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 2023

FINANCIAL HIGHLIGHTS

- Revenue increased by approximately 12.46% to approximately RMB83,891 million.
- Profit attributable to Shareholders increased by approximately 1.42% to approximately RMB1,822 million.
- Basic earnings per share increased to approximately RMB1.62.
- A final dividend of HK$43 cents per share is proposed.

2023 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 2023 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 2023

		Year ended 31 December	
		2023	2022
	NOTES	***RMB'000***	*RMB'000*
Revenue	*4*	**83,890,973**	74,598,641
Cost of sales		**(77,926,315)**	(68,209,336)
Gross profit		**5,964,658**	6,389,305
Other income		**1,897,109**	1,106,402
Other gains and losses	*5*	**(50,677)**	(57,443)
Impairment losses under expected credit loss model, net of reversal	*9*	**(55,439)**	(143,062)
Distribution and selling expenses		**(1,424,382)**	(1,229,444)
Administrative expenses		**(1,357,017)**	(1,362,895)
Research and development costs		**(1,927,152)**	(1,622,379)
Share of results of associates		**(835)**	(905)
Finance costs	*6*	**(482,780)**	(340,738)
Profit before tax		**2,563,485**	2,738,841
Income tax expense	*7*	**(727,780)**	(659,163)
Profit for the year	*8*	**1,835,705**	2,079,678

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME *(Continued)*
For the year ended 31 December 2023

		Year ended 31 December	
		2023	2022
	NOTE	***RMB'000***	*RMB'000*
Other comprehensive (expense) income			
Item that will not be reclassified to profit or loss:			
Fair value (loss) gain on investments in equity instruments at fair value through other comprehensive income ("**FVTOCI**"), net of income tax		**(6,067)**	46,142
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
Other comprehensive (expense) income for the year, net of income tax		**(6,067)**	51,829
Total comprehensive income for the year		**1,829,638**	2,131,507
Profit for the year attributable to:			
Owners of the Company		**1,821,836**	1,796,385
Non-controlling interests		**13,869**	283,293
		1,835,705	2,079,678
Total comprehensive income attributable to:			
Owners of the Company		**1,815,769**	1,848,214
Non-controlling interests		**13,869**	283,293
		1,829,638	2,131,507
Earnings per share	*10*		
– Basic *(RMB cents)*		**162**	160
– Diluted *(RMB cents)*		**159**	157

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

At 31 December 2023

		As at 31 December	
		2023	2022
	NOTE	***RMB'000***	*RMB'000*
Non-current Assets			
Property, plant and equipment		**13,054,093**	8,486,582
Right-of-use assets		**1,350,614**	1,249,263
Goodwill		**499**	499
Interests in associates		**318,609**	228,227
Equity instruments at FVTOCI		**355,651**	324,083
Deferred tax assets		**916,290**	790,922
Deposits for acquisition of property, plant and equipment		**380,435**	973,742
Loan receivables		**297,486**	333,436
Pledged/restricted bank deposits		**737,320**	1,210,000
		17,410,997	13,596,754
Current Assets			
Inventories		**6,807,515**	6,840,510
Properties under development for sale/properties for sale		**883,491**	860,626
Bills, trade and other receivables	*11*	**5,031,601**	5,041,205
Loan receivables		**1,085,648**	930,503
Amounts due from related parties		**36,966**	1,478
Debt instruments at FVTOCI		**476,093**	798,005
Financial assets at fair value through profit or loss ("**FVTPL**")		**320,828**	350,439
Pledged/restricted bank deposits		**5,242,219**	3,720,595
Time deposits		**–**	450,000
Cash and cash equivalents		**9,455,594**	7,545,808
		29,339,955	26,539,169

CONSOLIDATED STATEMENT OF FINANCIAL POSITION *(Continued)*
At 31 December 2023

		As at 31 December	
		2023	2022
	NOTE	***RMB'000***	*RMB'000*
Current Liabilities			
Bills, trade and other payables	*12*	**12,997,639**	11,958,681
Amounts due to related parties		**239,461**	316,228
Taxation liabilities		**455,722**	499,543
Borrowings		**6,240,750**	4,558,209
Lease liabilities		**7,215**	11,608
Provision		**631,508**	697,428
Contract liabilities		**2,713,775**	2,331,915
		23,286,070	20,373,612
Net Current Assets		**6,053,885**	6,165,557
Total Assets less Current Liabilities		**23,464,882**	19,762,311
Non-current Liabilities			
Deferred tax liabilities		**90,031**	94,424
Borrowings		**2,826,775**	1,624,218
Lease liabilities		**6,315**	13,437
Deferred government grants		**1,093,547**	864,058
Redemption liabilities on ordinary shares of a subsidiary		**1,003,591**	–
		5,020,259	2,596,137
Net Assets		**18,444,623**	17,166,174
Capital and Reserves			
Share capital		**109,850**	109,850
Share premium and reserves		**15,750,030**	14,334,266
Equity attributable to the owners of the Company		**15,859,880**	14,444,116
Non-controlling interests		**2,584,743**	2,722,058
Total Equity		**18,444,623**	17,166,174

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2023

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 NEW AND AMENDMENTS TO HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs")

New and amendments to HKFRSs that are mandatorily effective for the current year

In the current year, the Group has applied the following new and 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 2023 for the preparation of the consolidated financial statements:

HKFRS 17 (including the October 2020 and February 2022 Amendments to HKFRS 17)	Insurance Contracts
Amendments to HKAS 8	Definition of Accounting Estimates
Amendments to HKAS 12	Deferred Tax related to Assets and Liabilities arising from a Single Transaction
Amendments to HKAS 12	International Tax Reform-Pillar Two model Rules
Amendments to HKAS 1 and HKFRS Practice Statement 2	Disclosure of Accounting Policies

Except as described below, the application of the new and 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.

2.1 *Impacts on application of HKFRS 17 (including the October 2020 and February 2022 Amendments) Insurance Contracts*

The Group has applied the new standard and the relevant amendments for the first time in the current year.

HKFRS 17 establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts and supersedes HKFRS 4 *Insurance Contracts*.

HKFRS 17 defines an insurance contract as a contract under which the Group accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder.

In October 2020, the HKICPA issued Amendments to HKFRS 17 to address concerns and implementation challenges that were identified after HKFRS 17 was published. The amendments defer the date of initial application of HKFRS 17 (incorporating the amendments) to annual reporting periods beginning on or after 1 January 2023. At the same time, the HKICPA issued Amendments to HKFRS 4 *Extension of the Temporary Exemption from HKFRS 9* that extends the fixed expiry date of the temporary exemption from applying HKFRS 9 in HKFRS 4 to annual reporting periods beginning on or after 1 January 2023.

In February 2022, the HKICPA issued Amendment to HKFRS 17 *Initial Application of HKFRS 17 and HKFRS 9 – Comparative Information* to address implementation challenges that were identified after HKFRS 17 was published. The amendment addresses challenges in the presentation of comparative information.

Certain contracts entered into by the Group, e.g. assurance type warranty to customers, financial guarantee contracts issued by the Group, meet the definition of insurance contracts under HKFRS 17. However, these contracts are specifically scoped out from HKFRS 17 and the Group continues to account for these contracts under relevant accounting standards. Therefore, the application of HKFRS 17 in the current year had no material impact on the consolidated financial statements.

2.2 *Impacts on application of Amendments to HKAS 1 and HKFRS Practice Statement 2 Disclosure of Accounting Policies*

The Group has applied the amendments for the first time in the current year. HKAS 1 *Presentation of Financial Statements* is amended to replace all instances of the term “significant accounting policies” with “material accounting policy information”. Accounting policy information is material if, when considered together with other information included in an entity’s financial statements, it can reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements.

The amendments also clarify that accounting policy information may be material because of the nature of the related transactions, other events or conditions, even if the amounts are immaterial. However, not all accounting policy information relating to material transactions, other events or conditions is itself material. If an entity chooses to disclose immaterial accounting policy information, such information must not obscure material accounting policy information.

HKFRS Practice Statement 2 *Making Materiality Judgements* (the "**Practice Statement**") is also amended to illustrate how an entity applies the "four-step materiality process" to accounting policy disclosures and to judge whether information about an accounting policy is material to its financial statements. Guidance and examples are added to the Practice Statement.

The application of the amendments has had no material impact on the Group's financial positions and performance but has affected the disclosure of the Group's accounting policies set out in note 3 to the consolidated financial statements.

Amendments to HKFRSs in issue but not yet effective

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

Amendments to HKFRS 10 and HKAS 28	*Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*[1]
Amendments to HKFRS 16	*Lease Liability in a Sale and Leaseback*[2]
Amendments to HKAS 1	*Classification of Liabilities as Current or Non-current and related amendments to Hong Kong Interpretation 5 (2020)*[2]
Amendments to HKAS 1	*Non-current Liabilities with Covenants*[2]
Amendments to HKAS 7 and HKFRS 7	*Supplier Finance Arrangements*[2]
Amendments to HKAS 21	*Lack of Exchangeability*[3]

1 Effective for annual periods beginning on or after a date to be determined.
2 Effective for annual periods beginning on or after 1 January 2024.
3 Effective for annual periods beginning on or after 1 January 2025.

The directors of the Company anticipate that the application of all the 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	
	2023	2022
	RMB'000	*RMB'000*
Segment revenue		
Manufacturing business		
– external sales	**47,397,428**	41,971,044
Trading		
– external sales	**36,493,545**	32,627,597
– inter-segment sales	**6,318,624**	411,618
Segment revenue	**90,209,597**	75,010,259
Eliminations	**(6,318,624)**	(411,618)
Group revenue	**83,890,973**	74,598,641
Segment results		
Manufacturing business	**1,900,516**	2,188,543
Trading	**(7,368)**	(42,535)
	1,893,148	2,146,008
Unallocated		
Other gains and losses	**(50,677)**	(57,443)
Share of results of associates	**(835)**	(905)
Corporate administrative expenses	**(5,171)**	(7,962)
Finance costs	**(760)**	(20)
Profit for the year	**1,835,705**	2,079,678

Other segment information

For the year ended 31 December 2023	**Manufacturing business** *RMB'000*	**Trading** *RMB'000*	**Unallocated** *RMB'000*	**Total** *RMB'000*
Depreciation of property, plant and equipment	**818,413**	**3,259**	**–**	**821,672**
Depreciation of right-of-use assets	**45,567**	**–**	**–**	**45,567**
Impairment losses on trade receivables recognised in profit or loss	**10,327**	**18,887**	**–**	**29,214**
Loss on disposal/written off of property, plant and equipment	**55,173**	**–**	**–**	**55,173**
Interest income	**551,105**	**16,751**	**474**	**568,330**
Income tax expense	**724,939**	**2,841**	**–**	**727,780**
Write-down of inventories	**338,604**	**–**	**–**	**338,604**

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
Depreciation 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

Information about major customers

During the year ended 31 December 2023 and 2022, 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	
	2023	2022
	RMB'000	*RMB'000*
Types of goods or service		
Manufacturing business		
Lead-acid battery products	**42,423,301**	35,747,300
Renewable resources products	**3,600,226**	3,813,709
Lithium-ion battery products	**876,813**	1,602,312
Others *(note)*	**497,088**	807,723
Trading	**36,493,545**	32,627,597
	83,890,973	74,598,641
Geographical markets		
Mainland China	**83,651,021**	74,234,912
Others	**239,952**	363,729
	83,890,973	74,598,641
Timing of revenue recognition		
A point in time	**83,842,432**	74,115,516
Over time	**48,541**	483,125
	83,890,973	74,598,641

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

(ii) Performance obligations for contracts with customers and revenue recognition policies

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 2023 and 2022 and the expected timing of recognising revenue are as follows:

	As at 31 December	
	2023	2022
	RMB'000	*RMB'000*
Within one year	**65,186**	163,597
More than one year but not more than two years	**222,731**	–
More than two years	**–**	123,274
	287,917	286,871

As at 31 December 2023 and 2022, 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	
	2023	2022
	RMB'000	*RMB'000*
Net gains (losses) on financial assets at FVTPL		
– structured bank deposits	**19,287**	67,382
– investments in listed equity securities	**(20,302)**	(15,438)
– commodity derivative contracts	**2,566**	36,572
– foreign currency forward contracts	**14,374**	22,492
Loss on disposal/written off of property, plant and equipment	**(55,173)**	(66,464)
Net foreign exchange losses	**(33,144)**	(133,629)
Gain on disposal of subsidiaries	**–**	53,332
Others	**21,715**	(21,690)
	(50,677)	(57,443)

6. FINANCE COSTS

	Year ended 31 December	
	2023	2022
	RMB'000	*RMB'000*
Interest on borrowings	**349,806**	264,776
Interest on factorised bills	**100,062**	74,517
Interest on redemption liabilities on ordinary shares of a subsidiary	**31,543**	–
Interest on lease liabilities	**1,369**	1,445
	482,780	340,738

7. INCOME TAX EXPENSE

	Year ended 31 December	
	2023	2022
	RMB'000	*RMB'000*
People's Republic of China (the "**PRC**") Enterprise Income Tax ("**EIT**"):		
– Current tax	**828,713**	697,114
Deferred tax		
– Current year	**(100,933)**	(37,951)
	727,780	659,163

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 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 2021 to 2023 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	
	2023	2022
	RMB'000	*RMB'000*
Profit before tax	**2,563,485**	2,738,841
Tax at the applicable income tax rate of 25% (2022: 25%)	**640,871**	684,710
Tax effect of expenses not deductible for tax purposes	**4,349**	8,981
Tax effect of tax losses not recognised	**173,878**	29,001
Utilisation of tax losses previously not recognised	**(867)**	–
Tax effect of deductible temporary differences not recognised	**73,720**	41,678
Income tax at concessionary rates	**(10,756)**	20,089
Tax effect of additional deduction related to research and development costs and certain staff costs	**(198,770)**	(171,925)
Withholding tax on undistributed profits of PRC subsidiaries	**45,355**	46,629
	727,780	659,163

8. PROFIT FOR THE YEAR

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

	Year ended 31 December	
	2023	2022
	RMB'000	*RMB'000*
Directors' remuneration	**4,156**	4,307
Other staff costs	**3,087,309**	3,103,052
Retirement benefits scheme contributions, excluding directors	**184,068**	161,021
Share-based payments	**8,427**	7,644
Total staff costs	**3,283,960**	3,276,024
Depreciation of property, plant and equipment	**821,672**	726,843
Depreciation of right-of-use assets	**45,567**	42,314
Auditor's remuneration	**2,180**	2,030
Cost of inventories sold	**74,642,355**	67,160,592
Write-down of inventories (included in cost of sales)	**338,604**	96,392

9. DIVIDENDS

	Year ended 31 December	
	2023	2022
	RMB'000	*RMB'000*
Dividends declared during the year:		
2023: 2022 final dividend of HK$40.00 cents (equivalent to RMB35.52 cents) (2022: 2021 final dividend of HK$40.00 cents (equivalent to RMB34.15 cents)) per ordinary share	**400,005**	384,594

Subsequent to the end of the reporting period, a final dividend of HK$43.00 cents (equivalent to RMB38.99 cents) (2022: HK$40.00 cents (equivalent to RMB35.52 cents)) in respect of the year ended 31 December 2023 per ordinary share has been proposed by the directors and is subject to approval by the shareholders 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	
	2023	2022
	RMB'000	*RMB'000*
Earnings:		
Earnings for the purposes of calculating basic and diluted earnings per share – attributable to the owners of the Company	**1,821,836**	1,796,385

	Year ended 31 December	
	2023	2022
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	**21,909,530**	21,269,586
Weighted average number of ordinary shares for the purpose of calculating diluted earnings per share	**1,148,034,030**	1,147,394,086

11. BILLS, TRADE AND OTHER RECEIVABLES

	As at 31 December	
	2023	2022
	RMB'000	*RMB'000*
Bills receivables*	**1,742,657**	2,206,207
Trade receivables	**2,101,758**	1,738,719
Less: Allowance for credit losses	**(291,232)**	(351,350)
	1,810,526	1,387,369
Other receivables	**140,699**	178,702
Less: Allowance for credit losses	**(55,819)**	(45,961)
	84,880	132,741
Prepayments for materials	**698,658**	605,966
PRC value added tax and EIT recoverable	**694,880**	708,922
	5,031,601	5,041,205

* 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 2022, trade receivables from contracts with customers amounted to RMB1,615,137,000.

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	
	2023	2022
	RMB'000	*RMB'000*
0 to 45 days	**988,618**	920,192
46 to 90 days	**538,833**	359,021
91 to 180 days	**140,801**	49,972
181 to 365 days	**93,671**	23,895
1 year to 2 years	**23,007**	11,876
Over 2 years	**25,596**	22,413
	1,810,526	1,387,369

12. BILLS, TRADE AND OTHER PAYABLES

	As at 31 December	
	2023	2022
	RMB'000	*RMB'000*
Trade payables	**2,492,342**	2,456,894
Bills payables	**6,154,646**	6,198,145
Value added tax payables and other tax payables	**766,238**	729,460
Staff salaries and welfare payables	**646,354**	657,223
Payables for purchase of property, plant and equipment	**1,671,923**	620,554
Accrued charges	**624,414**	474,586
Deposits payables	**365,068**	440,744
Dividend payables	**688**	110,498
Other payables	**275,966**	270,577
	12,997,639	11,958,681

The Group normally receives credit terms of 5 days to 90 days (2022: 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	
	2023	2022
	RMB'000	*RMB'000*
0 – 90 days	**2,043,673**	2,181,136
91 – 180 days	**253,180**	150,787
181 – 365 days	**40,140**	61,633
1 – 2 years	**115,324**	34,473
Over 2 years	**40,025**	28,865
	2,492,342	2,456,894

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

	As at 31 December	
	2023	2022
	RMB'000	*RMB'000*
0 – 180 days	**6,152,115**	6,148,145
181 – 365 days	**2,531**	50,000
	6,154,646	6,198,145

MANAGEMENT DISCUSSION AND ANALYSIS

OPERATION REVIEW

During the year ended 31 December 2023 (the "**Reporting Period**"), the Group remained committed to its development strategies of "industry, technology and capital" as its guidance, to further strengthen the whole life cycle industrial chain of motive lead-acid battery. Additionally, the Group focused on constructing a new energy storage ecosystem, aiming to facilitate the synergistic growth of lead-acid battery and smart energy storage system ("**ESS**"). At the same time, the Group adhered to the concept of green development driven by technological innovation, deeply explored the diverse technologies in respect of "lead, lithium, hydrogen and sodium", as well as the coexistence of multiple business scenarios, accelerating the establishment of a low-carbon and recycling industrial system.

Promoting industrial upgrading and digital transformation is crucial for the sustainable development of Tianneng's lead-acid battery business. During the Reporting Period, Tianneng committed to advancing the construction of intelligent factories across its self-owned production bases to achieve seamless integration of intelligentization and eco-friendliness. Alongside precision digital marketing efforts, the Group has built an integrated industrial ecosystem that combined research and development ("**R&D**"), production and sales, achieving optimal allocation and maximizing the efficiency of the lead-acid battery industry. It further solidified the Company's position as the leader in the industry.

Converting technological advantages into product advantages is the competitiveness and solid strength of Tianneng, positioning it as the global leader in the motive lead-acid battery sector. During the Reporting Period, the Group leveraged on the "key technologies for the entire life cycle of batteries of Tianneng's lead-acid batteries" and achieved the comprehensive advancement of various champion-level lead-acid battery products, and reached another leap in power, performance and range, and fulfilled the diversified user needs across a range of scenarios by classifying products.

In addition to motive batteries, the Group focuses on the development of new ESS construction as the key strategic task during the Reporting Period. On the one hand, Tianneng continues to lead the lead-carbon battery technology and consistently achieves breakthroughs in key technologies related to lithium-ion ("**Li-ion**") batteries. The Group is also accelerating the application of technologies, including sodium-ion batteries and hydrogen fuel cell, in ESS products and system solutions. On the other hand, the Group is driving technological innovation in system integration to realize the key value of integration and allocation of different resources in the ESS industry chain and to realize the key values of diversification of application scenarios, and promotes the implementation of key plans across various sectors, including power generation, industrial and commercial user, and storage integration.

Being the industry's leading enterprise to establish a green circular industry park, the Group has consistently aligned itself with the national "Dual Carbon" strategy, which promotes green and low-carbon development across the industry chain. It excels in both "adding" by developing new businesses and "subtracting" through energy conservation and consumption reduction efforts. Tianneng positions itself in the dual-cycle track of waste lead-acid batteries and waste Li-ion batteries, achieved with a solid capacity reserve, continuous improvement of cutting-edge technology, and stringent environmental protection measures. A large amount of lead mining and solid waste emissions are reduced each year, and the recovery rate of related metal materials reaches up to 99% or above, thus achieving win-win economic and environmental benefits.

With a global perspective, the Group engages in the wave of development within the world's new energy industry. The Group seizes opportunities and expands its operations by leveraging its own advantages. In 2023, the Group established offices in the Netherlands, Vietnam and Thailand, etc. The Group has signed the Tianneng brand cooperation agreements with more than 20 overseas distributors, while simultaneously launching terminal shop plans and establishing a global R&D center, as well as a global resource integration center. These initiatives allow Tianneng to collaborate with global industry chain partners to participate in the rapid growth of its overseas business.

INDUSTRY DEVELOPMENT AND OPERATION

(1) High-end eco-friendly batteries

High-end eco-friendly batteries are a series of sealed maintenance-free lead-acid battery products created by the Group relying on its R&D and technology innovations, which include motive batteries, ESS batteries as well as starter and start-stop batteries for automobiles. During the Reporting Period, the high-end eco-friendly batteries business of the Group recorded an operating income of approximately RMB42,423 million, representing a year-on-year increase of approximately 18.68%.

Motive lead-acid battery

Lead-acid battery is a low-cost "resource-circular" energy product characterized by high safety, stable charging and discharging performance, wide application areas, recyclable and reusable. Among them, motive lead-acid batteries, as a power source, are mainly used in vehicles such as light electric vehicles and special electric vehicles. During the Reporting Period, the Group's lead-acid battery business recorded an operating income of approximately RMB39,152 million, representing a year-on-year growth of approximately 19.32%.

According to the statistics set out in the White Paper for the Development of the Chinese Two-wheeled Electric Vehicles Industry (2023) (《中國電動二輪車行業發展白皮書（2023年）》) jointly published by EVTank, a research institute and China YiWei Institute of Economics, China produced a total of 59.04 million two-wheeled electric vehicles in 2022, recording a year-on-year rise of approximately 8.5%, which maintained stable growth. On the one side, two-wheeled electric vehicles are adapted to the demand for short-distance travel, providing residents with a low-carbon solution for commuting over short distances. On the other side, the rapid development of consumption businesses in takeaways, same-city delivery, instant retail and shared travel are driving the rise in the demands of two-wheeled electric vehicles.

The motive lead-acid batteries are well-suited to the demands of two-wheeled electric vehicle and remain the mainstream batteries in the market. There is still room for growth in their application within the two-wheeled vehicle market. As the leading enterprise in the motive lead-acid batteries industry, Tianneng is a pioneer of the technological breakthroughs, a promoter of the cutting-edge technology, and a leader of product upgrades. During the Reporting Period, the Group officially launched the "Tianneng Round-Engines Technology Platform (天能全擎技術平台)", which empowers four key technologies for the entire life cycle of motive batteries, namely, the key technology of cutting-edge material formulation, the key technology of extremely stable battery cells process, the key technology of automatic intelligent cloud charging, and the key technology of green resource regeneration. Leveraging the Tianneng Round-Engines Technology Platform, Tianneng aims to strengthen its market competitiveness in terms of products, leading the industry with holistic upgrading in areas such as performance, life, intelligentization and recycling.

In 2023, the Group accelerated the intelligentization transformation and achieved fruitful results. Tianneng has infiltrated digital intelligence into each process to advance the coverage in each section. Several companies have been honored as demonstrations of the green manufacturing system and pilot projects for intelligent manufacturing by the Ministry of Industry and Information Technology of the People's Republic of China (MIIT) with the titles such as "Green Industrial Park" and "Green Factory". The Group established a digital workshop of high-performance battery assembly process, where mature battery process knowledge was applied to the product design and production process, resulting in forming a complete set of digital solutions. The Group has successfully built a high-performance intelligent factory of motive lead-acid battery to achieve the goals of design and manufacturing collaboration, production operation intelligence, and production data visualization. Meanwhile, we are gradually extending intelligent manufacturing to our production bases and over 100 subsidiaries across the country to minimise production costs and improve product quality.

Driven by technological innovations and intelligentization transformation, the Group has deepened multi-channel marketing layouts. During the Reporting Period, the Group's primary market sales of motive lead-acid battery has been constantly improving, and it had further cooperation with downstream vehicle manufacturers. In the replacement market, the Group's self-built online service mall has been successfully launched and operated. Its basic transaction mode is functioning smoothly. The Group will continue to consolidate sales in the primary market while engaging with over 3,000 dealers and more than 400,000 terminal stores. It aims to enhance the Company's influence and core competitiveness in the motive lead-acid battery industry.

While the Group continues to consolidate its leading position in the domestic motive lead-acid battery market, it also focuses on the potential growth of the overseas two-wheeled vehicle market. Two-wheeled vehicles are one of the main means of transportation for daily commuting and short-distant travel in the Southeast Asia region. According to data from ASEANstats, Southeast Asia has about 250 million motorcycles currently on the road, which is one of the regions with the highest motorcycle ownership in the world. Under the pressure of energy and environmental protection concerns, the "fuel-to-electric" has developed into a general trend for the two-wheeled vehicle market in Southeast Asia. However, the current penetration rate of electrification remains relatively low, and there is significant potential for market growth in the future.

During the Reporting Period, the Group has continued to expand the overseas market and achieved remarkable achievements across various aspects such as products, brands and markets. In terms of the product, we have completed the promotion of our full range of products in overseas markets. The sales of motive battery products has been growing steadily, while the ESS products have gained prominence. The sodium-ion batteries have made their debut overseas. Tianneng also participated in a number of large-scale international exhibitions, which brought a dynamic experience to the global new energy market. In terms of branding, our recognition overseas is gradually increasing. During the Reporting Period, the Group opened its first overseas brand store in Ho Chi Minh City, Vietnam, officially expanding its terminal stores. Moreover, the Group successfully held the Second Tianeng Globalization Alliance (TGA) to expand its industry influence. In terms of market, the Group actively set up offices in Thailand and Holland to provide effective services to the local customers. The Group have signed cooperation agreements with more than 20 overseas distributors, which will help expand the Company's market influence in those countries.

Lead-carbon ESS battery

Lead-carbon ESS batteries have become an important player in electrochemical energy storage. They possess distinct advantages in terms of safety, production and recycling processes, cycle life, and cost-effectiveness. Their application prospects are broad in the scenarios that requires the highest standards of safety, such as big data centres, new energy power stations and communication bases. During the Reporting Period, the lead-carbon ESS battery business of the Group recorded an operating income of approximately RMB338 million, representing a year-on-year increase of more than 100%.

Tianneng has insisted on developing lead-carbon batteries with high performance, high safety, long life and high cost-effectiveness. The Implementation Work of the 14th Five-Year Plan for New Energy Storage (《「十四五」新型儲能發展實施方案》) issued by the National Development and Reform Commission of the People's Republic of China (the "**PRC**" or "**China**") (NDRC) and the National Energy Administration highlighted the development of diversified technologies for energy storage such as high performance lead-carbon batteries. The Work Plan for Stabilizing the Growth of Light Industry (2023-2024) (《輕工業穩增長工作方案（2023-2024年）》), issued by MIIT, NDRC, and other departments proposed to develop lead-carbon ESS battery products with huge effort. The batteries specialized for lead-carbon ESS that are independently developed by Tianneng inherit the mature technology of lead-acid batteries, and improve the life and energy density by mixing negative electrode with carbon. Meanwhile, it adopted high-performance design and AGM technology with new materials of multi-element rare earth alloys, which has excellent performance in various aspects and fully meets the ESS needs of different scenarios with leading technologies at an international level.

As one of the earliest companies in China to develop and promote lead-carbon battery technology, Tianneng has participated in the construction of multiple lead-carbon ESS power stations which have achieved one-time operation and long-term stable design and demonstration effects. "Peaceful Co-Storage (和平共儲)", a shared ESS power station with smart energy engaged by Tianneng, is currently the largest lead-carbon ESS power station in the world, featuring safety, durability, cost-effectiveness, a short construction cycle, and strong resource integration capabilities.

Tianneng has always been committed to collaborative innovation in the upstream and downstream of the industrial chain to achieve revolutionary breakthroughs in the technology of lead-carbon batteries, promoting diversified and sustainable development of ESS, and developing new ESS solutions. We will give full play to the technical advantages and application value of lead-carbon batteries in the field of ESS by leveraging the digital intelligent control system in conjunction with distributed energy, ESS of user side, and adjustable loads to maintain local power supply and enhance the flexibility and regulation of the power grid.

Other high-end eco-friendly batteries

As a leading enterprise of lead-acid batteries, the Group also operates other high-end eco-friendly batteries including starter and start-stop batteries for automobiles. Starter batteries for automobiles are designed for the instant starting, ignition, lighting power of vehicles, ships, diesel locomotives, etc. The start-stop batteries are used in automobile start-stop systems to save energy and reduce consumption. During the Reporting Period, other high-end eco-friendly battery business of the Group recorded an operating income of approximately RMB2,933 million.

In the field of starter and start-stop batteries for automobiles, lead-acid batteries are widely used in the market due to their well-established technology, high safety standards, high recycling rate, low price and other advantages. In recent years, Tianneng has been actively expanding its domestic and overseas market, which includes building product lines of high-end starter and start-stop batteries and aftermarket services for automobile, developing diversified sales channels, innovating marketing methods, and continuously providing customers with high-quality products and services. During the Reporting Period, the Group has launched several new products: parking air conditioning battery, new energy low-voltage module auxiliary battery and AGM start-stop battery, etc. The first batch of automobile batteries involved in the cooperation projects with Changan Ford Automobile Co., Ltd has been delivered, further opening up the national primary market and continuously enhancing the brand influence.

(2) New energy batteries

The Group's new energy batteries businesses are mainly production of Li-ion batteries, and the R&D, production and sales of next-generation battery products such as hydrogen fuel cells and sodium-ion batteries. During the Reporting Period, the Group's new energy batteries businesses recorded an operating income of approximately RMB882 million.

Li-ion batteries

The Group primarily applies its Li-ion batteries in the field of ESS. As the Company's one of the key business development directions, the ESS sector mainly takes the product supply, project design and construction for ESS battery cells as development direction, which possesses EPC general contracting and service delivery capabilities. Within the ESS application fields including power side, grid side, and user side, the Group offers system solutions utilizing lead-carbon, lithium and other technologies. It helps "new energy, energy storage" gain a competitive advantage in the cost per kilowatt-hour throughout the entire lifecycle.

Energy storage is one of the key technologies of energy reform, and it is also an important path to realize the development of "Dual Carbon". As an important technical support for the construction of new power systems which mainly based on new energy, the ESS technology has been gradually applied to different situations such as smooth grid connection of renewable energy, peak-load management, frequency regulation and power quality improvement. According to the incomplete statistics of the global ESS database (CNESA DataLink), in 2023, China has newly commissioned a scale of approximately 46.6GWh of new ESS installations, triple the amount of 2022's new commissioning scale.

Leveraging on the Group's extensive experience in the new energy battery manufacturing industry, the Group has further improved its strategic implementation of ESS. During the Reporting Period, the Group's Li-ion battery base with an output of 6GWh in South Taihu Lake, Changxing County, Huzhou City, Zhejiang Province, has been put into operation that ESS production capacity was expected to grow. The Company has successfully applied 5 air cooling modules and 4 liquid cooling modules of two types of Li-ion batteries, and fulfilled the relevant national standards and UL certifications. The Company's Li-ion battery liquid cooling ESS project has been shortlisted into the 2023 List of Advanced (Future) Technological Innovation Achievements of Zhejiang Province published by the Economy and Information Technology Department of Zhejiang Province, and its subsidiary Tianneng New Energy (Huzhou) Co., Ltd* (天能新能源（湖州）有限公司) has been officially listed as the "Zhejiang Provincial Postdoctoral Working Station (浙江省博士後工作站)".

While strengthening technology R&D, the Company is accelerating its market deployment and endeavours to expand its customers in each application field for ESS. During the Reporting Period, the successful grid connection of Datang Lubei 200MWh energy storage power station, the signing of the pilot project of a new type of shared energy storage power station system in Jinchang City, Gansu Province, and the entering of an agreement on strategic cooperation in ESS with Bein Joint Stock Company in Vietnam.

The Group also gives full play to its leading advantages of supporting the whole industrial chain and multiple technologies. By providing dual technology solutions of "lead-carbon & lithium", it meets the needs of diversified application scenarios and enhances the core competitiveness of the ESS business. We will accelerate reformation and innovation, enhance the conversion and acceptance capabilities of resources and orders, enhance the conversion rate and delivery capability of key projects, focus on key matters for achieving breakthroughs, so as to realize the integration of advantages and continue to push Tianneng's ESS development to a deeper level.

Hydrogen fuel cells

The hydrogen energy industry is in a stage to accelerate the development that the relevant technologies are gaining breakthroughs and the construction of infrastructure are improving. In August 2023, the first "Guidelines for the Construction of Hydrogen Energy Industry Standard System (2023 Edition)" (《氫能產業標準體系建設指南（2023版）》) at the national level jointly issued by six authorities including NDRC of the PRC clarified the key missions of domestic and international hydrogen energy standardization. The system has built a standardized system in the whole industrial chain for the production, storage, transportation and application of hydrogen energy, and gave full play to the significant role of hydrogen energy in building a modern energy system.

The Group has been committed to the promotion and application of clean energy such as hydrogen energy. It has mastered over the core technologies related to hydrogen fuel cells and the development of their key components. It is proactively expanding its services for hydrogen energy application across all scenarios, providing the entire industrial chain services of hydrogen energy, including hydrogen production, storage and transportation, refueling, and fuel cell application. Regarding hydrogen fuel cells, the Group has been exploring and refining catalysts, membrane electrodes, bipolar plates, stacks and systems. At the same time, Tianneng provides customised system integration solutions for application scenarios such as public transportation, logistics, construction machinery and ships, communication base stations, combined heat and power supply.

During the Reporting Period, Tianneng's hydrogen fuel cells segment focused on R&D core industrial technologies and the transformation of these achievements and actively facilitated the development of the hydrogen energy industry ecosystem and "hydrogen economy". In March, the high-powered hydrogen fuel cell systems independently developed by Tianneng successfully passed the national mandatory inspection, which showed excellent performance of the system. In April, the first prototype of hydrogen energy loader supported by Tianneng successfully launched and will soon be mass-produced, entering the operation stage under real vehicle conditions. In September, the high-power hydrogen fuel cell system developed by Tianneng was successfully applied into the vehicle. In December, Tianneng entered into a strategic cooperation agreement on hydrogen energy industry with Guangde City, Anhui Province, in which both parties will foster collaboration in hydrogen energy industry application and the demonstration for new model of zero-carbon public buses in urban areas.

Tianneng's hydrogen fuel cells will continue to strengthen collaborative cooperation with upstream and downstream enterprises in the industry chain, and is committed to reducing the production, manufacturing and operating costs of hydrogen fuel cells, improving the comprehensive and supporting capabilities of the hydrogen energy industry chain. By strengthening basic research, Tianneng accelerates product innovation to surpass the pivotal core technology of "Bottleneck", and boost the diversification of hydrogen energy applications in different aspects to promote green and efficient development of hydrogen energy industry.

Sodium-ion batteries

China has included sodium-ion batteries in the "14th Five-Year Plan for Scientific and Technological Innovation in Energy Sector (《「十四五」能源領域科技創新規劃》)"and has successively introduced a number of national policies to promote the industrialization process of sodium-ion batteries, providing a good environment for the development of China's sodium-ion battery industry. Analysts from the ASKCI predicted that China's sodium-ion battery market size will increase to approximately 28.2GWh in 2025. The Group now has a sodium-ion battery pilot production line, and its product performance indicators are at the leading level in the industry and possess advantages in market segments such as low-speed motive and ESS applications.

Sodium-ion batteries have numerous advantages such as resource sufficiency, low cost, high energy conversion efficiency, long cycle life, low maintenance costs, and high safety, and have certain market development potential. During the Reporting Period, the Group developed different types of sodium-ion battery application modules based on multiple application scenarios. Currently, it has developed 45V10Ah and 45V20Ah sodium-ion battery modules for the national standard, 24V135Ah heavy truck battery modules, 66V23Ah electric motorcycle battery modules, 48V50Ah home storage modules, and other products. In March, the Company officially released the first-generation sodium-ion battery "Tianna (天鈉)T1" for light electric vehicles. In addition, the Sodium-ion Battery Industry Ecosystem Alliance (鈉電池產業生態聯盟) has been established and formed close cooperative relationships with key enterprises in the light electric vehicle industry, e-commerce logistics platforms and investment institutions to jointly promote the development of the sodium-ion battery industry and the construction of an ecosystem.

(3) Recycling industry

The Group built two circular economic ecosystems of lead-acid batteries and Li-ion batteries so as to implement the extended producer responsibility system, flourishing the development of circular economy. It has created a battery life cycle and ecological industry chain that integrates "recycling, smelting, reproduction" so as to identify a green and environmental disposal model for a huge number of decommissioned motive batteries. During the Reporting Period, the Group's recycling industry recorded an operating income of approximately RMB3,600 million.

Recycling lead-acid batteries

Based on the recycling of used lead-acid batteries, Tianneng has established a comprehensive industrial ecosystem with "lead and other small metals" for collection, storage and transportation, disposal, and resource use. During the Reporting Period, the Group's recycling lead-acid batteries business recorded an external operating income of approximately RMB3,069 million.

As the world's largest manufacturer and consumer of lead-acid batteries, the overall market size of lead-acid battery recycling industry in China has shown steady growth. According to Mysteel, the domestic scrap volume of used lead-acid batteries in 2023 amounted to approximately 6 million tons, representing an increase of 0.2 million tons over 2022, approximately 3.44%.

Since 2009, Tianneng has carried out the recycling business for lead-acid batteries and obtained qualifications of recycling pilots in 15 provinces across China. It has set up battery recycling pilot companies in 22 provinces and cities with more than 500,000 battery recycling outlets across China, building a standardized and efficient recycling system. The Group constructed four green circular economy industrial parks in Zhejiang, Anhui, Jiangsu, and Henan Province, with the annual capacity of disposing of 1 million tons of used lead-acid batteries. In December 2023, the Group has reached a long-term strategic agreement with China Recycling Investment Co., Ltd., of which recycling network and resources will provide Tianneng with more solid protection for its comprehensive layout in used lead-acid battery recycling.

The Group has obtained a number of advanced technology patents in the field of lead recycling which supported the key technologies for green renewable energy, leading to a significant decrease in the carbon footprint of the entire battery life cycle where the recycling rates of metal, sulfuric acid, plastic and other materials for used lead-acid batteries exceed 99%. The issue of extracting impurities such as copper, nickel and cadmium in the secondary lead refining process has been resolved with its pioneering unique refining process of secondary lead.

In order to fully implement the extended producer responsibility system, Tianneng strived to reform from digitalisation and build the whole process industry chain of recycling used lead-acid batteries. It constructs an intelligent supervision system that covers the entire process of recycling and disposal process for used lead-acid batteries, which characterized as "source identifiable, destination traceable, risk controllable, and responsibility investigable". With the gradual extension of the digital recycling model, it assumes that more used lead-acid batteries will be included in the green chain industry, realizing the comprehensive life cycle management of battery products.

This year, the production capacity of the used lead-acid battery recycling industry has been significantly increased, resulting in firm prices of used batteries in terms of raw materials. Due to such fierce competition, the lead-acid recycling business has faced the challenge of profitability. However, the Group continued to revitalize the recycling industry with high-quality production capacity and diversified recycling network through recycling system construction, recycling technology upgrades, and digital and intelligent transformation of production lines, so as to seize the synergies arising from the entire lead-acid battery industry chain, and to maintain its leading position in the used lead-acid battery recycling industry.

Recycling Li-ion batteries

Recycling of Li-ion batteries is mainly from motive batteries, consumer batteries and ESS batteries. The main outputs are cobalt sulfate, nickel sulfate, manganese sulfate and lithium carbonate. During the Reporting Period, the Group's Li-ion battery recycling business recorded an operating income of approximately RMB531 million.

According to the statistics from a research institute, EVTank, the recycling amount of used Li-ion batteries in China was approximately 415,000 tons in 2022. It is expected to reach approximately 2.312 million tons in 2026, with a market size of approximately 100 billion. In order to prepare for the day when there is enormous quantity of decommissioned batteries, Tianneng has equipped itself with the recycling and reuse capacity of processing 10,000 tons of used motive Li-ion batteries annually. Upon completion, the new project in Binhai County, Jiangsu Province will achieve the comprehensive utilisation of high-value Li-ion resources with annual capacity of 110,000 tons in aggregate.

In terms of qualification and technology, the Group took advantages of the dual white lists for "echelon utilisation, recycling utilisation" of used motive batteries published by MIIT to actively integrate upstream and downstream resources; applied Li-ion battery recycling ecotechnology in all aspects to achieve harmless treatment of scrap key components such as decommissioned batteries for new energy vehicles and reduce the carbon emission levels of the whole industry chain in an effective manner; reduced the overall disposal costs owing to mature key technologies such as safe disassembly without discharge and hydrometallurgy method, and therefore the recycling rates of nickel, cobalt, lithium of used Li-ion batteries were top notch in the industry. The wastewater generated during the production process was treated and recycled through MVR high-efficiency evaporation technology, achieving near-zero discharge of wastewater produced with a wastewater recycling rate of approximately 95%.

In terms of channels, the Group facilitated the development layout of urban mines, and built a closed-loop ecology of battery manufacturing, sales, recycling, echelon utilisation, and reuse, forming a three-dimensional Li-ion battery recycling network which is covered across China. Through in-depth network channels in various districts and counties, large-scale systematic operations, and top-down targeted strategic promotion, the Company has strengthened cooperation with vehicle-to-everything (V2X) platforms, vehicle manufacturers, and vehicle dismantling plants, to freeze the residual life of batteries in advance, and to promote the echelon utilisation and recycling of batteries.

During the Reporting Period, despite that the profitability of Li-ion battery recycling business has been restrained to a certain extent due to significant fluctuations in the prices of materials such as lithium carbonate, the development prospect was still solid as a post-Li-ion battery industry. The lithium battery recycling business of the Group has rich operation experience and continues to enhance market competitiveness through different measures such as production capacity construction, technological innovation, and product quality improvement. It also develops channels through the integration of upstream and downstream resources and open up business models, fully demonstrating its technical strength in the recycling field.

OUTLOOK

Under the global energy transition and adhering to the backdrop of "Dual Carbon" goal, Tianneng abides by the philosophy of innovation, transformation and development. Rooted as a green energy solution provider, it adheres to high-quality development with the "customer-oriented and market-oriented" approaches. We vigorously develop the energy storage solutions of "lead, lithium, hydrogen, sodium" diverse technical route with our high-end eco-friendly batteries as its core business. By relying on the battery recycling system construction and the green and intelligent manufacturing upgrade, we are dedicated to building a green development ecology.

For the high-end eco-friendly battery business, the Group will coordinate industrial resources and strengthen the integration of lead-acid battery manufacturing, recycling and disposal, to create a strategic platform for lead-acid battery resources. It also aims to establish a comprehensive industrial and ecological chain by upgrading business models such as battery life cycle management and digital marketing on an ongoing basis, fortifying smart factories and lean manufacturing, enhancing product technology and quality, and expanding application scenarios.

By taking the ESS business as its second growth curve, Tianneng has been employed with unique competitive strategies in an effort to dominate in a niche market. Tianneng will completely integrate the R&D, production, sales, system integration, operation and other aspects of the ESS industry, adhere to promoting products with technology and assisting the ESS solutions to be applied in additional scenarios, so as to construct an ESS ecosystem based on system solutions and shape its own market competitiveness. In terms of the recycling business segment, the Group will strengthen business planning, and focus on the vertically integrated layout of "smart manufacturing, recycling, and disposal of batteries" to further improve the recycling network, upgrade smart manufacturing, improve the comprehensive disposal capability of batteries, and explore new paths for the efficient utilization of resources to promote new developments.

Tianneng will keep up its proactive response to China's "Belt and Road" initiative, promote the globalisation strategy to an advanced level, and accelerate the pace of "going global" by building a global manufacturing hub, supporting the strategy of localisation overseas, striving to develop new businesses, and strengthening its influence in the field of new energy overseas. Adhering to its new philosophy of development, the Group will focus on and refine its principal business, taking more responsibility in the process of China's high-quality economic development. Meanwhile, it will engage in wider, more focused and more sustainable cooperation for energy on a global scale with an open heart, so as to gather strength for building a community of global energy.

MANAGEMENT ANALYSIS

Gross profit

The Group's gross profit decreased by approximately 6.65% to approximately RMB5,965 million in 2023 from approximately RMB6,389 million in 2022, mainly due to the decrease in gross profit of the Li-ion battery business and Li-ion battery recycling business. The overall gross profit margin decreased by 1.45 percentage points to 7.11% from 8.56% in 2022. Among them, the gross profit margin of the manufacturing business was 12.75%, representing a decrease of 2.36 percentage points as compared to 2022, mainly due to the decrease in sales gross profit margin of Li-ion batteries.

Other income

Other income of the Group increased by approximately 71.47% from approximately RMB1,106 million in 2022 to approximately RMB1,897 million in 2023. The increase was mainly attributable to the increase in government grants and interest income. Government grants increased from approximately RMB704 million in 2022 to approximately RMB1,219 million in 2023. The increase was mainly attributable to the increase in tax refunds received. Interest income increased from approximately RMB315 million in 2022 to approximately RMB568 million in 2023. The increase was mainly attributable to optimised fund allocation and increase in interest income from deposit.

Distribution and selling costs

Distribution and selling costs of the Group increased by approximately 15.86% from approximately RMB1,229 million in 2022 to approximately RMB1,424 million in 2023. The increase in selling and distribution costs was mainly due to the increase in transportation fees and travelling expenses.

Administrative expenses

Administrative expenses decreased by approximately 0.43% from approximately RMB1,363 million in 2022 to approximately RMB1,357 million in 2023. Such decrease was mainly due to the decrease in entertainment expenses and maintenance fees.

Finance costs

Finance costs increased by approximately 41.69% from approximately RMB341 million in 2022 to approximately RMB483 million in 2023, which was mainly due to the increase in loan size during the Reporting Period. In 2023, interest income from bank deposits and wealth management amounted to RMB588 million, representing an increase of RMB308 million as compared to RMB280 million in 2022. The interest income from bank deposits and wealth management exceeded finance costs by RMB105 million in 2023.

Taxation

Tax charges of the Group increased by approximately 10.41% from approximately RMB659 million in 2022 to approximately RMB728 million in 2023, which was mainly due to the increase in taxable profit during the Reporting Period.

LIQUIDITY AND FINANCIAL RESOURCES

The net cash from operating activities for the Reporting Period was approximately RMB2,330 million (2022: RMB1,590 million). The increase was mainly attributable to the improved inventories and management of receivables.

As at 31 December 2023, the cash and cash equivalents and pledged/restricted bank deposits of the Group was approximately RMB15,435 million (31 December 2022: approximately RMB12,926 million). As at 31 December 2023, the Group obtained undrawn banks facilities of approximately RMB21,756 million (31 December 2022: approximately RMB13,086 million). In cash and cash equivalents and pledged/restricted bank deposits, approximately RMB15,313 million, RMB26 million, RMB96 million, RMB11,000 and RMB137,000 were denominated in Renminbi, Hong Kong Dollars, US Dollars, Euros and Singapore dollars, respectively. As the bank balances of currencies other than RMB accounted for approximately 0.79% of the total balances, the Group's relevant currency risk is low.

As at 31 December 2023, the net current assets of the Group were approximately RMB6,054 million (31 December 2022: net current assets of approximately RMB6,166 million). The decrease was primarily attributable to the decrease in bills receivables and debt instruments at FVTOCI. As at 31 December 2023, the interest bearing loans of the Group with maturity of within one year amounted to approximately RMB6,248 million (31 December 2022: approximately RMB4,570 million). The interest-bearing loans of the Group with maturity of more than one year amounted to approximately RMB2,833 million (31 December 2022: RMB1,637 million). The interest-bearing loans of RMB8,255 million (31 December 2022: approximately RMB4,839 million) carried fixed and variable interest rates ranging from 2.5% to 5.85% (2022: 2.23% to 6.5%) per annum. Loans dominated in U.S. dollar and Hong Kong dollar as converted to denomination in Renminbi of approximately RMB826 million carried fixed and variable interest rates ranging from 2.88% to 6.94%. The Company will closely monitor the changes in interest rate and currency exchange and assess the interest rate risk and currency 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 Reporting Period, 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 2023, the total assets of the Group were approximately RMB46,751 million, representing an increase of 16.48% as compared to approximately RMB40,136 million as at 31 December 2022. Among them, non-current assets increased by approximately 28.05% to approximately RMB17,411 million and current assets increased by approximately 10.55% to approximately RMB29,340 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 cash and cash equivalents and pledged/restricted bank deposits and account receivables.

Liabilities

As at 31 December 2023, the total liabilities of the Group were approximately RMB28,306 million, representing an increase of approximately 23.23% as compared to approximately RMB22,970 million as at 31 December 2022. Among them, non-current liabilities increased by approximately 93.37% to approximately RMB5,020 million, mainly due to the increase in long-term interest-bearing borrowings of RMB1,200 million and redemption liabilities on ordinary shares of a subsidiary of RMB1,000 million; current liabilities increased by approximately 14.30% to approximately RMB23,286 million, mainly due to the increase in contract liabilities and short-term borrowings.

ANALYSIS BY KEY FINANCIAL KPIS

Profitability:

	2023	2022
Return on equity	**10.31%**	12.78%
Gross profit margin	**7.11%**	8.56%
– Sales of batteries and battery related sales	**12.75%**	15.11%
– Trading	**-0.21%**	0.14%
Net profit margin	**2.19%**	2.79%

Due to the decline in gross profit margin of Li-ion batteries in 2023, the overall gross profit margin has declined compared to 2022.

Liquidity:

	2023	2022
Current ratio	**1.26**	1.30
Quick ratio	**0.97**	0.97

Both the ratios above in 2023 decreased when compared with those in 2022, mainly due to less increment of current assets as compared to that of the current liabilities.

Operating Cycle:

	2023	2022
Inventory turnover days	**32**	30
Account receivables turnover days	**7**	8
Account payables turnover days	**12**	15
Bills and account receivables turnover days	**12**	12
Bills and account payables turnover days	**41**	40

The inventory turnover days increased by 2 days to 32 days in 2023 due to the increase in production capacity and inventory in 2022. Account receivables turnover days decreased by 1 day from 2022 to 7 days in 2023 due to the improved management of account receivables. Account payables turnover days for 2023 decreased by 3 days to 12 days mainly due to the fact that the increase in account payables was less than the increase in the total procurement amount. Bills and account receivables turnover days remained the same as compared to 2022. Bills and account payables turnover days increased by 1 day to 41 days due to the fact that the increase in account payables was more than the increase in the total procurement amount.

Capital:

	2023	2022
Net debt ratio	**-2.03%**	-11.00%
Interest coverage ratio *(Note)*	**8.11**	11.30

Note: EBITDA divided by total interest expenses

As the interest-bearing debt ("**Debt**") and the cash and cash equivalents as at 31 December 2023 were RMB9,081 million and RMB9,456 million, respectively. The cash and cash equivalents and pledged/restricted bank deposits exceeded Debt by RMB375 million. There was adequate total capital during the Reporting Period. The interest coverage ratio is 8.11 times, and the ability to make interest payments still remain strong.

Return of Shareholders:

	2023	2022
Earning per share (Basic) *(RMB)*	**1.62**	1.60
Dividend per share (HK cents/share)	**43** (Note)	40

Note: representing the dividend proposed by the Company's board of directors (the "**Board**") for 2023, which is subject to approval at the forthcoming annual general meeting.

CAPITAL EXPENDITURE

The capital expenditure in 2023 was approximately RMB3,722 million (2022: approximately RMB3,029 million). A majority of the expenditure was incurred in the lithium-ion battery segments, lead-carbon ESS construction, lead-acid intelligent manufacturing and enhancement segments, and construction investment in the forthcoming 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 2023 was approximately RMB2,753 million (31 December 2022: approximately RMB2,934 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 2023 was approximately 19.42% (31 December 2022: approximately 15.47%).

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 Reporting Period, 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 2023 (31 December 2022: Nil).

PLEDGE OF ASSETS

As at 31 December 2023, 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 RMB7,932 million (31 December 2022: RMB7,851 million).

EMPLOYEE AND REMUNERATION POLICIES

As at 31 December 2023, the Group employed a total of 25,776 employees (31 December 2022: 26,971 employees). Staff costs excluding directors' emoluments of the Group for the Reporting Period amounted to approximately RMB3,280 million (2022: RMB3,272 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

There were no other significant investments held by the Group as at 31 December 2023.

MATERIAL ACQUISITION AND DISPOSAL

During the Reporting Period, on 5 May 2023, a Capital Increase Agreement and a Shareholder Agreement were entered into by Zhejiang Tianneng New Materials Co., Ltd. 浙江天能新材料有限公司 ("**Tianneng New Materials**", an indirect non-wholly owned subsidiary of the Company), 15 outside investors who are independent third parties and 3 investors who are controlled by the Company (collectively, the "**Investors**"), Tianneng Holding Group Co., Ltd. 天能控股集團有限公司 ("**Tianneng Holding**", an indirect wholly-owned subsidiary of the Company), Zhejiang Tianneng Commercial Management Co., Ltd. 浙江天能商業管理有限公司 ("**Tianneng Commercial**", an indirect wholly-owned subsidiary of the Company) and Tianchang Holding Co., Ltd. 天暢控股有限公司. Pursuant to the Capital Increase Agreement, the Investors agreed to subscribe to the new registered capital of Tianneng New Materials in the amount of RMB39,216,000 (representing approximately 28.57% of the registered capital of Tianneng New Materials as enlarged by the capital increase) with a cash consideration of RMB1,000,000,000. Tianneng New Materials has received all the cash consideration in September 2023.

Save as disclosed above, the Group has no material acquisition or 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 Reporting Period, 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.

PROPOSED FINAL DIVIDEND

The Board has proposed the payment of a final dividend of HK$43 cents per share (2022: HK$40 cents per share). The financial statements do not reflect the dividend payable. The proposed final dividend is subject to approval by the Company's shareholders at the forthcoming annual general meeting of the Company to be held on Friday, 7 June 2024. If the resolution for the proposed final dividend is passed at the annual general meeting, the proposed final dividend is expected to be paid on or before Monday, 8 July 2024.

CLOSURE OF REGISTER OF MEMBERS

The register of members of the Company will be closed from Tuesday, 4 June 2024 to Friday, 7 June 2024 (both days inclusive), during which period no transfer of shares of the Company will be registered. 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 the Company's Hong Kong branch share registrar, Tricor Investor Services Limited, at 17/F, Far East Finance Centre 16 Harcourt Road Hong Kong, no later than 4:30 p.m. on Monday, 3 June 2024.

Further, the register of members of the Company will be closed from Monday, 17 June 2024 to Tuesday, 18 June 2024 (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 the Company's Hong Kong branch share registrar, Tricor Investor Services Limited, at 17/F, Far East Finance Centre 16 Harcourt Road Hong Kong not later than 4:30 p.m. on Friday, 14 June 2024. Subject to the approval of the shareholders at the annual general meeting of the Company to be held on Friday, 7 June 2024, the proposed final dividend is expected to be paid on or before Monday, 8 July 2024.

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 Reporting Period.

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 C1 to the Listing Rules that is applicable to the corporate governance report for the Reporting Period, except for the code provision C.2.1 in 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 the separation of the position of the chairman and CEO is necessary.

SCOPE OF WORK OF MESSRS. 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 2023 as set out in the preliminary announcement have been agreed by the Group's auditor, Messrs. Deloitte Touche Tohmatsu, to the amounts set out in the audited consolidated financial statements of the Group for the year as approved by the Board of Directors on 28 March 2024. The work performed by Messrs. Deloitte Touche Tohmatsu in this respect did not constitute an assurance engagement and consequently no opinion or assurance conclusion has been expressed by Messrs. Deloitte Touche Tohmatsu on the preliminary 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 C3 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 Reporting Period.

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 Friday, 7 June 2024 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 D2 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.

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, 28 March 2024

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.