

Shanghai Putailai New Energy Technology Co., Ltd.

2022 Annual Report Summary

A. Company Information

Name of Putailai in Chinese	上海璞泰来新能源科技股份有限公司
Abbr. of Putailai name in Chinese	璞泰来
Name of Putailai in English	Shanghai Putailai New Energy Technology Co., Ltd.
Abbr. of Putailai name in English	Putailai
Legal Representative	Liang Feng

B. Contact Information

	Secretary of the Board	Representative for Securities Affairs
Name	Han Zhongwei	Zhang Xiaoquan
Address	No. 116, Lane 456, Dieqiao Road, Pudong New Area, Shanghai	No. 116, Lane 456, Dieqiao Road, Pudong New Area, Shanghai
Tel.	(021) 61902930	(021) 61902930
Fax	(021) 61902908	(021) 61902908
E-mail	IR@putailai.com	IR@putailai.com

C. Company Profile

Registered address	Room 301-96, Building 1, No. 400 Fangchun Road, China (Shanghai) Pilot Free Trade Zone
Office address	No. 116, Lane 456, Dieqiao Road, Pudong New Area, Shanghai
Zip code of office address	201315
Website address	www.putailai.com
E-mail address	IR@putailai.com

D. Information disclosure and place to obtain the report

Media and its website address where the report is disclosed	"Securities Times": www.stcn.com "China Securities Journal": www.cs.com.cn "Shanghai Securities News": www.cnstock.com "Securities Daily": www.zqrb.cn
Securities exchange for publishing the annual report	www.sse.com.cn
Place where the report is available	No. 116, Lane 456, Dieqiao Road, Pudong New Area, Shanghai

E. Stock Information

Company stock profile				
Stock type	Stock exchange where the shares are listed	Stock abbreviation	Stock code	Previous Stock abbreviation(if any)
A shares	Shanghai Stock Exchange	Putailai	603659	

F. Key Accounting Data and Financial Indicators in the past three years

a) Key accounting data

Unit: CNY

Key accounting data	2022	2021	Change(%)	2020
Operation revenue	15,463,905,959.37	8,995,894,111.31	71.90	5,280,674,058.78
Net profits attributable to shareholders of the the listed company	3,104,433,993.56	1,748,727,819.13	77.53	667,637,525.89
Net profits attributable to shareholders of The listed company after deduction of non-recurring gains and losses	2,959,051,738.74	1,660,041,467.57	78.25	623,691,577.96
Net cash flow from operating activities	1,223,361,736.87	1,725,113,559.10	-29.09	693,563,527.25
	31 December 2022	31 December 2021	Changes of the Same Period (%)	31 December 2020
Net assets attributable to shareholders of the listed company	13,456,926,161.06	10,486,702,727.06	28.32	8,914,163,998.06
Total assets	35,697,309,157.66	21,450,262,561.84	66.42	14,486,275,424.65

b) Key Financial Indicators

Key Financial Indicators	2022	2021	Change (%)	2020
Basic earnings per share (CNY /share)	2.24	1.27	76.38	0.55
Diluted earnings per share (CNY/share)	2.23	1.26	76.98	0.54
Basic earnings per share after deducting non-recurring gains and losses (CNY/share)	2.14	1.20	78.33	0.51
Weighted average ROE (%)	26.00	18.07	Increased by 7.93 percentage points	15.92
Weighted average ROE after deducting non-recurring gains and losses (%)	24.76	17.16	Increased by 7.60 percentage points	14.87

G. Discussion and Analysis of Business Situation

Putailai is committed to becoming a global leading comprehensive solutions provider for key materials and process technologies for new energy batteries and promotes battery performance improvement and manufacturing efficiency by technology R&D innovation, provides customers with diversified and differentiated product portfolios and professional integration services by raw material innovation, manufacturing process upgrade, large-scale efficient production and industry chain synergy layout.

In 2022, the global market of power battery and energy storage battery has maintained growth rapidly. Putailai's diversified and differentiated product portfolio actively matched the needs of downstream customers, with rapid growth in production and sales of various business segments.

In terms of anode materials, the domestic market size of power battery expanded rapidly, which offset the impact of the periodical downturn in the global consumer electronics and European power markets; and the gradual increase in self-built graphitization and carbonization supporting production eased the upward pressure from rising prices of the upstream raw material, energy; outsourced graphitization and carbonization processing. Lithium-ion battery silicon-carbon anode material research and development have been recognized by customers and plans for the production base are actively being made. Putailai's sodium-ion battery hard carbon product's customer verification is moving smoothly and progressing to pilot-scale experiment.

In the area of separator coating processing, Putailai provides customers with cost-effective products and services by improving equipment process efficiency and implementing various cost reduction. The market share continues to increase and economies of scale are achieved; Putailai's base film production line has been successfully installed and trial-produced, and Putailai has been actively working on customer certification since completing internal certification. The volume of various new products such as coating materials and new binders, like PVDF, PAA, and boehmite slurries, has rapidly increased, which has become a new growth point for the corporate's performance.

In terms of automation equipment business, Putailai's on-hand order quantity has increased significantly. Products such as high-speed double-sided coating machines, lamination machines, and liquid injection machines have been widely recognized by downstream customers. The market share of coating machines has rebounded significantly. The orders of new products in the middle and back-end equipment continue to experience breakthroughs.

Putailai continues to invest in new products and applications, and expands the application of materials in power batteries and energy storage batteries. The composite current collector developed by Putailai has obtained a number of invention patents and utility model patents, and the pilot products have been recognized by customers. Putailai actively promotes the mass production preparation and batch certification of the composite current collector. Putailai cooperates extensively with scientific research units, and through these collaborations, the bio-based aramid coating materials have been validated to be feasible in batches, and Putailai is working with the partner to promote mass production.

In 2022, Putailai achieved operating revenue of CNY 15.46 billion, a year-on-year increase of 71.90%, and a net profit attributable to shareholders of the company of CNY 3.10 billion, a year-on-year increase of 77.53%. Putailai's specific business situation during the reporting period is reviewed as follows:

a) Anode Materials and Graphitization Division

In 2022, Putailai's anode material business achieved a shipment of 139,491 tons, a year-on-year increase of 43.45%; main business revenue reached of CNY 7,649.85 million, a year-on-year

increase of 49.15%; and graphitization processing business achieved main business revenue of CNY 1,698.07 million (including internal sales), a year-on-year increase of 68.21%.

b) Separator and Coating Division

The market shares of Putailai's separator coating processing business further increased during the reporting period, and new products such as various coating materials and new binders represented by PVDF, PAA, and boehmite slurries rapidly increased in volume, becoming the company's new performance growth point. In 2022, Putailai's coated separator and processing volume reached 4.34 billion square meters. The main business revenue of separator and coating processing was CNY 3,686.12 million, a year-on-year increase of 67.91%; and the main business revenue of PVDF products was CNY 1,834.08 million (including internal sales), a year-on-year increase of 310.16%.

c) Lithium-ion battery automation equipment Division

During the reporting period, Putailai's automation equipment business seized the market opportunities brought about by the expansion cycle of the new energy industry, and orders amount increased significantly, which achieved main business-revenue (including internal sales) of CNY 2,400.89 million, a year-on-year increase of 75.55%. As of the end of the reporting period, Putailai's on-hand orders had amounted to CNY 4.18 billion (tax included).

H. Business Strategy

Going forward, Putailai will accelerate implementation of the development strategy of "two vertical-and one horizontal expansion, all-out attack, blooming in multiple places ". Through vertical integration strategy, Putailai will build an integrated industry chain of anode materials and base film coating to form a closed loop of the industry chain. Through horizontal strategic expansion. Putailai will expand its product line in the field of automation equipment business, consolidate the technical advantages of the existing business, improve market shares and scales effect, and deploy overseas markets and new businesses. Putailai aims to achieve 600,000 tons of anode material, 2.5 billion square meters of base film, 40,000 tons of PVDF, 14 billion square meters of coated separator processing capacity and 6.5 billion automation equipment output value by the end of 2025. Putailai is committed to becoming a world-class platform enterprise with leading technology, excellent products, and standardized management, providing solutions for battery materials and processes, and contributing to the rapid development of the global new energy battery industry.

I. Shareholdings of the Top Ten Shareholders

Shareholdings of the top ten shareholders						
Shareholder name (full name)	Increase or decrease during the reporting period	Number of shares held at the end of the period	Proportion (%)	Number of shares held with restrictions on sales	Shares in pledge, marked or frozen	
					Share Status	Quantity
Liang Feng	183,279,614	366,559,228	26.36	0	In pledge	62,821,600

Ningbo Shengyue Venture Capital Partnership (Limited Partnership)	79,400,457	158,800,914	11.42	0	In pledge	109,760,000
Nanyang Kuoneng Enterprise Management Partnership (Limited Partnership)	68,896,395	137,792,790	9.91	0	none	
Chen Wei	60,907,212	121,076,924	8.71	0	In pledge	2,230,000
HKSCC	66,103,322	111,519,314	8.02	0	none	
Qi Xiaodong	13,100,000	26,200,000	1.88	0	none	
China Construction Bank Co., Ltd.-Huaxia Energy Innovation Equity Securities Investment Fund	14,053,559	20,660,046	1.49	0	none	
Industrial and Commercial Bank of China Co., Ltd.- ABC-CA New Energy Theme Flexible Allocation Hybrid Securities Investment Fund	4,280,352	18,259,257	1.31	0	none	
Postal Savings Bank of China Co., Ltd.-East Growth Small and Medium Cap Hybrid Open-end Securities Investment Fund	8,869,017	11,609,095	0.83	0	none	
Han Zhongwei	3,749,651	7,499,302	0.54	0	In pledge	2,970,000