assessments | 1,430 |
| Number of suppliers determined to have actual and potential significant negative environmental and social impacts | 0 |
| Number of suppliers receiving environmental and social related training or capacity building activities | 1,164 |

## Employee Equity and Multiple Performance

| Index | 2022 | 2023 | 2024 |
|---|---|---|---|
| Total employees | 11,278 | 11,627 | 10,331 |
| Number of male employees | 9,238 | 9,423 | 8,209 |
| Number of female employees | 2,040 | 2,204 | 2,122 |
| Number of employees under 30 | 3,638 | 3,981 | 3,615 |
| Number of employees aged 30 to 50 | 7,096 | 7,091 | 6,250 |
| Number of employees over 50 | 544 | 555 | 466 |
| Number of management employees | 340 | 369 | 369 |
| Total number of penalties for violations of employee employment and labor laws and regulations | 0 | 0 | 0 |

## Employee Benefit Performance

| Index | Unit | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Social insurance coverage | % | 100 | 100 | 100 |
| Proportion of employees paying provident fund | % | 100 | 100 | 100 |
| Proportion of employees participating in physical examination | % | / | 100 | 100 |
| Total amount of employee activity investment | 10 thousand CNY | / | 79.99 | 74.21 |

## Occupational Health and Safety Performance

| Index | Unit | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Employee injury insurance coverage | % | 100 | 100 | 100 |
| Amount invested in employee injury insurance | 10 thousand CNY | 384.60 | 376.46 | 496.60 |
| Coverage rate of employee safety production liability insurance | % | / | / | 100 |
| Investment amount of employee safety production liability insurance | 10 thousand CNY | 4.50 | 16.50 | 19.35 |
| Workdays lost due to injury[1] | day | / | / | 2,252.75 |
| Number of employees killed as a result of work related injuries | person | 0 | 0 | 0 |
| Total time of occupational health and safety training | hour | 89,644 | 92,916 | 83,208 |
| Total investment in safe operation | 10 thousand CNY | / | / | 3,162.11 |

Note:
1. In 2024, the number of working days lost due to industrial injuries mainly came from object strikes and mechanical injuries suffered by employees in the process of work. The company has timely treated the injured employees in accordance with the safety accident report and investigation and handling process, and done a good job of follow-up improvement according to the accident report.

## Employee Development and Training Performance

| Index | Unit | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Annual training expenditure | 10 thousand CNY | / | 1,592.19 | 1,349.79 |
| Total training sessions | | 3,869 | 3,920 | 5,517 |
| Average length of employee training[1] | hour | 30.40 | 30.08 | 34.77 |
| Average length of training for male employees[1] | hour | 34.50 | 36.27 | 35.75 |
| Average length of training for female employees[1] | hour | 31.50 | 33.20 | 31.10 |
| Employee training coverage[2] | % | 100 | 100 | 100 |
| Male employee training coverage[2] | % | 100 | 100 | 100 |
| Female employee training coverage2 | % | 100 | 100 | 100 |

Note:
1. Average training time of employees=total training time of employees/total number of employees. Average training time of employees by gender=total training time of employees by gender/number of employees by gender.
2. Employee training coverage rate=total number of employees trained/total number of employees. Employee training coverage by gender=number of employees trained by gender/number of employees trained by gender.

## Social Contribution Performance

| Index | Unit | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Total amount of social welfare investment | 10 thousand CNY | 282.32 | 242.04 | 103.77 |
| the amount of investment in Rural Revitalization | 10 thousand CNY | 51.50 | 126.00 | 3.00 |
| Total volunteer time | hour | / | / | 16,569 |
| Employee volunteer service | | / | / | 257 |

# Corporate Governance Performance

## Economic performance

| Index | Unit | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Total assets | 10 thousand CNY | 3,569,730.92 | 4,367,494.76 | 4,210,355.51 |
| Net profit attributable to shareholders of listed companies | 10 thousand CNY | 310,443.40 | 191,160.35 | 119,061.80 |
| Basic earnings per share | CNY | 1.54 | 0.95 | 0.56 |
| Cash dividend amount | 10 thousand CNY | 47,288.22 | 29,795.11 | 35,777.06 |
| Cash dividend plan (per 10 shares) | CNY | 3.40 | 1.40 | 1.70 |

## Business Ethics Performance

| Index | Unit | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| The average duration of anticorruption training per employee[1] | hour | 3 | 3 | 3 |
| The average duration of anti-corruption training received by management personnel.[1] | hour | / | 4 | 4 |
| The average duration of anti-corruption training received by directors[1] | hour | 3 | 5 | 5 |
| Percentage of board members covered by anticorruption training | % | 100 | 100 | 100 |
| Percentage of suppliers participating in anticorruption training[2] | % | / | 100 | 100 |
| Number of corruption lawsuits filed and concluded against the issuer or its employees during the reporting period | | 0 | 0 | 0 |
| Number of violations of laws and regulations in trade secret protection (including intellectual property rights) | | 0 | 0 | 0 |
| The number of cases in which the company has been sanctioned by relevant departments for unfair competition in operation or violation of trust and anti-monopoly laws | | 0 | 0 | 0 |
| Amount involved in litigation or major administrative penalties due to unfair competition of the company during the reporting period | 10 thousand CNY | 0 | 0 | 0 |

Note 1: per capita length of anti-corruption training=total length of anti-corruption training/total number of corresponding personnel (according to the total number of employees, total number of management employees and total number of directors).
Note 2: in addition to special training meetings, the company's anti-corruption training for suppliers also includes various ways such as publicizing and signing anti-fraud statements in important business activities such as bidding.

# Appendix

## Appendix 1: Index of Proper Nouns

| Proper Noun | Definition |
|---|---|
| APQP | Advanced Product Quality Planning |
| AR | Augmented Reality |
| FAT | Factory Acceptance Test |
| FMEA | Failure Mode and Effects Analysis |
| EDS | Energy Dispersive Spectrometer |
| EHS | Environment, Health & Safety |
| ERP | Enterprise Resource Planning |
| GRI | Global Reporting Initiative |
| HSF | Hazardous substances free |
| LCA | Life Cycle Assessment |
| LIMS | Laboratory Information Management System |
| MES | Manufacturing Execution System |
| MSA | Measurement Systems Analysis |
| MSDS | Material Safety Data Sheet |
| NMP | N-Methyl-2-pyrrolidone |
| OA | Office Automation |
| PE | Polyethylene Film |
| PPAP | Production Part Approval Process |
| PVDF | Polyvinylidene fluoride |
| PAA | Polyacrylic Acid |
| QMS | Quality Management System |
| RBA VAP | Responsible Business Alliance Validated Audit Process |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RoHS | Restriction of Hazardous Substances |
| SBR | Styrene-Butadiene Rubber |
| SPC | Statistical Process Control |
| SRM | Supplier Relationship Management |
| SVHC | Substances of Very High Concern |
| WMS | Warehouse Management System |
| WRI | World Resources Institute |

## Appendix 2: Comparison Table of Company Name and Abbreviation

| Full name | Abbreviation |
|---|---|
| Shanghai Putailai New Energy Technology Co., Ltd | PTL、The company |
| Guangdong KATOP Automation Technology Co., Ltd | Guangdong KATOP |
| Jiangxi KATOP Intelligent Equipment Co., Ltd | Jiangxi KATOP |
| Liyang Zichen New Material Technology Co., Ltd | Liyang Zichen |
| Jiangxi Zichen Technology Co., Ltd | Jiangxi Zichen |
| Jilin Zichen Technology Co., Ltd | Jilin Zichen |
| Sichuan Zichen Technology Co., Ltd | Sichuan Zichen |
| Inner Mongolia Zichen Xingfeng New Energy Technology Co., Ltd | Inner Mongolia Zichen |
| Ruyuan East Sunshine Fluororesin Co., Ltd | Ruyuan Fluororesin |
| Sichuan AET New Material Technology Co., Ltd | Sichuan AET |
| Ningde AET New Materials Technology Co., Ltd | Ningde AET |
| Jiangsu AET New Material Technology Co., Ltd | Jiangsu AET |
| Guangdong AET New Material Technology Co., Ltd | Guangdong AET |

# Report preparation instructions

This report is the fourth environmental, social and corporate governance (ESG) report of Shanghai putailai New Energy Technology Co., Ltd. (hereinafter referred to as "PTL" and "the company"), which discloses to investors and other stakeholders the concept, management methods, work and results of the company's ESG issues in its operation.

## Scope of reporting

The scope of this report covers Shanghai putailai New Energy Technology Co., Ltd. and its subsidiaries. Unless otherwise specified, it is consistent with the scope of the consolidated financial statements of putailai (Stock Code: SH.603659) for the same period.

## Reporting period

The reporting period is from January 1, 2024 to December 31, 2024. Unless otherwise specified, the data in this report are all data during the period.

## Data description

The data and cases in the report come from the official records of the company's actual operation.

The financial data in the report are in RMB. If the financial data are inconsistent with the annual financial report of the company, the annual financial report shall prevail.

## How reports are obtained

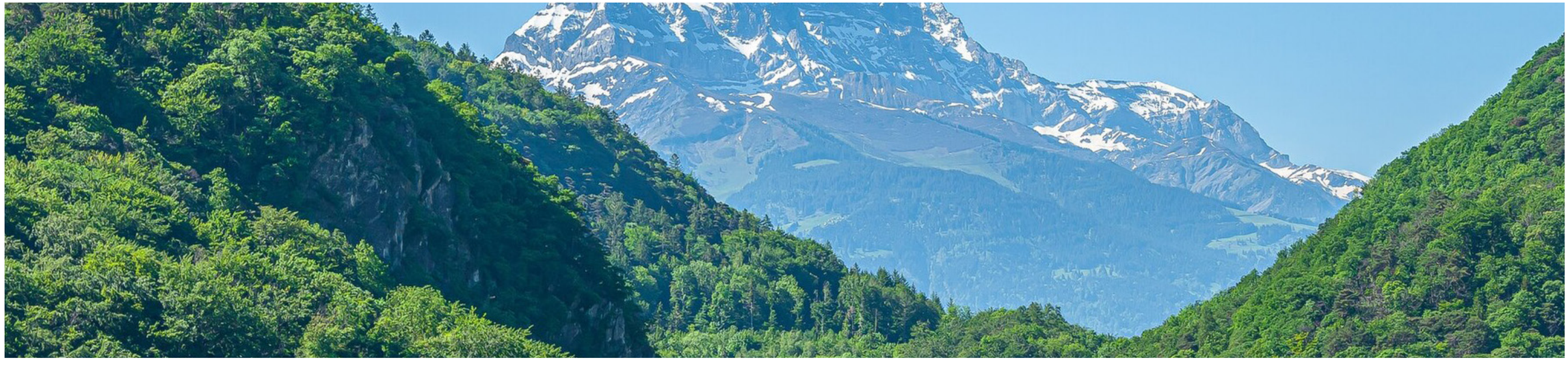
This report is released in electronic form on the company's official website https://www.putailai.com/ And the information disclosure platform designated by the stock exchange.

## Contact Company

If you have any comments or suggestions on the report, you can contact the company through the following ways:

Contact address: No.116, Zone G, Lane 456, dieqiao Road, Pudong New Area, Shanghai

Contact: IR@putailai.com




璞泰来
PUTAILAI