天能

TIANNENG POWER INTERNATIONAL LIMITED
天 能 動 力 國 際 有 限 公 司

(Incorporated in the Cayman Islands with limited liability)

(Stock Code: 00819)

RESULTS ANNOUNCEMENT
FOR THE YEAR ENDED 31 DECEMBER 2022
AND
PROPOSED AMENDMENTS TO THE EXISTING MEMORANDUM AND ARTICLES OF ASSOCIATION AND ADOPTION OF THE AMENDED AND RESTATED MEMORANDUM AND ARTICLES OF ASSOCIATION

FINANCIAL HIGHLIGHTS

- Gross profits increased by approximately 38.27% to approximately RMB6,389 million.
- Profit attributable to Shareholders increased by approximately 38.19% to approximately RMB1.796 billion.
- Basic earnings per share increased by approximately 39.13% to approximately RMB1.60.
- A final dividend of HK40 cents per share is proposed.

2022 ANNUAL RESULTS

The board of directors (the "**Board**") of Tianneng Power International Limited (the "**Company**" or "**Tianneng**") hereby announces the results of the Company and its subsidiaries (collectively the "**Group**") for the year ended 31 December 2022 together with that for the previous financial year as follows:

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the year ended 31 December 2022

		Year ended 31 December	
		2022	2021
	Notes	***RMB'000***	*RMB'000*
Revenue	*4*	**74,598,641**	85,615,917
Cost of sales		**68,209,336**	(80,994,895)
Gross profit		**6,389,305**	4,621,022
Other income		**1,106,402**	1,094,307
Other gains and losses	*5*	**(57,443)**	1,669
Impairment losses under expected credit loss model, net of reversal		**(143,062)**	(113,459)
Distribution and selling expenses		**(1,229,444)**	(1,037,235)
Administrative expenses		**(1,362,895)**	(989,376)
Research and development costs		**(1,622,379)**	(1,483,162)
Share of results of associates		**(905)**	(2,735)
Finance costs	*6*	**(340,738)**	(254,089)
Profit before tax		**2,738,841**	1,836,942
Income tax expense	*7*	**(659,163)**	(285,730)
Profit for the year	*8*	**2,079,678**	1,551,212

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME *(Continued)*

For the year ended 31 December 2022

		Year ended 31 December	
		2022	2021
	Note	***RMB'000***	*RMB'000*
Other comprehensive income (expense)			
Item that will not be reclassified to profit or loss:			
Fair value gain (loss) on investments in equity instruments at fair value through other comprehensive income ("**FVTOCI**"), net of income tax		**46,142**	(104,611)
Item that may be reclassified subsequently to profit or loss:			
Fair value gain on debt instruments measured at FVTOCI, net of income tax		**5,687**	6,494
Other comprehensive income (expense) for the year, net of income tax		**51,829**	(98,117)
Total comprehensive income for the year		**2,131,507**	1,453,095
Profit for the year attributable to:			
Owners of the Company		**1,796,385**	1,299,952
Non-controlling interests		**283,293**	251,260
		2,079,678	1,551,212
Total comprehensive income attributable to:			
Owners of the Company		**1,848,214**	1,201,835
Non-controlling interests		**283,293**	251,260
		2,131,507	1,453,095
Earnings per share	*10*		
– Basic (RMB cents)		**160**	115
– Diluted (RMB cents)		**157**	113

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

At 31 December 2022

		As at 31 December	
		2022	2021
	Note	***RMB'000***	*RMB'000*
Non-current Assets			
Property, plant and equipment		**8,486,582**	6,504,488
Right-of-use assets		**1,249,263**	1,099,183
Goodwill		**499**	23,305
Interests in associates		**228,227**	36,115
Equity instruments at FVTOCI		**324,083**	267,489
Deferred tax assets		**790,922**	688,263
Deposits for acquisition of property, plant and equipment		**973,742**	743,273
Loan receivables		**333,436**	284,928
Long-term receivables		–	5,136
Pledged/restricted bank deposits		**1,210,000**	–
		13,596,754	9,652,180
Current Assets			
Inventories		**6,840,510**	4,484,624
Properties under development for sale		**860,626**	768,189
Bills, trade and other receivables	*11*	**5,041,205**	3,328,917
Loan receivables		**930,503**	203,954
Amounts due from related parties		**1,478**	3,479
Amount due from an associate		–	70,000
Debt instruments at FVTOCI		**798,005**	987,055
Financial assets at fair value through profit or loss ("**FVTPL**")		**350,439**	1,600,095
Pledged/restricted bank deposits		**3,720,595**	2,943,087
Time deposits		**450,000**	–
Cash and cash equivalents		**7,545,808**	8,697,364
		26,539,169	23,086,764

CONSOLIDATED STATEMENT OF FINANCIAL POSITION *(Continued)*

At 31 December 2022

		As at 31 December	
		2022	2021
	Note	***RMB'000***	*RMB'000*
Current Liabilities			
Bills, trade and other payables	*12*	**11,958,681**	8,923,504
Amounts due to related parties		**316,228**	239,970
Derivative financial instruments		–	263
Taxation liabilities		**499,543**	348,748
Borrowings		**4,558,209**	2,874,839
Lease liabilities		**11,608**	8,727
Provision		**697,428**	720,292
Contract liabilities		**2,331,915**	2,129,216
Deferred government grants		–	42,026
		20,373,612	15,287,585
Net Current Assets		**6,165,557**	7,799,179
Total Assets less Current Liabilities		**19,762,311**	17,451,359
Non-current Liabilities			
Deferred tax liabilities		**94,424**	60,407
Borrowings		**1,624,218**	1,408,682
Lease liabilities		**13,437**	13,637
Deferred government grants		**864,058**	591,701
		2,596,137	2,074,427
		17,166,174	15,376,932

CONSOLIDATED STATEMENT OF FINANCIAL POSITION *(Continued)*

At 31 December 2022

	As at 31 December	
	2022	2021
	RMB'000	*RMB'000*
Capital and Reserves		
Share capital	**109,850**	109,850
Share premium and reserves	**14,334,266**	12,870,646
Equity attributable to the owners of the Company	**14,444,116**	12,980,496
Non-controlling interests	**2,722,058**	2,396,436
Total Equity	**17,166,174**	15,376,932

1. GENERAL

The Company was incorporated and registered as an exempted company with limited liability in the Cayman Islands under the Companies Law of the Cayman Islands on 16 November 2004 and its shares are listed on The Stock Exchange of Hong Kong Limited (the "**Hong Kong Stock Exchange**") with effect from 11 June 2007.

The Company is an investment holding company. The principal activities of its subsidiaries are the manufacture and sales of lead-acid battery products, lithium-ion battery products and recycled materials and trading of materials.

The consolidated financial statements are presented in Renminbi ("**RMB**") which is also the functional currency of the Company.

2. APPLICATION OF AMENDMENTS TO HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs")

Amendments to HKFRSs that are mandatorily effective for the current year

In the current year, the Group has applied the following amendments to HKFRSs issued by the Hong Kong Institute of Certified Public Accountants ("**HKICPA**") for the first time, which are mandatorily effective for the Group's annual period beginning on 1 January 2022 for the preparation of the consolidated financial statements:

Amendments to HKFRS 3	Reference to the Conceptual Framework
Amendment to HKFRS 16	Covid-19-Related Rent Concessions beyond 30 June 2021
Amendments to HKAS 16	Property, Plant and Equipment – Proceeds before Intended Use
Amendments to HKAS 37	Onerous Contracts – Cost of Fulfilling a Contract
Amendments to HKFRSs	Annual Improvements to HKFRSs 2018-2020

The application of the amendments to HKFRSs in the current year has had no material impact on the Group's financial positions and performance for the current and prior years and/or on the disclosures set out in these consolidated financial statements.

New and amendments to HKFRSs in issue but not yet effective

The Group has not early applied the following new and amendments to HKFRSs that have been issued but are not yet effective:

HKFRS 17 (including the October 2020 and February 2022 Amendments to HKFRS17)	Insurance Contracts[1]
Amendments to HKFRS 10 and HKAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture[2]
Amendments to HKFRS 16	Lease Liability in a Sale and Leaseback[3]
Amendments to HKAS 1	Classification of Liabilities as Current or Non-current and related amendments to Hong Kong Interpretation 5 (2020)[3]
Amendments to HKAS 1	Non-current Liabilities with Covenants[3]
Amendments to HKAS 1 and HKFRS Practice Statement 2	Disclosure of Accounting Policies[1]
Amendments to HKAS 8	Definition of Accounting Estimates[1]
Amendments to HKAS 12	Deferred Tax related to Assets and Liabilities arising from a Single Transaction[1]

1 Effective for annual periods beginning on or after 1 January 2023.
2 Effective for annual periods beginning on or after a date to be determined.
3 Effective for annual periods beginning on or after 1 January 2024.

The directors of the Company anticipate that the application of all the new and amendments to HKFRSs will have no material impact on the consolidated financial statements in the foreseeable future.

3. SEGMENT INFORMATION

The Group's operating and reportable segments are based on information prepared and reported to the chief operating decision makers ("**CODM**"), being the board of directors of the Company, for the purposes of resources allocation and performance assessment. For the manufacturing operation, there was no further discrete financial information since the financial information provided to the CODM does not contain profit or loss information of each product line or each market segment and the CODM review the operating results of the manufacturing operation on a consolidated basis. Therefore, the operation of the Group constitutes two single operating and reportable segments, (1) manufacturing business and (2) trading.

The CODM makes decisions according to operating result of each segment. No analysis of segment assets and segment liabilities is presented as the CODM does not regularly review such information for the purposes of resources allocation and performance assessment. Therefore, only segment revenue and segment results are presented. The accounting policies of the operating and reportable segment are the same as the Group's accounting policies. Segment results represent the profits earned by each segment and exclude certain other gains and losses, share of results of associates, corporate administrative expenses and finance costs. Inter-segment sales are charged at cost plus profit approach.

	Year ended 31 December	
	2022	2021
	RMB'000	*RMB'000*
Segment revenue		
Manufacturing business		
– external sales	**41,971,044**	37,920,576
Trading		
– external sales	**32,627,597**	47,695,341
– inter-segment sales	**411,618**	425,539
Segment revenue	**75,010,259**	86,041,456
Eliminations	**(411,618)**	(425,539)
Group revenue	**74,598,641**	85,615,917
Segment results		
Manufacturing business	**2,188,543**	1,546,894
Trading	**(42,535)**	15,241
	2,146,008	1,562,135
Unallocated		
Other gains and losses	**(57,443)**	1,669
Share of results of associates	**(905)**	(2,735)
Corporate administrative expenses	**(7,962)**	(9,110)
Finance costs	**(20)**	(747)
Profit for the year	**2,079,678**	1,551,212

Other segment information

For the year ended 31 December 2022	**Manufacturing business** *RMB'000*	**Trading** *RMB'000*	**Unallocated** *RMB'000*	**Total** *RMB'000*
Depreciation of property, plant and equipment	**726,513**	**330**	**–**	**726,843**
Amortisation of right-of-use assets	**42,314**	**–**	**–**	**42,314**
Impairment losses on trade receivables recognised in profit or loss	**108,704**	**7,726**	**–**	**116,430**
Loss on disposal/written off of property, plant and equipment	**66,464**	**–**	**–**	**66,464**
Interest income	**295,426**	**23,062**	**(3,554)**	**314,934**
Income tax expense	**652,978**	**6,185**	**–**	**659,163**
Write-down of inventories	**96,392**	**–**	**–**	**96,392**

For the year ended 31 December 2021	Manufacturing business *RMB'000*	Trading *RMB'000*	Unallocated *RMB'000*	Total *RMB'000*
Depreciation of property, plant and equipment	570,701	1,921	–	572,622
Amortisation of right-of-use assets	29,954	–	–	29,954
Impairment losses on trade receivables recognised in profit or loss	68,429	26,906	–	95,335
Loss on disposal/written off of property, plant and equipment	45,985	–	–	45,985
Interest income	211,166	7,037	1	218,204
Income tax expense	270,299	15,431	–	285,730
Write-down of inventories	12,888	–	–	12,888

Information about major customers

During the year ended 31 December 2022 and 2021, none of the Group's individual customer contributed more than 10% to the total revenue of the Group.

4. REVENUE

(i) Disaggregation of revenue from contracts with customers

	Year ended 31 December	
	2022	2021
	RMB'000	*RMB'000*
Types of goods or service		
Manufacturing business		
Lead-acid battery products	**35,747,300**	31,820,839
Renewable resources products	**3,813,709**	2,678,280
Lithium-ion battery products	**1,602,312**	987,231
Others *(note)*	**807,723**	2,434,226
Trading	**32,627,597**	47,695,341
	74,598,641	85,615,917
Geographical markets		
Mainland China	**74,234,912**	85,343,929
Others	**363,729**	271,988
	74,598,641	85,615,917
Timing of revenue recognition		
A point in time	**74,115,516**	83,960,020
Over time	**483,125**	1,655,897
	74,598,641	85,615,917

Note: It includes provision of freight transportation service and sales of other products.

(ii) Performance obligations for contracts with customers

Sales of goods (revenue recognised at a point in time)

The Group sells lead-acid battery products, renewable resources products, lithium-ion battery products and other products to customers. Revenue is recognised when control of the goods has transferred, being when the goods have been shipped to the customer's specific location (delivery). Transportation and handling activities that occur before customers obtain control are considered as fulfilment activities. Following the delivery, the customer has full discretion over the manner of distribution and price to sell the goods, has the primary responsibility when on selling the goods and bears the risks of obsolescence and loss in relation to the goods. The normal credit term is 45 to 90 days upon delivery.

Sales-related warranties associated with lead-acid battery products and lithium-ion battery products cannot be purchased separately and they serve as an assurance type of warranty that the products sold comply with agreed-upon specifications. Accordingly, the Group accounts for warranties in accordance with HKAS 37.

Trading (revenue recognised at a point in time)

The Group recognises revenue from trading of materials when the control of materials has transferred, being when customers collect the materials or obtain the control of the materials at the warehouse. Following the transfer, customers has full discretion over the manner of distribution and price to sell the goods, has the primary responsibility when on selling the goods and bears the risks of obsolescence and loss in relation to the goods. Customers are normally required to make full prepayment before goods delivery.

Freight transportation service (revenue recognised over time)

The performance obligation is satisfied over time as services are rendered and payment is generally due upon delivery of the shipments and issuance of the invoice to the customers.

(iii) Transaction price allocated to the remaining performance obligation for contracts with customers

The transaction price allocated to the remaining performance obligations (unsatisfied or partially unsatisfied) in relation to sales of properties as at 31 December 2022 and the expected timing of recognising revenue are as follows:

	Sales of properties
	RMB'000
Within one year	163,597
More than one year but not more than two years	123,274
	286,871

As at 31 December 2022 and 2021, all other sales contracts with customers are for periods of one year or less. As permitted under HKFRS 15, the transaction price allocated to these unsatisfied contracts is not disclosed.

5. OTHER GAINS AND LOSSES

	Year ended 31 December	
	2022	2021
	RMB'000	*RMB'000*
Net gains (losses) on financial assets at FVTPL		
– structured bank deposits	**67,382**	73,274
– investments in listed equity securities	**(15,438)**	(14,074)
– commodity derivative contracts	**36,572**	21,352
– foreign currency forward contracts	**22,492**	–
Loss on disposal/written off of property, plant and equipment	**(66,464)**	(45,985)
Net foreign exchange (losses) gain	**(133,629)**	11,834
Gain on disposal of subsidiaries	**53,332**	–
Others	**(21,690)**	(44,732)
	(57,443)	1,669

6. FINANCE COSTS

	Year ended 31 December	
	2022	2021
	RMB'000	*RMB'000*
Interest on borrowings	**264,776**	207,276
Interest on factorised bills	**74,517**	45,281
Interest on lease liabilities	**1,445**	1,332
Others	**–**	200
	340,738	254,089

7. INCOME TAX EXPENSE

	Year ended 31 December	
	2022	2021
	RMB'000	*RMB'000*
People's Republic of China (the "**PRC**") Enterprise Income Tax ("**EIT**"):		
– Current tax	**697,114**	509,976
Deferred tax:		
– Current year	**(37,951)**	(224,246)
	659,163	285,730

The Company was incorporated in the Cayman Islands and Tianneng International Investment Holdings Limited was incorporated in the British Virgin Islands (the "**BVI**") and as such are tax exempted as no business is carried out in the Cayman Islands and the BVI under the tax laws of the Cayman Islands and the BVI, respectively.

The subsidiaries of the Company operating in Hong Kong did not have tax assessable profit during both years.

Under the Law of the PRC on Enterprise Income Tax (the "**EIT Law**") and Implementation Regulation of the EIT Law, the tax rate of the PRC subsidiaries is 25% for both years. In accordance with the "Notice of the State Tax Bureau of the Ministry of Finance Regarding Certain Preferential Treatment Policies on Enterprise Income Tax", New and High Technical Enterprise is subject to income tax at a preferential tax rate of 15%. Certain subsidiaries of the Company were qualified as New and High Technical Enterprises in accordance with the applicable EIT Law and are subject to income tax at a preferential tax rate of 15% for a period of three years starting from 2020 to 2022 according to the EIT Law.

The tax charge for the year can be reconciled to the profit before tax per the consolidated statement of profit or loss and other comprehensive income as follows:

	Year ended 31 December	
	2022	2021
	RMB'000	*RMB'000*
Profit before tax	**2,738,841**	1,836,942
Tax at the applicable income tax rate of 25% (2021: 25%)	**684,710**	459,236
Tax effect of expenses not deductible for tax purposes	**8,981**	3,167
Tax effect of tax losses not recognised	**29,001**	11,788
Utilisation of tax losses previously not recognised	**–**	(39,317)
Tax effect of deductible temporary differences not recognized	**41,678**	–
Income tax at concessionary rates	**20,089**	(9,316)
Tax effect of additional deduction related to research and development costs and certain staff costs (note)	**(171,925)**	(148,565)
Withholding tax on undistributed profits of PRC subsidiaries	**46,629**	8,737
	659,163	285,730

Note: Pursuant to Caishui [2018] circular No. 99, certain subsidiaries enjoy super deduction of 200% (2021: 200%) on qualifying research and development expenditures for the year ended 31 December 2022.

8. PROFIT FOR THE YEAR

The Group's profit for the year is stated after charging the following:

	Year ended 31 December	
	2022	2021
	RMB'000	*RMB'000*
Directors' remuneration	**4,307**	4,528
Other staff costs	**3,103,052**	2,548,631
Retirement benefits scheme contributions, excluding directors	**161,021**	140,487
Share-based payments	**7,644**	13,316
Total staff costs	**3,276,024**	2,706,962
Depreciation of property, plant and equipment	**726,843**	572,622
Amortisation of right-of-use assets	**42,314**	29,954
Auditor's remuneration	**2,030**	1,920
Cost of inventories sold	**67,160,592**	80,379,431
Write-down of inventories (included in cost of sales)	**96,392**	12,888

9. DIVIDENDS

	Year ended 31 December	
	2022	2021
	RMB'000	*RMB'000*
Dividends declared during the year:		
2022: 2021 final dividend of HK40.00 cents (equivalent to RMB34.15 cents) per ordinary share (2021: 2020 final dividend of HK40.00 cents (equivalent to RMB33.67 cents))	**384,594**	374,810

Subsequent to the end of the reporting period, a final dividend of HK40.00 cents (equivalent to RMB34.84 cents) (2021: HK40.00 cents (equivalent to RMB34.15 cents)) in respect of the year ended 31 December 2022 per ordinary share has been proposed by the directors and is subject to approval by the shareholders of the Company (the "**Shareholders**", each a "**Shareholder**") in the forthcoming annual general meeting.

10. EARNINGS PER SHARE

The calculation of the basic and diluted earnings per share attributable to owners of the Company is based on the following data:

	Year ended 31 December	
	2022	2021
	RMB'000	*RMB'000*
Earnings:		
Earnings for the purposes of calculating basic and diluted earnings per share – attributable to the owners of the Company	**1,796,385**	1,299,952

	Year ended 31 December	
	2022	2021
Number of shares:		
Weighted average number of ordinary shares for the purpose of calculating basic earnings per share	**1,126,124,500**	1,126,124,500
Effect of dilutive potential ordinary shares – share options	**21,269,586**	27,132,350
Weighted average number of ordinary shares for the purpose of calculating diluted earnings per share	**1,147,394,086**	1,153,256,850

11. BILLS, TRADE AND OTHER RECEIVABLES

	As at 31 December	
	2022	2021
	RMB'000	*RMB'000*
Bills receivables*	**2,206,207**	–
Trade receivables	**1,738,719**	1,868,648
Less: Allowance for credit losses	**(351,350)**	(253,511)
	1,387,369	1,615,137
Other receivables	**178,702**	143,674
Less: Allowance for credit losses	**(45,961)**	(36,709)
	132,741	106,965
Prepayments for materials	**605,966**	1,203,124
PRC value added tax and EIT recoverable	**708,922**	403,691
	5,041,205	3,328,917

* The balance represents bills receivables held by the Group which is measured at amortised cost since the bills are held within a business model whose objective is to collect contractual cash flows and the contractual cash flows are solely payments of principal and interest on the principal amount outstanding. All bills received by the Group are with a maturity period of less than one year.

As at 1 January 2021, trade receivables from contracts with customers amounted to RMB917,248,000.

The following is an aged analysis of trade receivables net of allowance for credit losses presented based on the invoice dates.

	As at 31 December	
	2022	2021
	RMB'000	*RMB'000*
0 to 45 days	**920,192**	978,311
46 to 90 days	**359,021**	349,392
91 to 180 days	**49,972**	160,253
181 to 365 days	**23,895**	86,048
1 year to 2 years	**11,876**	24,986
Over 2 years	**22,413**	16,147
	1,387,369	1,615,137

12. BILLS, TRADE AND OTHER PAYABLES

	As at 31 December	
	2022	2021
	RMB'000	*RMB'000*
Trade payables	**2,456,894**	3,004,111
Bills payables	**6,198,145**	3,278,323
Value added tax payables and other tax payables	**729,460**	786,736
Staff salaries and welfare payables	**657,223**	427,426
Payables for purchase of property, plant and equipment	**620,554**	422,653
Accrued charges	**474,586**	393,797
Deposits payables	**440,744**	359,763
Dividend payables	**110,498**	7,916
Other payables	**270,577**	242,779
	11,958,681	8,923,504

The Group normally receives credit terms of 5 days to 90 days (2021: 5 days to 90 days) from its suppliers. The following is an aged analysis of trade payables at the end of the reporting period, presented based on the invoice dates:

	As at 31 December	
	2022	2021
	RMB'000	*RMB'000*
0 – 90 days	**2,181,136**	2,879,511
91 – 180 days	**150,787**	5,883
181 – 365 days	**61,633**	61,971
1 – 2 years	**34,473**	27,333
Over 2 years	**28,865**	29,413
	2,456,894	3,004,111

The following is an aged analysis of bills payables from issue dates at the end of the reporting period:

	As at 31 December	
	2022	2021
	RMB'000	*RMB'000*
0 – 180 days	**6,148,145**	3,228,323
181 – 365 days	**50,000**	50,000
	6,198,145	3,278,323

MANAGEMENT DISCUSSION AND ANALYSIS

OPERATION REVIEW

In the year ended 31 December 2022 (the "**Year**"), Tianneng maintained its development strategies of "intelligentisation, platform-building, globalisation", promoted green development through scientific and technological innovation, and focused on the new-generation battery technologies such as lead-acid batteries, Li-ion batteries, fuel cells and sodium-ion batteries, as well as the used battery recycling business. It has been determined to implement the industrial technology development strategy, adjust the business strategy of each business segment in a scientific manner and deploy multiple technologies in a proactive manner, to form a diversified business development model.

As the world's leading enterprise, Tianneng has strengthened its lead-acid batteries segment in a down-to-earth manner, enjoying absolute and dominant advantages in the Chinese market. In respect of research and development ("**R&D**"), Tianneng sticks to technological breakthroughs and product innovation, continues to consolidate market advantages, and takes the lead in mastering new material technologies such as graphene composites and multi-compound rare earth alloys. In respect of production and manufacturing, Tianneng strives to promote the process of digitalisation by establishing a high-efficiency production mode with an intelligent system as the carrier in an order-oriented manner, which leads to success in building a green intelligent manufacturing industry chain. During the Year, Tianneng dug deep into users' pain points, realised what customers need, sorted out the product matrix, and entered the field of high-capacity batteries at one stroke. Its brand strategy achieved new breakthroughs by exploring different directions of marketing networks and diversifying development to broaden prospects.

While maintaining the world's leading position in the field of lead-acid batteries, Tianneng endeavoured to make arrangements for its Li-ion batteries business so as to create a second growth curve for its future development. The Group adhered to the dual technologies of lead-acid batteries and lithium-ion batteries in order to exhibit the synergy by leveraging their advantages and to upgrade motive batteries and energy storage system ("**ESS**") batteries on a continuous basis. It also promoted the sustainable development of new energy for travel and the new energy storage industry. In respect of motive Li-ion batteries, regular upgrade of technology and products, orderly layout of production capacity and production line, together with green logistics to improve the ecological environment, ushered an essential era with development opportunities during the Year. In respect of ESS, the Group has developed a variety of energy storage container products such as air-cooled and liquid-cooled containers after years of development. The Group launched pilot demonstrations of ESS. The Li-ion batteries business has made extensive breakthroughs in new markets and continued to enhance its advantages and competitiveness in various market segments.

As the paragon of the new energy industry, the Group has also deployed new battery technologies including fuel cells, sodium-ion batteries, and solid-state batteries. During the Year, the Group expanded its talent pool, utilised the resources from colleges, accelerated the breakthrough of core technologies, and strived to seek strategic cooperation in the industry, so as to facilitate commercial expansion and scenario application, providing global customers with a wide range of premium battery products and system solutions.

In respect of the recycling business segment, the Group, equipped with comprehensive recycling system of waste lead-acid batteries and Li-ion batteries, produces products such as lead ingot, lithium carbonate, cobalt sulfate, nickel sulfate and manganese sulfate. In 2022, the Group strived to improve the standards of operation management and equipment technology, accelerated the development plan for recycling Li-ion batteries, established a powerful recycling network and improved its recycling technology to gain the unique competitiveness of the Group.

As a major strategic segment of the Group, Tianneng accelerates the globalisation process, and actively expands its overseas business. The Group has established subsidiaries in Hong Kong and Nigeria, and overseas offices in Vietnam, India and the Netherlands, which serve as the platform for the expansion and integration of the overseas business of the Group, so as to undertake the business of the Group including lead-acid batteries and Li-ion batteries. In the future, with the release of demand from the overseas new energy battery market, the Group will continue to increase its penetration rate in major overseas regions and enhance its global sales capacity.

INDUSTRY DEVELOPMENT AND OPERATION

In 2022, the Group's manufacturing business contributed revenue of approximately RMB41,971 million, representing an increase of 10.68% as compared to the same period of last year. The industry development and operation of each main business are as follows:

(1) High-end eco-friendly batteries

During the reporting period, high-end eco-friendly batteries recorded an operating income of approximately RMB35,747 million, representing an increase of approximately 12.34% as compared with the same period of last year. High-end eco-friendly batteries are a series of sealed maintenance-free lead-acid battery products created by Tianneng relying on its R&D and technology innovations, including motive batteries, automotive batteries and ESS products.

Motive lead-acid batteries

During the reporting period, the Group's motive lead-acid batteries recorded an operating income of approximately RMB35,109 million, representing a year-on-year increase of approximately 12.31%.

As a powerful source of motivation, lead-acid batteries are mainly used in light electric vehicles, special electric vehicles and other vehicles. Lead-acid batteries featured with high security and cost-effective performance are still the major batteries in the light electric vehicle market. According to data published by EVTank, China produced 54.43 million two-wheeled electric vehicles in 2021, recording a year-on-year increase of 12.6%. As a leading enterprise of lead-acid batteries, the Group has invested and built factories in locations such as Shuyang County, Jiangsu Province, Jieshou City, Anhui Province, and Puyang City, Henan Province since 2005. During the reporting period, the Group completed and put into operation the first phase of the high-performance eco-friendly motive battery project with an annual output of 20 GWh at the production base in Maanshan City, Anhui Province.

In 2022, the Group strived to improve its ancillary product matrix and made major breakthroughs in the R&D of products in the field of eco-friendly travel, and successively launched a series of products such Captain Graphene (石墨烯領跑者), Overrun Graphene (超跑石墨烯), T3 New Black Gold Graphene (T3真黑金石墨烯) and the 3rd generation of Long Milegae King emphasised with battery life and durability, and continued to contribute to the industry upgrade and innovation. Tianju (天聚) Battery, a brand for three-wheeled electric vehicles was also launched to meet the vast needs of urban and rural consumers. In the future, Tianneng will accelerate the transformation and upgrade to contribute to the high-quality development of the local economy.

Under the influence arising from consumption pattern transformation together with the New National Standard Policy, the concentration of China's two-wheelers' market has been further increased, the integration of original equipment manufactures ("**OEMs**") has been accelerated, and the industry has shifted from high-speed development to high-quality development. The Group has collaborated with leading OEMs including Aima Technology Co., Ltd. (愛瑪科技集團股份有限公司), Yadea Group Holdings Ltd. (雅迪集團控股有限公司), Shenzhen TAILG Technology Group Co., Ltd. (深圳台鈴科技集團有限公司) and Zhejiang Luyuan Electric Vehicle Co., Ltd. (浙江綠源電動車有限公司) to carry out multi-dimensional strategic cooperation, releasing entrepreneurial potential and facilitating the industry development. Through the cooperation with internet enterprises such as Alipay and JD.com, it strived to construct a new ecology travelled by two-wheeled electric vehicles. In cooperation with enterprises such as AntChain and Chunteng Wulian (春藤物聯), the Group focused on the "last kilometre" travel of two-wheeled electric vehicles and the new mode of charging and replacing batteries.

In addition, motive lead-acid batteries are also widely used in special industrial vehicles. At present, the development trend of electrification and intelligentisation of special industrial vehicle products is obvious, and the demand for new energy industrial vehicles is growing rapidly. The Group's motive lead-acid batteries for special electric industrial vehicles have a profound technical capacity. This Year, the Group continued to carry out R&D in materials, processes, and equipment to continuously improve our product performance. At the same time, the Group responded quickly to market demand, launched competitive products, and cooperated with leading downstream companies to gain a leading edge for the Group to continue to develop the electrified industrial vehicles market.

In the new era of energy, Tianneng accelerates its global layout and provides green energy system solutions to consumers, industrial and commercial users, and public institutions around the world. According to Frost & Sullivan's forecast, the annual sales volume of electric two-wheelers in overseas markets will reach 46.30 million by 2026, with promising sales in Europe, the United States, Southeast Asia and India. Southeast Asia is one of the world's largest two-wheeler markets, accounting for approximately 25% of the global market. According to Regional Comprehensive Economic Partnership (RCEP), Indonesia and Vietnam will lower tariffs on Chinese exports of two-wheeled vehicles, providing development opportunities for Chinese enterprises to enter the market in Southeast Asia. Due to the deregulation of the Motorcycle Ban, implementation of the Oil-for-Electricity policy, improvement of infrastructure, development of e-commerce and online catering industry, there is a broad market for electric two-wheelers in Southeast Asia.

During the reporting period, the official establishment of the Vietnam representative office of Tianneng in Ho Chi Minh City marked a new beginning for the Group to practise localised and platform-based operations in Southeast Asia, which will lay a solid foundation for further expanding the Southeast Asian market and marching towards the world. In December 2022, the Group demonstrated its green energy solutions with multi-scenarios at the 18th Saigon Autotech & Accessories Show in Vietnam, showcasing the Group's product solutions and technology roadmap in various fields such as new energy electric vehicles, urban logistics and construction machinery.

Automotive starter and start-stop batteries

As the second largest application market for lead-acid batteries, the automotive battery is also the focus of the Group. The Group's starter batteries for automobiles are designed for instant starting, ignition, and lighting power needs of vehicles, ships, diesel start-stop locomotives, etc., while start-stop batteries are used in the vehicle start-stop system to save energy and reduce consumption. During the reporting period, the automotive battery business recorded an operating income of approximately RMB481 million.

Automotive starter and start-stop batteries are an indispensable part of automobiles and a major segment of the automotive aftermarket. According to the automobile production and sales data in 2022 released by China Association of Automobile Manufacturers, the production and sales volume of automobiles in China amounted to 27,021 thousand and 26,864 thousand respectively, representing a year-on-year growth of 3.4% and 2.1%, respectively. In 2022, the number of vehicle ownership in China reached 0.32 billion vehicles, representing, a year-on-year growth of nearly 6%.

During the first half of 2022, the growth rate of the market slowed down due to factors such as disruption of supply chain and production reduction by OEMs. However, driven by a series of policies such as the halving of tax on vehicle purchase and consumption stimulus policies in the post-pandemic era, the automobile industry has also fully recovered, resulting in surging demand for automotive batteries. As a leading enterprise of new energy motive batteries, the Group has adopted international advanced production technology and production process for automotive starter and start-stop batteries, and achieved the perfect integration of green power and the automobile industry in terms of excellent battery performance, energy saving and consumption reduction, long service life and safety design. The energy density of existing automotive starter and start-stop batteries of the Group is 40-50 Wh/kg, while the number of charging cycles reaches more than 80,000 times.

During the reporting period, based on the consolidation of secondary sales and new retail sales channels, Tianneng has cooperated with nearly 400 distributors and strengthened cooperation with downstream OEMs, including Xuzhou Construction Machinery Group Co., Ltd. (徐州工程機械集團有限公司) (“**XCMG**”), China National Heavy Duty Truck Group Co., Ltd. (中國重型汽車集團有限公司) and other clients. It also signed a cooperation framework agreement with AC Cars (AC汽車), an automotive aftermarket industry media, based on the “industry + internet” marketing model, to develop a new path of digital intelligence in the automotive aftermarket. New development directions will be discussed in a customer-oriented and market-oriented approach jointly to accelerate the transformation of OEM cooperation in the future, and provide strong support for the Group’s customer base expansion in the field of automotive batteries.

Lead-carbon batteries for ESS

In June 2022, the 25 Key Requirements for Preventing Electricity Production Accident (2022 Edition) (Draft for Comment) (《防止電力生產事故的二十五項重點要求(2022年版)(徵求意見稿)》) was issued by the General Department of the National Energy Administration, which proposed that the medium and large electrochemical energy storage power stations shall not select and use NCM Li-ion batteries and sodium-sulphur batteries. Based on its high security and cost-effective characteristics, lead-carbon batteries will open up a broad market for applications in data centres and large-scale electrochemical energy storage power stations. Benefiting from the positive influence of the national ESS policy and the market’s recognition of lead-carbon batteries technology, during the reporting period, the Group’s operating income of lead-carbon batteries for ESS amounted to approximately RMB128 million, representing a year-on-year increase of approximately 225.08%.

Lead-carbon battery is a new type of battery independently developed by the Group with global leading technologies, which has overcome the technical barriers of traditional batteries such as low specific energy and short cruising range in China, and reduced the dependence on foreign products in an effective manner. During the Year, Key Technology and Application Project for Green Manufacturing of High-Performance Lead-Carbon Batteries (高性能鉛碳電池綠色製造關鍵技術與應用項目) jointly developed by the Group and Zhejiang University of Technology was granted with the first prize of China National Light Industry Council 2021 Science and Technology Progress Award. The lead-carbon battery project adheres to the concept of green ecological design, integrates R&D, production, sales and recycling into the whole life cycle management, forms a green closed loop, as well as improves the overall utilisation efficiency of resources.

During the reporting period, the Group formed a strategic partnership with Changxing Taihu Electric Co., Ltd. (長興太湖能谷科技有限公司) ("**Taihu Electric**"). Tianneng Battery Group Co., Ltd. (688819.SH) ("**Tianneng Share**"), a subsidiary of the Company listed on the Science and Technology Innovation Board of the Shanghai Stock Exchange, obtained an order for 30GWh lead-carbon batteries for ESS with Taihu Electric. Meanwhile, construction of the Group's 10GWh lead-carbon batteries-based ESS project in Maanshan City, Anhui Province, has been completed, which encourages the Group to expand the new ESS market and promotes the long-term development of the ESS business.

(2) New energy batteries

New energy batteries are mainly Li-ion batteries, and also include the production and R&D of next-generation battery products such as hydrogen fuel cells and sodium-ion batteries. Among these, Li-ion batteries achieved a breakthrough in the Year. During the reporting period, the Group's Li-ion battery business recorded an operating income of approximately RMB1,602 million, representing a year-on-year increase of approximately 62.30%.

Li-ion batteries for ESS

The Group actively builds an energy storage industry ecosystem and provides customers with multi-scenario diversified system solutions, to create the second growth curve for future development. ESS products utilising Li-ion batteries, featured with advantages such as high energy density, high conversion efficiency and long cycle life, are mainly applied to the fields including power generation side, grid side and user side. During the reporting period, the Group's Li-ion batteries for ESS recorded an operating income of approximately RMB524 million, representing a year-on-year increase of 353.51%.

Li-ion batteries for ESS is a dynamic and promising industry in the world. According to the data of the Ministry of Industry and Information Technology (MIIT) of China, in 2022, China's ESS Li-ion battery shipments exceeded 100GWh. Gaogong Industry Institution (GGII) predicts that by 2025, the ESS Li-ion battery shipments in China will reach 180 GWh, and it is optimistic about future market of ESS Li-ion batteries. Currently, promotion on ESS on the power generation side and the grid side in China has commenced, accelerating the dynamic transformation of the new energy industry chain through a combination of industrial development and capital empowerment.

The Group is making more plans and arrangements for the field of ESS by facilitating the production line of battery cells and PACK as well as industrial projects supported by upstream and downstream materials and accessories, and covering the power generation side, the grid side and the user side, which will be widely used in scenarios such as photovoltaic power stations, wind farms and industrial parks. At present, the Group has successfully launched 100Ah, 180Ah and 280Ah ESS battery cells, designed various air-cooled and liquid-cooled ESS modules, launched the TN200 liquid-cooled ESS container, and obtained the relevant national standard certification.

Tianneng has innovated its business model and stepped up its efforts in jointly promoting the commercialization of ESS with the related parties in the industry chain. In China, Tianneng established strategic partnerships with enterprises including SGCC and China Huaneng Group Co., Ltd. (中國華能集團有限公司); through cooperations between the government and enterprises, facilitated the global sample of the new development model of new energy plus energy storage; participated in the first two grid-side ESS projects under construction in Zhejiang Province. Overseas, the Group undertook a number of ESS demonstration projects in Africa, including off-grid photovoltaic storage projects to broaden and deepen the Group's overseas market expansions, promote the sales of the Group's products globally, expand and strengthen the ecosystem of new energy batteries, whereby globalising and scaling up the Group's development in the ESS industry.

Motive Li-ion batteries

Under the backdrop of constructing a sustainable development pattern of society, electrification has become one of the main directions of green development of commercial and industrial vehicles. The Group's Li-ion motive batteries are widely used in fields such as industrial vehicles, logistic vehicles, sanitation vehicles, electric bicycles, electric passenger buses, mini-electric vehicles and special vehicles. The Group, proactively responding to the policy, is increasing its investment in the fields of warehousing and logistics with its leading industrial motive Li-ion battery products and solutions, so as to facilitate low-carbon and sustainable development of the logistics industry in China.

The Group has developed its own industrial motive Li-ion battery products with high energy density and security, facilitating product innovation and application with eco-friendly science and technology. It has launched a number of products applicable to models such as pallet trucks, forklifts and reach forklifts, and the products also provided customers with customised, safe, reliable and durable product solutions to meet the requirements of the complex application scenarios in the warehousing and logistics industry for Li-ion batteries in terms of charging and discharging rate, energy density and security. During the Year, supported by safe core technology, the Group launched its self-developed 26700 new-generation lithium manganate composite system battery cells, which has attracted consumers with its outstanding advantages of long service life, cold resistance, high stability and high-quality performance.

As a well-known brand in the field of forklift batteries in China, the Group's customers include Hangcha Group Co., Ltd. (杭叉集團股份有限公司), Xuzhou Xugong Special Construction Machinery Co., Ltd. (徐州徐工特種工程機械有限公司), Anhui Heli Co., Ltd. (安徽合力股份有限公司), etc. At the 2022 New Energy Auto Show in Jinan, the Group exhibited a number of products and solutions applicable to low-speed four-wheeled electric vehicles such as Tianneng Classic (天能經典), Tianneng Journey (天能征途), Tianneng No. 1 (天能1號), Huiyuan (匯源品牌) and Tab No. 1 (泰博1號), which is not only the highlight of Tianneng's special motive batteries as the major product, but also an important embodiment of Tianneng's leading products and technologies to make green travel more feasible.

In the two-wheeled electric vehicle market, according to data of EVTank, the output level of two-wheeled electric vehicles with Li-ion batteries amounted to 13.17 million in 2021. As a result, the shipment of Li-ion batteries for two-wheeled electric vehicles reached 13.1GWh, representing a year-on-year increase of 21.7%. As the market leader in motive batteries for two-wheeled electric vehicles, the Group is currently equipped with NCM Li-ion battery capacity that can satisfy the demand for electric two-wheelers batteries.

Hydrogen fuel cells

During the reporting period, the Group's hydrogen fuel cells business achieved a breakthrough, recording an operating income of approximately RMB63.3906 million.

On 23 March 2022, the National Development and Reform Commission issued the Medium and Long-Term Plan for Hydrogen Energy Industry Development (2021-2035) (《氫能產業發展中長期規劃(2021-2035年)》), which stipulates the energy attribute of hydrogen as an integral part of the future energy system in China. Meanwhile, it also stipulates that hydrogen energy is the key direction for developing a strategic emerging industry, which suggests a new growth prospect in constructing a green and low-carbon industrial system and promoting industrial transformation and upgrade. The development and application of hydrogen energy in China has entered into a new stage with the introduction of favourable project-based policies for the hydrogen energy industry in various regions.

The Group has been facilitating the renewal of fuel cell products since its entry into the hydrogen energy industry. Currently, the Group has made significant breakthroughs in the R&D of fuel cell stacks, membrane electrodes, bipolar plates and engine systems, as well as the development and demonstration of application scenarios. It has successively developed various stack products, including 100-kW class graphite plate stacks and high-power metal plate reactors with up to 150kW. Such products have gone through verification and procurement by downstream customers, among which, various 70kW-160kW hydrogen fuel cell engine systems were delivered in the Year with overall cost leadership strategy.

With innovative products independently developed by the Group such as air-cooled stacks, the Group was granted with notable awards including the 2022 Best Innovative Technology (2022年度創新技術) and 2021 Trendbank Industry Emerging Star (2021勢銀行業年度新銳) at the GG Golden Globe Awards (高工金球獎). The high-power hydrogen fuel cell engine T-70 was listed as the first product (set) of Huzhou City in 2022. Cutting-edge products including the T80-C fuel cell engine, the TN-STK-M1 high-power metal plate stack and the high-performance membrane electrode with low platinum were presented at the World Manufacturing Convention with a high appraisal. The relevant products, added to the list of the Ministry of Industry and Information Technology after passing the national compulsory assessment, outperform the industry, and make a positive contribution to the promotion of hydrogen energy technology and the development of the industry as well as accelerating the electrification of commercial vehicles with hydrogen fuel cells.

In recent years, the Group has participated in the formulation of a number of national and industrial standards for hydrogen energy. Two standards, namely the Carbon Footprint Evaluation Guidelines for Proton-Exchange Membrane Fuel Cell Products (《質子交換膜燃料電池產品碳足跡評價導則》) (T/DZJN98-2022) and the Evaluation Requirements for Green Factories of the Proton-Exchange Membrane Fuel Cell Industry (《質子交換膜燃料電池行業綠色工廠評價要求》) (T/DZJN99-2022), partly formulated by Zhejiang Tianneng Hydrogen Energy Technology Co., Ltd. (浙江天能氫能源科技有限公司), were officially published.

The Group has established strategic cooperation with Geely New Energy Commercial Vehicles Group (遠程新能源商用車集團) (a wholly-owned subsidiary of Zhejiang Geely Holding Group Co., Ltd (浙江吉利控股集團有限公司)), XCMG and Xiamen King Long United Automotive Industry Co., Ltd. (廈門金龍聯合汽車工業有限公司), striving to explore diversified applications of hydrogen energy in transportation, construction machinery, shipping and other fields, and promoting the green transformation of final energy consumption in transportation, industry, ESS, etc. At the same time, Zhejiang Tianneng Hydrogen Energy Technology Co., Ltd. (浙江天能氫能源科技有限公司) entered into strategic cooperation agreements with Shanxi Gerun Times Construction Machinery Co., Ltd. (山西格潤時代工程機械有限公司) and Sino-Synergy Hydrogen Energy Technology (Jiaxing) Co., Ltd. (國鴻氫能科技(嘉興)股份有限公司), fully utilising their respective advantages in technology, industry chain, equipment and platform resources, jointly promoting the development and promotion of hydrogen energy industry, and cooperating with upstream and downstream hydrogen fuel cell enterprises for win-win development.

During the reporting period, on the basis of completing the construction of the R&D centre of hydrogen fuel cells, the Group has steadily promoted the construction of the industrial base project of fuel cell engine system in Shuyang, Jiangsu Province. The Shuyang project has been completed and accepted by the end of 2022, and the related production capacity of Tianneng's hydrogen fuel cells has been significantly improved.

Sodium-ion batteries

In light of the rapid development of the new energy industry, factors such as continuous iteration, lifespan, properties, costs, and security of new-generation battery technology are the pain points of industry development and the focus of customer needs. As such, the Group has taken the lead to plan for the strategy of sodium-ion batteries business, increased R&D investments, accelerated technology breakthroughs, and swiftly built up the first-mover advantage. Sodium-ion batteries have the same working principle and production process as Li-ion batteries. There are abundant resources of sodium salt which is evenly distributed. The production of sodium-ion batteries has no innate restraints of resource element with the advantages of low cost of energy, high stability and safety. Benefitting from these, sodium-ion batteries industry developed rapidly, material-front technology had constant breakthroughs, and barriers to battery technology were removed. At the dawn of the low-carbon era with the development of the ESS batteries industry, the industrialisation of sodium-ion batteries is approaching.

In 2021, the Group set up a sodium-ion battery R&D institution, established a high-level professional R&D team led by a group of experts, and launched R&D and trial productions of sodium-ion batteries, which resulted in relatively systematic technical achievements. On 5 September 2022, the Group established a wholly-owned subsidiary, which marked the official implementation of the industrialisation of the Group's sodium-ion battery business.

The cells' types of the Group's sodium-ion batteries include cylindrical, pouch, and prismatic models. The cycle times and energy density of these batteries are at a leading level in the industry, and their temperature performance and high-rate discharge ability are relatively better than Li-ion batteries. In terms of technology, the Group took the layered metal technology route as the main breakthrough, and also arranged for the R&D and industrialisation of polyanionic materials. The Group has formed strategic cooperation with upstream manufacturers on cathode materials and achieved effective progress. During the reporting period, the Group actively coordinated and integrated upstream and downstream resources and made efforts to lower the costs of sodium-ion batteries, offering customers with sodium-ion battery products of high cost-effectiveness.

In terms of capacity, the Group constructed a production line dedicated to sodium-ion batteries, and it is currently pushing ahead with production. In terms of downstream customers, the Group mainly focused on the fields of light electric vehicles and ESS. In terms of the low-speed power market, benefitting from the Group's unique channel advantage, samples of sodium-ion battery products were sent to downstream leading customers, and the Group has started joint application matching development, product verification and import and other work with customers, and signed relevant cooperation agreements with several customers. During the reporting period, the Group achieved a series of major breakthroughs in the R&D of sodium-ion battery technology and product commercial application, and was awarded with the "2022 Industry Top 10 Innovative Brands (2022行業十大創新品牌)" and the "Golden Tripod Awards (金鼎獎)", which is a symbol of technology innovation.

(3) Recycling industry

The Chinese "14th Five-Year Plan for the Development of Circular Economy" specifically stated the vigorous development of a circular economy, promotion of economical and intensive utilisation of resources, and construction of a circular utilisation system of waste materials. Such a plan is of great significance for securing the safety of national resources, promoting the realisation of "Carbon Peaking, Carbon Neutrality", and facilitating the construction of ecological civilisation.

As a practitioner and leader of green recycling industry in China, Tianneng has put huge efforts in developing a circular economy, actively looked for industry cooperation, explored green low-carbon technology innovation model, and created a closed-loop green industry chain that integrates "recycling, smelting and reproduction" and comprises "lead recycling + lithium recycling + great recycling". During the reporting period, the Group recorded an external operating income of approximately RMB3,814 million from the recycling industry, representing a year-on-year increase of approximately 42.39%.

Recycling lead-acid batteries

In 2022, the annual scrap volume of lead-acid batteries in China exceeded over 6 million tons. The Group's lead-acid battery recycling business has been deployed since 2009 and the disposal volume for the year has reached 1 million tons. The Group's lead-acid batteries recycling business recorded an external operating income of approximately RMB3,084 million, representing a year-on-year growth of approximately 34.20%.

Recycling of used batteries covered motive batteries, automotive batteries and ESS batteries, and products produced were mainly recycled lead (lead ingots), sulfuric acid, plastic shells, etc. In 2022, the proportion of local usage of recycled lead in China exceeded 50%. With the continuous optimisation of the industry structure of recycled lead, the ratio of use of recycled lead replacing primary lead is expected to increase steadily. In light of the recycled materials, Tianneng has innovated and created an integration model of sale and recycle, which not only provides the Company with raw material resource channels that significantly reduce costs, but also sets up a new model of circular economy for the industry.

The lead recycling business has opened up the entire industry chain of the Group's main business, with significant synergies between upstream and downstream businesses. Taking advantage of the distribution outlets of various distributors and terminal stores, the Group set up more than 600 battery recycling outlets in 15 provinces nationwide, built green circular industry parks in various locations such as Changxing County of Zhejiang Province, Shuyang County of Jiangsu Province, Puyang City of Henan Province, etc., and established battery recycling pilot companies in many cities including Beijing and Shanghai.

Province-based franchises have been launched for used lead acid batteries in segments such as recycling, transportation, and disposal, and first-tier qualified enterprises will be favoured. The Group obtained the qualification for launching pilot recycling projects in 15 provinces. The Group has profound technical capacity in the field of lead-acid batteries recycling, and the recycling rate of each product exceeds 99%. At present, the new production line has been approved, and the Group's recycling capacity will be further enhanced.

The Group has built a mature lead-recycling system. By relying on its strong market position as well as years of rich operating experience, the Group will strengthen its strategy in the future, include more hazardous waste disposal companies, and deploy Li-ion recycling channels. To comprehensively improve the resource utilisation efficiency, the Group will provide significant support to accelerate the transformation and upgrade of its industry structure.

Recycling Li-ion batteries

Li-ion battery recycling mainly consists of waste motive batteries, consumer batteries and ESS batteries. The main output are lithium carbonate, cobalt sulfate, nickel sulfate and manganese sulfate. During the reporting period, the Group's Li-ion battery recycling business recorded an operating income of approximately RMB678 million, representing a year-on-year growth of approximately 99.86%.

China's mineral resources of Li-ion batteries' core materials are heavily dependent on imports, and the upstream supply is highly uncertain. It is thus necessary to establish a complete recycling system for lithium resources and strengthen the independent control ability of upstream strategic resources, which will be conducive to alleviating the "bottlenecks" of lithium resources. According to the White Paper for the Development of the Recycling and Dismantling of Used Li-ion Batteries and Echelon Utilization Industry in China (2022) (《中國廢舊鋰離子電池回收拆解與梯次利用行業發展白皮書(2022年)》) published by EVTank, the theoretical recovery amount of used Li-ion batteries in China reached 591 thousand tons in 2021, of which the theoretical recovery amount of used power batteries was 294 thousand tons. The recovery and regeneration of lithium resources has become an essential part of the battery industry chain and will soon enter a period of fast development.

At present, the development of Li-ion batteries recycling industry is still in the early stage. The Group has advantages of a wide-ranging sales network strategy and online recycling channels. At the same time, it actively promotes strategic cooperation with new energy vehicle operating enterprises, holds the qualifications of dual white lists for recycling and echelon utilisation, and builds elite R&D teams, which lay a solid foundation for the Group in the Li-ion batteries recycling industry.

Regarding the technical aspect, the Group has cooperated closely with universities and scientific research institutes such as the Institute of Process Engineering, Chinese Academy of Sciences, Central South University and the Zhejiang University of Technology to carry out technical research. Key breakthroughs have been made in several core technologies, such as automatic charged battery disassembling and crushing, rapid intelligent sorting of materials, harmless processing of electrolytes, and efficient lithium extraction. The Group has built the industry's leading Li-ion battery recycling and processing production line, with the recovery rate of lithium increasing to over 88%, and the comprehensive technical index reaching the international advanced level.

In recent years, the Group has also strengthened the strategy of motive Li-ion batteries recycling and resource recycling, as well as speeding up the implementation of the "3+5+N" recycling strategy of 3 comprehensive disposal bases, 5 regional recycling bases and N recycling disposal points. The current disposal capacity of Wushan Li-ion batteries recovery base in Changxing County, Zhejiang province is about 10,000 tons. Further, the base in Binhai County, Jiangsu province that is under construction will reach a total annual disposal capacity of 100,000 tons.

OUTLOOK

Tianneng is experiencing a profound transformation from being a product provider which focuses on lead-acid batteries for electric two-wheelers in the past to a green energy solution provider now driven by diversified technologies in respect of lead, lithium, hydrogen and sodium. The Group has concentrated on the related application fields, and established strategies for new-generation technologies such as methanol and ammonia. The Group will focus on the construction of two 100-billion class industry ecosystems for lead and ESS and it will take the ecosystem as the main body and medium to gradually improve its forward-looking strategy in terms of technology and service, thereby achieving initiatives of the strategy of "business + technology + capital".

Through intelligent manufacturing of lead-acid batteries, together with innovative models such as digital marketing, integration of sale and recycling to set up a vertical integration, the efficiency of the lead industry will be enhanced, while digital intelligence will be used to connect the procurement, production, sales, recycling and research systems to build an industrial ecosystem with the focus on motive lend-acid batteries, so as to maximise optimal allocation of production factors in the lead industry and ecological benefits.

New ESS is leading the green energy industry for improvement amidst changes with its unique industrial advantages and clear direction for development. In the future, Tianneng will put more emphasis on systematic planning of innovation in ESS technology and strengthen its strategic deployment in three aspects including the promotion of diversified technology development, the breakthrough in the whole process of safety technology, and innovation of intelligent adjustment technology, so as to overcome the challenges by focusing on the technology. Meanwhile, it will also take into account the optimal allocation of innovative resources to facilitate the cross-sector development of industry and academia as well as research and application.

Tianneng will also be more open and integrated to carry out broader, more precise, and more sustainable international cooperation in respect of energy, and to gather efforts for the construction of a global energy community. Relying on the services and empowering system of the Tianneng Globalization Alliance (TGA), Tianneng will continuously strengthen the cooperation with members and achieve the globalisation of markets, R&D, talents, capital, brands, and manufacturing in full force through local operation, sales leadership, capital injection, technological achievement and industrial implementation.

MANAGEMENT ANALYSIS

Gross profit

The Group's gross profit increased by approximately 38.27% to approximately RMB6,389 million in 2022 from approximately RMB4,621 million in 2021, which was attributable to the increase in sales volume and gross profit margin of batteries. The overall gross profit margin increased by 3.16 percentage points to 8.56% from 5.40% in 2021. Among them, gross profit margin of manufacturing segment was 15.11%, representing an increase of 3.06 percentage points when compared with that in 2021. This was mainly attributable to the enhancement of cost management resulting in the decrease in cost of lead-acid batteries as compared with the previous year, and the increase in sales price of the products.

Other income

Other income of the Group increased by approximately 1.11% from approximately RMB1,094 million in 2021 to approximately RMB1,106 million in 2022. The increase was mainly attributable to the increase in government grants and interest income. Interest income increased from approximately RMB218 million in 2021 to approximately RMB315 million in 2022. The increase was mainly attributable to optimised fund allocation and increase in interest income from deposit.

Distribution and selling expenses

Distribution and selling expenses of the Group increased by approximately 18.53% from approximately RMB1,037 million in 2021 to approximately RMB1,229 million in 2022. The increase in distribution and selling expenses was mainly due to the increase in transportation fees.

Administrative expenses

Administrative expenses increased by approximately 37.75% from approximately RMB989 million in 2021 to approximately RMB1,363 million in 2022. Such increase was mainly due to the increase in staff cost and consultancy expenses.

Finance costs

Finance costs increased by approximately 34.10% from approximately RMB254 million in 2021 to approximately RMB341 million in 2022, which was mainly due to the increase in loan size during the Year.

Taxation

Tax charges of the Group increased by approximately 130.69% from approximately RMB286 million in 2021 to approximately RMB659 million in 2022, which was mainly due to the increase in profit during the Year.

LIQUIDITY AND FINANCIAL RESOURCES

The net cash from operating activities for the year of 2022 was approximately RMB1,590 million (2021: RMB2,105 million).The decrease was mainly due to the growth of inventories as a result of the increase in the Group's production capacity in 2022.

As at 31 December 2022, the bank balances and cash (including pledged bank deposits) of the Group was approximately RMB12,926 million (31 December 2021: approximately RMB11,640 million). As at 31 December 2022, the Group obtained undrawn banks facilities of approximately RMB13,086 million (31 December 2021: approximately RMB7,859 million). The bank balances and cash (including pledged bank deposits) of approximately RMB12,700 million, RMB145 million, RMB81 million and RMB88.18 were denominated in Renminbi, Hong Kong Dollars, US Dollars and Euros, respectively. As the bank balances in Hong Kong Dollars, US Dollars and Euros collectively accounted for approximately 1.75% of the total balances, the Group's relevant exchange risk is low.

As at 31 December 2022, the net current assets of the Group were approximately RMB6,166 million (31 December 2021: net current assets of approximately RMB7,799 million). The decrease was primarily attributable to the increase in notes payables of the Company, and that the Company was able to control the level of its liabilities and financial risks.

As at 31 December 2022, the interest bearing loans of the Group with maturity of within one year amounted to approximately RMB4,570 million (31 December 2021: approximately RMB2,875 million). The interest bearing loans of the Group with maturity of more than one year amounted to approximately RMB1,637 million (31 December 2021: RMB1,409 million). The interest bearing loans of RMB4,839 million (31 December 2021: approximately RMB2,551 million) carried fixed and variable interest rates ranging from 2.23% to 6.50% (2021: 2.23% to 7.36%) per annum. Loans dominated in U.S. dollar and Hong Kong dollar as converted to denomination in Renminbi of approximately RMB1,369 million carried fixed and variable interest rates ranging from 1.09% to 1.71%. The Company will closely monitor the changes in interest rate and assess the interest rate risk.

The objective of the Company's financial policy is to maintain healthy capital structure to minimize the capital cost through prudent financial management. During the year under review, the Group continued to further make use of long-term loans in order to optimize its loan structure.

FINANCIAL POSITION

Assets

As at 31 December 2022, the total assets of the Group were approximately RMB40,136 million, representing an increase of 22.59% as compared to approximately RMB32,739 million as at 31 December 2021. Among them, non-current assets increased by approximately 40.87% to approximately RMB13,597 million and current assets increased by approximately 14.95% to approximately RMB26,539 million. The major reason for the increase of non-current assets was due to the capital expenditure on production plants and equipment upgrade. The increase in current assets was mainly attributable to the increase in inventories, notes receivables and bank deposits.

Liabilities

As at 31 December 2022, the total liabilities of the Group were approximately RMB22,970 million, representing an increase of approximately 32.30% as compared to approximately RMB17,362 million as at 31 December 2021. Among them, non-current liabilities increased by approximately 25.15% to approximately RMB2,596 million, mainly due to the increase in long-term interest bearing borrowings and deferred income; current liabilities increased by approximately 33.27% to approximately RMB20,374 million, mainly due to the increase in bill payables and short-term borrowings.

ANALYSIS BY KEY FINANCIAL KPIS

Profitability:

	2022	2021
Return on equity	**12.78%**	12.49%
Gross profit margin	**8.56%**	5.40%
– Sales of batteries and battery related sales	**15.11%**	12.05%
– Trading	**0.14%**	0.11%
Net profit margin	**2.79%**	1.81%

The overall gross profit margin in 2022 increased as compared to 2021 due to the increase of manufacturing business. In 2022, the Group enhanced its cost management, resulting in the decrease in cost of lead-acid batteries as compared with the previous year, coupled with the increase in sales price of products, thereby achieving growth in gross profit margin of lead-acid products.

Liquidity:

	2022	2021
Current ratio	**1.30**	1.51
Quick ratio	**0.97**	1.22

Both the ratios above in 2022 decreased when compared with those in 2021, mainly due to less increment of current assets as compared to that of the current liabilities.

Operating Cycle:

	2022	2021
Inventory turnover days	**30**	20
Account receivables turnover days	**8**	6
Account payables turnover days	**15**	12
Bills and account receivables turnover days	**12**	13
Bills and account payables turnover days	**40**	25

The inventory turnover days increased by 10 days to 30 days in 2022 due to the increase in production capacity and inventory in 2022. Account receivables turnover days increased by 2 days from 2021 to 8 days in 2022 due to the increase in sales in the primary market in 2022, resulting in an increase in accounts receivable. Account payables turnover days for 2022 increased by 3 days to 15 days mainly due to the increase in account payables. Bills and account receivables turnover days decreased by 1 day to 12 days. Bills and account payables turnover days increased by 15 days to 40 days due to the increase in account payables.

Capital:

	2022	2021
Net debt ratio	**-11.00%**	-28.70%
Interest coverage ratio *(Note)*	**11.30**	10.60

Note: EBITDA divided by total interest expenses

As the interest bearing debt ("**Debt**") and the cash and bank balances as at 31 December 2022 were RMB6,207 million and RMB8,096 million, respectively, the net debt was RMB-1,888 million. There was adequate total capital during the Year.

The interest coverage ratio is 11.30 times, and the ability to make interest payments still remain strong.

Return of Shareholders:

	2022	2021
Earning per share (Basic) *(RMB)*	**1.60**	1.15
Dividend per share (HK cents/share)	**40.00 (Note)**	40.00

Note: representing the dividend proposed by the Board for 2022, which is subject to approval at the forthcoming annual general meeting.

CAPITAL EXPENDITURE

The capital expenditure in 2022 was approximately RMB3,029 million (2021: approximately RMB2,356 million). A majority of the expenditure was incurred in the lithium-ion battery segments, the start-stop battery segments and construction investment in the recycling segments.

CAPITAL COMMITMENTS

The amount contracted for but not stated in the consolidated financial statements in respect of the acquisition of property, plant and equipment as at 31 December 2022 was approximately RMB2,934 million (31 December 2021: approximately RMB2,043 million).

GEARING RATIO

The Group's gearing ratio (which is based on the amount of total interest bearing loans divided by total assets multiplied by 100%) as at 31 December 2022 was approximately 15.47% (31 December 2021: approximately 13.08%).

EXPOSURE TO EXCHANGE RATE FLUCTUATION

As the Group's operations were mainly conducted in China and the majority of businesses were transacted in Renminbi, the Group has set up policies to strike a balance between uncertainty and the risk of opportunity loss due to the growing significance of its exposures to fluctuations in foreign currencies. Foreign currency forward contracts can be used to eliminate the currency exposures. During the Year, the Group has entered into certain foreign currency forward contracts and closely monitored the movement of foreign currency rates. The Board is of the view that the Company's operating cash flow and liquidity are not subject to significant foreign exchange rate risk.

CONTINGENT LIABILITIES

The Group did not have any significant contingent liabilities as at 31 December 2022 (31 December 2021: Nil).

PLEDGE OF ASSETS

As at 31 December 2022, the bank facilities of the Group were secured by bank deposits, bills receivables, property, plant and equipment and prepaid lease payments. The aggregate net book value of the assets pledged amounted to approximately RMB7,851 million (31 December 2021: RMB4,315 million).

EMPLOYEE AND REMUNERATION POLICIES

As at 31 December 2022, the Group employed a total of 26,971 employees (31 December 2021: 25,618 employees). Staff costs excluding directors' emoluments of the Group for the year of 2022 amounted to approximately RMB3,264 million (2021: RMB2,702 million). The costs included basic salaries and benefits as well as staff benefits such as discretionary bonus, medical and insurance plans, pension scheme (including the schemes under the statutory requirement of the government such as pension insurance in China and mandatory provident fund in Hong Kong), unemployment insurance plans and share option scheme, etc. Competitive remuneration packages were offered to the employees. The Company has adopted incentive programs (including share option scheme) to encourage employee performance and provided a range of training programs for the development of its staff.

SIGNIFICANT INVESTMENTS HELD

Save for the investments in equity securities listed in the People's Republic of China (the "**PRC**") and Hong Kong, unlisted equity securities in the PRC and the structured bank deposits, there were no other significant investments held by the Group as at 31 December 2022. Such investments refer to its increased holdings of those excellent companies in the industry, reflecting its confidence in the prospect of the industry and the increase in corporate interest.

MATERIAL ACQUISITION AND DISPOSAL

The Group has no material acquisition and disposal of subsidiaries, associates and joint ventures during the reporting period.

PRINCIPAL RISKS AND UNCERTAINTIES

Many economic experts closely monitor whether the global and Chinese economy growth will slow down in the coming years. The Group's traditional business such as the sale of e-bike battery may be under uncertainties if the consumer market downturn exists. It is the reason that the Group started industry chain transformation and upgrade a few years ago, aiming to diversify the risk of over reliance on any single business segment.

In the past few years, labour cost in China continuously increased and the production-oriented entities in China were facing increasing pressure of higher production cost. The Group will make use of more resources in establishing production automation system in order to reduce manpower needed per production unit. At the same time, the employee incentive scheme will be used as the other way to improve manpower efficiency.

PURCHASE, SALE OR REDEMPTION OF THE COMPANY'S LISTED SHARES

During the Year, neither the Company nor any of its subsidiaries purchased, sold or redeemed any of the Company's listed securities.

Future Development

For the Group's future plans and development, please refer to the paragraph headed "Outlook" in the "Management Discussion and Analysis" section of this announcement.

CLOSURE OF REGISTER OF MEMBERS

The register of members of the Company will be closed from Monday, 5 June 2023 to Thursday, 8 June 2023 (both days inclusive), during which period no transfer of shares of the Company will be registered and the record date of the annual general meeting will be 8 June 2023. In order to qualify for attending the annual general meeting of the Company of this year, all share certificates, together with duly completed transfer forms, must be lodged with Tricor Investor Services Limited, the Company's Hong Kong branch share registrar, at 17/F, Far East Finance Centre, 16 Harcourt Road, Hong Kong, no later than 4:30 p.m. on Friday, 2 June 2023.

Further, the register of members of the Company will be closed from Thursday, 15 June 2023 to Friday, 16 June 2023 (both days inclusive), during which period no transfer of the shares of the Company will be registered. In order to establish entitlements to the proposed final dividend, all transfers accompanied by the relevant share certificates must be lodged with Tricor Investor Services Limited, the Company's Hong Kong branch share registrar, at 17/F, Far East Finance Centre, 16 Harcourt Road, Hong Kong, not later than 4:30 p.m. on Wednesday, 14 June 2023. Subject to the approval of the Shareholders at the annual general meeting of the Company to be held on Thursday, 8 June 2023, the proposed final dividend is expected to be paid on or before Friday, 7 July 2023.

AUDIT COMMITTEE

The Audit Committee was established in accordance with the requirements of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "**Listing Rules**") for the purposes of reviewing and providing supervision over the Group's financial reporting process and internal controls. The Audit Committee currently comprises three independent non-executive Directors, namely, Mr. Huang Dongliang (chairman), Mr. Zhang Yong and Mr. Xiao Gang.

The Audit Committee meets regularly with the Company's senior management and the Company's auditors to consider the Company's financial reporting process, the effectiveness of internal controls, the audit process and risk management.

The Audit Committee has reviewed the annual results of the Group for the year ended 31 December 2022.

CORPORATE GOVERNANCE CODE

The Company has adopted and met the provisions of Part 2 of the Corporate Governance Code (the "**Code**") as contained in Appendix 14 to the Listing Rules that is applicable to the corporate governance report for the year ended 31 December 2022, except for the code provision C.2.1 of Part 2 of the Code as set out below.

Dr. Zhang Tianren is both the chairman and CEO of the Company who is responsible for managing the Group's business. The Board considers that vesting the roles of chairman and CEO in the same person facilitates the execution of the Company's business strategies and maximizes the effectiveness of its operation. With the present Board structure and scope of business, the Board considers that there is no imminent need to separate the roles into two individuals. However, the Board will continue to review the effectiveness of the Group's corporate governance structure to assess whether separation of the position of the chairman and CEO is necessary.

SCOPE OF WORK OF DELOITTE TOUCHE TOHMATSU

The figures in respect of the Group's consolidated statement of financial position, consolidated statement of profit or loss and other comprehensive income, and the related notes thereto for the year ended 31 December 2022 as set out in this announcement have been agreed by Deloitte Touche Tohmatsu, the Group's auditors, to the amounts set out in the Group's audited consolidated financial statements for the year ended 31 December 2022. The work performed by Deloitte Touche Tohmatsu in this respect did not constitute an assurance engagement in accordance with the Hong Kong Standards on Auditing, Hong Kong Standards on Review Engagements or Hong Kong Standards on Assurance Engagements issued by the Hong Kong Institute of Certified Public Accountants and consequently no assurance has been expressed by Deloitte Touche Tohmatsu on this announcement.

COMPLIANCE WITH THE MODEL CODE OF THE LISTING RULES

The Company has adopted the Model Code for Securities Transactions by Directors of Listed Issuers (the "**Model Code**") as set out in Appendix 10 to the Listing Rules. Having made specific enquiry, all directors of the Company confirmed that they have complied with the required standards as set out in the Model Code throughout the year ended 31 December 2022.

ANNUAL GENERAL MEETING

The forthcoming annual general meeting of the Company will be held at Conference Room, 3/F, Tianneng Group Building, Huaxi Industrial Function Zone, Changxing County, Zhejiang Province, the PRC on Thursday, 8 June 2023 at 2:00 p.m.. Notice of annual general meeting will be published on the Company's website at www.tianneng.com.hk and the website of the Hong Kong Stock Exchange at www.hkexnews.hk and despatched to the Shareholders as soon as practicable.

PUBLICATION

The annual report containing all the information as required by Appendix 16 to the Listing Rules will be published on the Company's website at www.tianneng.com.hk and the website of the Hong Kong Stock Exchange at www.hkexnews.hk as soon as practicable.

PROPOSED AMENDMENTS TO THE EXISTING MEMORANDUM AND ARTICLES OF ASSOCIATION

Pursuant to Rule 13.51(1) of the Listing Rules, the Board announces that the Board proposes to make certain amendments (the "**Proposed Amendments**") to the existing memorandum of association and articles of association of the Company (the "**Existing Memorandum and Articles**") and adopt an amended and restated memorandum of association (the "N**ew Memorandum**") and articles of association of the Company (the "**New Articles**", together with the New Memorandum, collectively the "**New Memorandum and Articles**") in substitution for, and to the exclusion of, the Existing Memorandum and Articles.

The primary objectives of the Proposed Amendments are:

1. to provide more flexibility in relation to the conduct of general meetings of the Company by allowing general meetings to be held at different physical locations simultaneously, or to be held as hybrid meetings or electronic meetings which may be attended by the Shareholders by means of electronic facilities;

2. to reflect the latest amendments to the Listing Rules, particularly Appendix 3 to the Listing Rules concerning the core shareholder protection standards which came into effect on 1 January 2022, and to bring the Existing Memorandum and Articles up-to-date with the applicable laws of the Cayman Islands; and

3. to incorporate other consequential and housekeeping amendments which are in line with the above amendments.

Below is a summary of the key areas of the Proposed Amendments that will be incorporated in the New Memorandum and Articles:

The New Memorandum:

1. to update the registered office of the Company.

The New Articles:

1. to allow all general meetings of the Company (including an annual general meeting, any adjourned or postponed meeting) to be held as physical meetings in any part of the world and at one or more locations, or as hybrid meetings or electronic meetings where the Shareholders may participate virtually by means of electronic facilities;

2. to expressly provide that any Shareholder or Director attending and participating at a meeting convened and held in any manner permitted by the New Articles by means of electronic facilities shall be deemed to be present at that meeting;

3. to include the definitions of, among other things, ''electronic communication'', ''electronic meeting'', ''hybrid meeting'', ''Meeting Location'', ''physical meeting'' and ''Principal Meeting Place'', and make corresponding changes to the relevant provisions;

4. to exclude the application of Section 8 and Section 19 of the Electronic Transactions Act (2003) of the Cayman Islands to the extent it imposes obligations or requirements in addition to those set out in the New Articles;

5. to specify the additional details that need to be included in a notice of general meeting in light of allowing general meetings to be held at one or more meeting locations, or as hybrid meetings or electronic meetings;

6. to expressly allow the chairman of a general meeting to make arrangements for managing the attendance and participation in the meeting, including adjourning the meeting from time to time (or indefinitely) and/or from place to place(s) and/or from one form to another (a physical meeting, a hybrid meeting or an electronic meeting), and imposing appropriate requirements or restrictions to ensure the security and the proper and orderly conduct of the meeting;

7. to provide that, where the Directors, in their absolute discretion, consider that it is inappropriate, impracticable, unreasonable or undesirable for any reason to hold a general meeting on the date or at the time or place or by means of electronic facilities specified in the notice calling for such meeting, they may change or postpone the meeting to another date, time and/or place, change the electronic facilities and/or change the form of the meeting (a physical meeting, a hybrid meeting or an electronic meeting) without approval from the Shareholders;

8. to allow the delivery of a notice or document by and to the Company through electronic communications;

9. to provide that the Company must hold an annual general meeting in each financial year and such annual general meeting must be held within six months after the end of the Company's financial year;

10. to provide that a resolution put to the vote at general meetings of the Company shall be decided by poll except in a physical meeting where the chairman may in good faith allow a resolution which relates purely to a procedural or administrative matter to be voted on by a show of hands, and that votes may be cast by such means, electronic or otherwise, as the Directors or the chairman of the meeting may determine;

11. to provide that all Shareholders have the right to speak and vote at a general meeting of the Company, except where a Shareholder is required by the Listing Rules to abstain from voting to approve the matter under consideration;

12. to replace the definition of "Law" with "Act" to bring it in line with the Companies Act, Cap. 22 (Act 3 of 1961, as consolidated and revised) of the Cayman Islands;

13. to provide that the appointment, removal and remuneration of the auditor of the Company shall be approved by Shareholders by ordinary resolution;

14. to provide that any person appointed by the Directors to fill a casual vacancy on or as an addition to the Board to hold office only until the first annual general meeting after his appointment and then to be eligible for re-election;

15. to remove the requirement that the record date for determining the Shareholders' entitlement to receive any dividend, distribution, allotment or issue shall be fixed on a date on, or at any time not more than 30 days before or after, any date on which such dividend, distribution, allotment or issue is declared, paid or made;

16. to modify the definition of ''associate'' into that of ''close associate'', and make corresponding updates to the relevant provisions in relation to any Board resolution approving any contract or arrangement or any other proposal in which a Director or any of his associates and/or close associates is materially interested;

17. to amend the provisions relating to loans to a Director or his/her close associate(s);

18. to provide that a resolution in writing shall not be passed in lieu of a Board meeting for the purposes of considering any matter or business in which a substantial Shareholder of the Company or a Director has a conflict of interest and the Board has determined that such conflict of interest to be material;

19. to provide that the Board may accept the surrender for no consideration of any fully paid shares;

20. to remove the provision relating to that purchase by the Company of a redeemable share not made through the market or by tender shall be limited to a maximum amount that may be determined by the Company in general meeting;

21. to specify that two persons appointed by the clearing house as authorised representatives or proxies shall form a quorum in general meeting for all purposes;

22. to provide that the Board may resolve to capitalise all or any part of any amount for the time being standing to the credit of any reserve or fund to pay up unissued shares to be allotted to (i) employees (including the Directors) of the Company and/or its affiliates, or (ii) any trustee of any trust in connection with the operation of any share incentive scheme or employee benefit scheme or other arrangement which relates to such persons that has been adopted or approved by the Shareholders at a general meeting;

23. to provide that the power of the Board to present a petition to wind up the Company shall be subject to a special resolution passed by the Shareholders;

24. to remove the provision which provided that in the event of winding-up of the Company in Hong Kong, every Shareholder of the Company who is not for the time being in Hong Kong shall be bound to serve notice in writing on the Company appointing some person resident in Hong Kong upon whom summonses and other notices, process or orders under the winding-up may be served;

25. to clarify that unless otherwise determined by the Directors, the financial year end of the Company shall be 31 of December in each year; and

26. to make other amendments to update or clarify provisions of the Existing Memorandum and Articles to better align with the language in the applicable laws of the Cayman Islands and the Listing Rules.

The Proposed Amendments and the adoption of the New Memorandum and Articles are subject to the approval of the Shareholders by way of a special resolution at the forthcoming annual general meeting of the Company, and, if approved, will become effective upon such approval.

A special resolution will be proposed at the forthcoming annual general meeting for the Shareholders to consider, and if appropriate, approve the Proposed Amendments and the adoption of the New Memorandum and Articles. A circular which contains, among other things, details of the Proposed Amendments and the adoption of the New Memorandum and Articles, together with a notice convening the annual general meeting, will be despatched to the Shareholders in due course.

GENERAL INFORMATION

As at the date of this announcement, the executive directors of the Company are Dr. ZHANG Tianren, Mr. ZHANG Aogen, Mr. ZHANG Kaihong, Mr. SHI Borong and Mr. ZHOU Jianzhong; the independent non-executive directors of the Company are Mr. HUANG Dongliang, Mr. ZHANG Yong and Mr. XIAO Gang.

This announcement will be published on the website of the Company at www.tianneng.com.hk and the website of the Hong Kong Stock Exchange at www.hkexnews.hk.

By Order of the Board
TIANNENG POWER INTERNATIONAL LIMITED
ZHANG Tianren
Chairman

Hong Kong, 24 March 2023

As at the date of this announcement, the executive directors of the Company are Dr. ZHANG Tianren, Mr. ZHANG Aogen, Mr. ZHANG Kaihong, Mr. SHI Borong and Mr. ZHOU Jianzhong; the independent non-executive directors of the Company are Mr. HUANG Dongliang, Mr. ZHANG Yong and Mr. XIAO Gang.