



2022 Summary of Environmental Social and Governance Report

Shanghai Putailai New Energy Technology Co.,Ltd.



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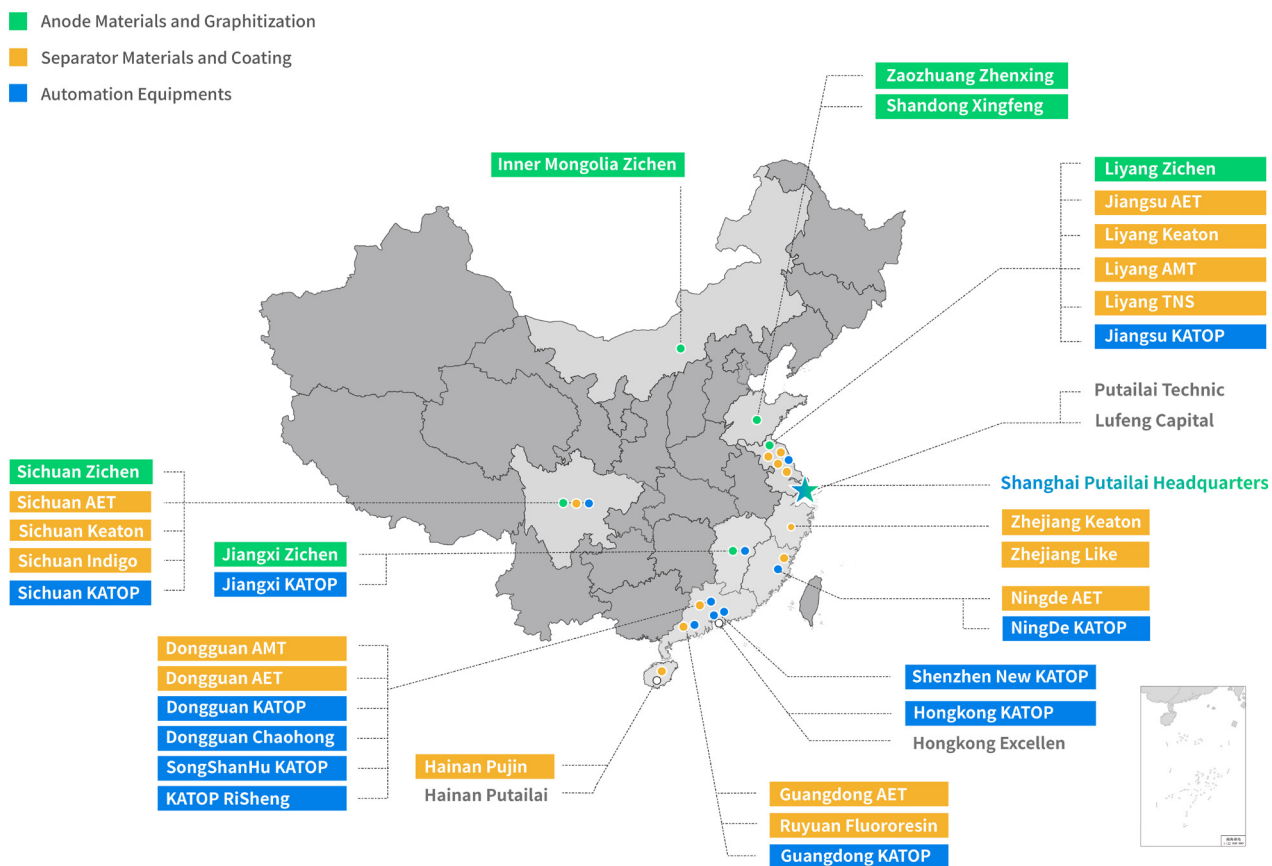


01 | About Putailai

Company Profile

Shanghai Putailai New Energy Technology Co., Ltd. (603659 SH, "Putailai" or "the Company") was founded in 2012, headquartered in Shanghai and registered capital of RMB 1.39 billion by the end of 2022, listed on the Shanghai Stock Exchange in 2017. Putailai is committed to becoming a global leading comprehensive solutions provider for key materials and automation equipment for new energy batteries, with its main business covering anode materials and graphitization processing, separator and coating processing, automation equipment, PVDF and adhesives, composite current collectors, aluminum-plastic packaging films, nano-alumina and boehmite, etc. By the end of 2022, Putailai had more than 30 wholly-owned and holding subsidiaries.

Putailai attaches great attention to ecological environmental protection, fulfills social responsibility, improves governance, and takes various active measures to improve ESG governance. In 2022, Putailai successfully raised the Company's MSCI ESG rating from BB to BBB. In the future, Putailai will strengthen planning to further improve its ESG governance level.



2022 Key Performance

Operation revenue

RMB 15,463.91 million

Annual environmental investment expenditure

RMB 159.91 million

Operation profit

RMB 3,683.71 million

Amount of community welfare investment

RMB 2,823,200

Total assets

RMB 35,697.31 million

Employees

11,278

Number of patents

972

Training hours per employee

30.40 hours

Total greenhouse gas emissions

132 million tons of carbon dioxide equivalent

R&D investment

RMB 921.44 million



02 | ESG Management

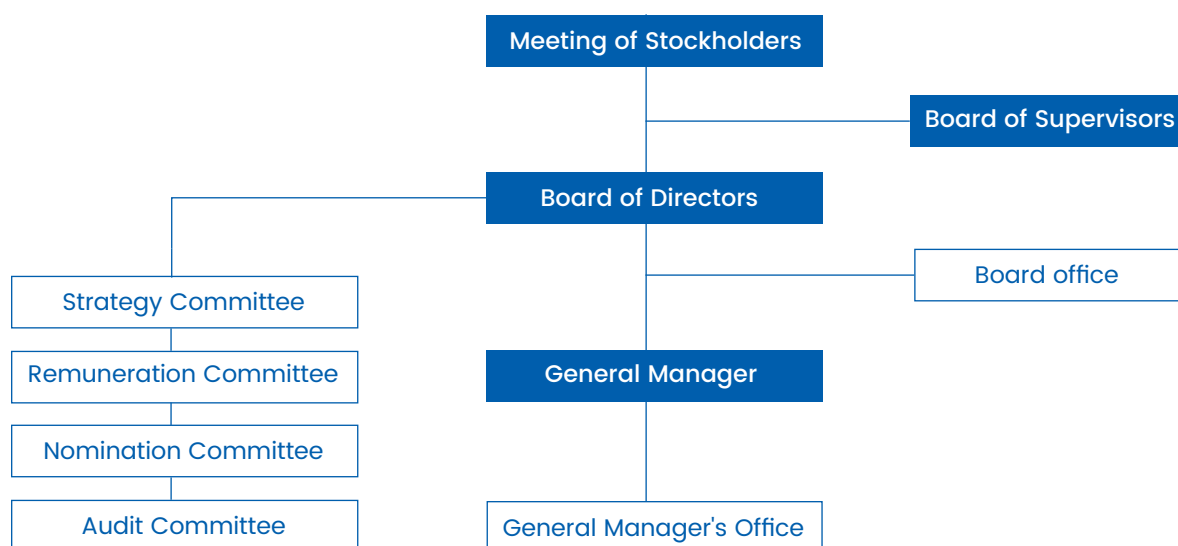
Based on the Company's strategy and actual situation, Putailai has established a three-level management structure from the Board of Directors, ESG Working Group to each department and subsidiary, and clarified the ESG responsibilities of each level.

Putailai ESG management organizational structure



03 | Compliance Operation and Sound Development

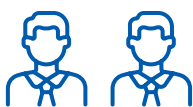
Governance Structure of Putailai



Composition of the Board of Directors and the Supervisory Board



Three non-independent directors of the Board of Directors



Two independent directors of the Board of Directors



3 supervisors on the Board of Supervisors, of which 1 employee supervisor

The Conduct of Relevant Meetings



3 stockholders meetings were held in 2022, with 25 motions considered



the Board of Directors held 7 meetings in 2022, with 42 motions considered



the Board of Supervisors held 7 meetings in 2022, with 35 motions considered

Risk Management and Auditing

In 2022, Putailai carried out risk identification from four aspects: strategy, operation, finance, environment and safety, and took appropriate response methods. In 2022, Putailai completed a total of 25 audits, including 8 routine audits, 6 special audits, 11 infrastructure audits, covering the Company and its 11 subsidiaries.

Business Ethics

Putailai is committed to promoting a business environment of honesty, fairness, and free of corruption or bribery. Putailai actively conveys the business philosophy of transparency and integrity to business partners, publicly discloses an anti-corruption report email to customers, suppliers, internal staff and other stakeholders.

Report Email

afi@putailai.com

Report Address

Audit Department
No. 116, Lane 456, Dieqiao Road,
Pudong New Area, Shanghai



04 | Excellent Products and Customer Service

Putailai adheres to the quality policy of "Exceeding customer expectations is the Company's direction of striving", and provides high-quality products and service to partners and customers. Currently, 11 subsidiaries of the 22 manufacturers have passed the IATF 16949 automotive quality management system, and 15 subsidiaries have passed the ISO 9001 quality management system certification, 3 subsidiaries have passed ISO 22301 for business continuity management certification.



Hazardous Substances Management

The company strictly abides by the "Regulations on the Safety Management of Hazardous Chemicals", "The List of Priority Control Chemicals", the EU "Restriction of Hazardous Substances Directive" (RoHS), the EU "Registration, Evaluation, Authorization and Restriction of Chemicals Regulation" (REACH) and other conventions, laws and regulations.

Customer Service Management

Putailai always regards continuously improving of customer satisfaction as the service tenet. The Company has established a rigorous service system, and formulates a number of institutional documents, such as "Customer Complaint Management Regulations", and "Customer Satisfaction Measurement and Evaluation Procedures", to ensure the Company's excellent service level.

Responsible Sourcing

Putailai has established a comprehensive supplier management system and formulated "Supplier Management Regulations", "Procurement and Supplier Management Control Procedures" and other systems, to standardize management of suppliers in the whole procurement. The company has developed a comprehensive supplier admission evaluation process, and carries out quarterly comprehensive assessment of suppliers, taking different management measures for different levels.

Putailai introduced a series of social and environmental indicators in supplier management to ensure that suppliers meet the company's sustainability expectations, mainly including: requiring suppliers to provide ISO 14001 Environment System Certificate, ISO 45001 Occupational Health and Safety System Certificate, etc., prohibiting outsourcing parties from employing child labor, signing "Integrity Agreement", "Environmental Protection Agreement", "Social Responsibility Commitment Letter" with suppliers, and requiring raw material suppliers to provide RoHS reports for raw materials and recyclable and reusable packaging materials, etc.



05 | Technological Innovation and Clean Development

Continuous improvement of product performance and reduction of environmental footprint had always been the pursuit of Putailai. The Company's R&D team has increased to 900 people, and continues to increase R&D investment. In 2022, Putailai continued to maintain effective investment in R&D with investment of RMB 921.44 million , accounting for 5.96% of operation revenue.

Intellectual Property Protection

Putailai abides by laws and regulations such as the "Intellectual Property Law of the People's Republic of China", attaches great importance to its own intellectual property protection work, and developed the "Patent Management Measures". In 2022, AET and Zichen Technology passed the GB/T 29490 Enterprise Intellectual Property Management System Certification.

As of December 31, 2022, Putailai had been granted 972 patents and 48 software copyrights.



06 | Green Operation to Reduce Environmental Impact

Putailai strictly abides by the "Environmental Protection Law of the People's Republic of China", "Energy Conservation Law of the People's Republic of China" and relevant national and local laws and regulations, and takes effective environmental management measures to reduce the impact on the environment.

By the end of 2022, 15 production-oriented subsidiaries had obtained ISO 14001 Environmental Management System certification, accounting for 68.18% of all production-oriented subsidiaries in production.

Carbon Emission Management

Putailai set up a "Dual-carbon" joint working group to establish a three-level organizational structure for decision-making, implementation planning and operation, and build a Carbon Emission Reduction and Energy Integrated Management department within the company.



Putailai's Clean Energy Goals

Renewable Energy Usage Targets

10% by 2023
 30% by 2024
 50% by 2025

Green Electricity Usage Targets

100% green electricity use by 2030

Energy Management

In 2022, Putailai completed bidding for rooftop photovoltaic project in 7 factories, with an installed capacity of 50.01 MWP, all adopting the contract energy management model. After the projects are connected to the grid, the annual power generation will be about 50 million KWh, which saves about 6,100 tons of standard coal (equivalent value) annually, and reduces the annual carbon dioxide emissions about 39,400 tons.

In 2023, Putailai plans to carry out process and equipment renovation projects to further improve energy efficiency and reduce energy consumption.

Water Resources Management

Putailai pays high attention to the sustainable use of water resources, as well as the impact of its operations on the water environment and the potential water resources pressure that it may face.

In 2022, Putailai used an external tool - the World Resources Institute (WRI) "Aqueduct Water Risk Atlas" to conduct water stress assessments on 22 already operational subsidiaries and 7 subsidiaries that have not yet been put into production by the end of 2022.

Putailai 2022 Water Stress Assessment Results of Each Subsidiary

Operation Status of Subsidiaries	Very High Risk	High Risk	Low to Medium Risk	Low Risk
Built and put into production	1	7	1	13
Not built /not put into production	0	1	0	6



In 2022 , Putailai's total water consumption was 2.48 million tons, of which 1.42 million tons were from municipal water supply and 1.06 million tons of recycled water usage, accounting for 42.66 % of the total annual water consumption.

Discharge Management

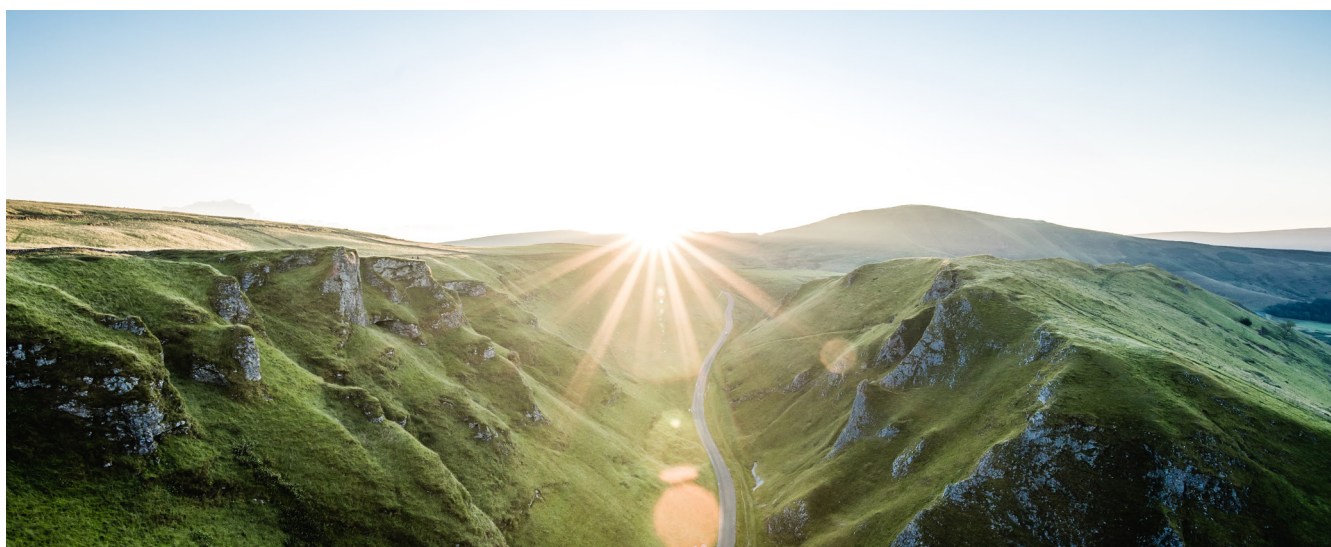
Putailai is highly concerned about the emissions generated by business operations and its treatment process, and strictly follows relevant laws and regulations as well as the Company's "Environmental Protection Management System" for management and disposal of waste. In 2022, the company's all emission indicators met the standards.

In 2022, Putailai discharged 641,600 tons of wastewater.

In 2022, 2 subsidiaries of Putailai were listed as key water pollution units. During the year, the water treatment systems of the two companies operated normally, without exceeding standards and no major water quality incidents occurred.

Subsidiary	Main Pollutants	Emission Method	Number of Outlets	Outlet Distribution	Average Emission Concentration mg/L	Pollutant Discharge Standard mg/L	Emissions
Liyang zichen	Chemical Oxygen Demand (COD)	Indirect emission	1	Factory area	89.40	500	Up-to-standard
	Suspended solids (SS)	Indirect emission			35.89	400	Up-to-standard
	Ammonia nitrogen	Indirect emission			17.59	45	Up-to-standard
	Total phosphorus	Indirect emission			3.12	8	Up-to-standard
	Total nitrogen	Indirect emission			25.10	70	Up-to-standard

Subsidiary	Main Pollutants	Emission Method	Number of Outlets	Outlet Distribution	Average Emission Concentration mg/L	Pollutant Discharge Standard mg/L	Discharge
Li Yang TNS	Chemical Oxygen Demand (COD)	Indirect emissio	1	Factory area	75.00	450	Up-to-standard
	Suspended solids (SS)	Indirect emissio			36.00	400	Up-to-standard
	Ammonia nitrogen	Indirect emission			21.50	30	Up-to-standard
	Total phosphorus	Indirect emission			3.52	8	Up-to-standard
	dichloromethane	Indirect emission			Not detected	0.2	Up-to-standard
	Petroleum	Indirect emission			0.09	20	Up-to-standard



In 2022, one of Putailai's subsidiaries was listed as a key air pollution discharge unit for the atmospheric environment. During the year, the Company's waste gas treatment system was operating normally and no pollution incidents occurred.

Subsidiary	Main Pollutant	Emission Method	Number of Outlets	Outlet Distributio	Average Emission Concentration mg/m ³	Pollutant Discharge Standard mg/m ³	Emissions
Inner Mongolia Zichen Xingfeng	Particulate matter	Discharge after centralized treatment	13	Factory area	15.80	120	Up-to -standard
	Sulfur dioxide	Discharge after centralized treatment	9		16.10	550	Up-to -standard
	Nitrogen oxide	Discharge after centralized treatment	9		39.00	240	Up-to -standard
	Asphalt smoke	Discharge after centralized treatment	3		12.90	220	Up-to -standard
	BaP	Discharge after centralized treatment	3		0.000063	2.2*10 ⁻³	Up-to -standard

07 | People-oriented create harmony

Putailai strictly abides by relevant laws and regulations such as the "Labor Law of the People's Republic of China", "Labor Contract Law of the People's Republic of China" and "Social Insurance Law of the People's Republic of China" to protect the legal rights ,benefits and welfare of every employee.



Occupational Health and Safety

By the end of 2022, 14 subsidiaries had obtained the ISO 45001 occupational health and safety system certification, and more than 7 subsidiaries had passed the safety standardization certification. In 2022, Putailai further strengthened the construction of the EHS team, and the staffing of the environmental safety department increased to more than 130.

In 2022, Putailai conducted 150 onsite emergency drills, with 8,000 employees involved in the drills. 126,812 hours of safety training were conducted throughout the year, providing 63,400 training opportunities.

Besides, Putailai has launched training programs for employees on product knowledge, safety education, management skills, etc. The total training time was up to 340,000 hours, and with a total of 3,869 training sessions and an average training time of 30.40 hours.

Community Service

Putailai participates in public welfare and charity actively out of the concern about social needs. The Company has provided employment opportunities and infrastructure construction for the community and actively supported education and public welfare by its own development characteristics and resource advantages. The total investment in public welfare was up to RMB 2.82 million in the year.

In the future, the corporate vision of "continuously forging ahead for clean energy, environmental protection and energy conservation, and striving to contribute to creating a better homeland" will guide Putailai's business operation. Putailai will constantly improve the Company's practice in terms of environmental protection, society and corporate governance, and share the fruits of prosperity and development with the whole society, to achieve sustainable business operations.

Shanghai Putailai New Energy Technology Co., Ltd.





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