國電科技環保集團股份有限公司
GUODIAN TECHNOLOGY & ENVIRONMENT GROUP CORPORATION LIMITED*
(a joint stock company incorporated in the People's Republic of China with limited liability)
(Stock code: 01296)

RESULTS ANNOUNCEMENT FOR THE YEAR ENDED 31 DECEMBER 2021

FINANCIAL HIGHLIGHTS

- For the year ended 31 December 2021, the revenue of the Group was approximately RMB12,073.3 million, representing a decrease of approximately 22.7% compared to that for the last year.
- For the year ended 31 December 2021, the gross profit of the Group was approximately RMB720.5 million, representing a decrease of approximately 75.6% compared to that for the last year.
- For the year ended 31 December 2021, the operating loss of the Group was approximately RMB662.3 million, while profit from operations was approximately RMB706.3 million for the last year.
- For the year ended 31 December 2021, loss attributable to equity shareholders of the Company was approximately RMB839.6 million, while profit attributable to equity shareholders of the Company was approximately RMB57.1 million for the last year.
- The Board does not recommend a distribution of dividends for the year ended 31 December 2021.

The board (the "**Board**") of directors (the "**Directors**") of Guodian Technology & Environment Group Corporation Limited (the "**Company**") announces herewith the consolidated results of the Company and its subsidiaries (the "**Group**") for the year ended 31 December 2021, together with the comparative figures for the year ended 31 December 2020. The results were extracted from the Group's audited financial statements prepared in accordance with the International Financial Reporting Standards issued by the International Accounting Standards Board.

* *For identification purposes only*

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

For the year ended 31 December 2021
(Amounts expressed in Renminbi ("RMB") unless otherwise stated)

	Notes	**2021**	2020
		RMB'000	*RMB'000*
Revenue	5	**12,073,257**	15,624,478
Cost of sales		**(11,352,727)**	(12,669,611)
Gross profit		**720,530**	2,954,867
Other revenue	6	**258,578**	315,344
Other income	7	**1,022,166**	22,652
Other expenses	7	**(10,778)**	(111,342)
Selling and distribution expenses		**(793,097)**	(1,094,852)
Administrative expenses		**(1,859,736)**	(1,380,365)
(Loss)/profit from operations		**(662,337)**	706,304
Finance costs	8	**(424,481)**	(573,700)
Share of profits less losses of associates		**(15,123)**	72,331
(Loss)/profit before taxation	9	**(1,101,941)**	204,935
Income tax	10	**(107,715)**	(249,368)
Loss for the year		**(1,209,656)**	(44,433)
Attributable to:			
- Equity shareholders of the Company	11	**(839,574)**	57,123
- Non-controlling interests		**(370,082)**	(101,556)
Basic and diluted (loss)/earnings per share (expressed in RMB cent)	11	**(13.85)**	0.94

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the year ended 31 December 2021
(Amounts expressed in RMB unless otherwise stated)

	2021	2020
	RMB'000	*RMB'000*
Loss for the year	**(1,209,656)**	(44,433)
Other comprehensive income for the year		
Items that will not be reclassified to profit or loss:		
– Equity investments at fair value through other comprehensive income ("**FVOCI**"):		
– changes in fair value	**1,737,619**	1,000,747
– income tax effect	**(83,131)**	(249,468)
Items that may be reclassified subsequently to profit or loss:		
– Exchange differences on translation of financial statements of operations outside the People's Republic of China (the "**PRC**")	**(83)**	(1,269)
Other comprehensive income for the year, net of tax	**1,654,405**	750,010
Total comprehensive income for the year	**444,749**	705,577
Attributable to:		
Equity shareholders of the Company	**814,831**	807,133
Non-controlling interests	**(370,082)**	(101,556)
Total comprehensive income for the year	**444,749**	705,577

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 31 December 2021

(Amounts expressed in RMB unless otherwise stated)

	Notes	**2021** ***RMB'000***	2020 *RMB'000*
Non-current assets			
Property, plant and equipment		**3,696,168**	4,631,720
Investment properties		**385,577**	209,501
Intangible assets		**287,713**	824,062
Goodwill		**5,304**	57,591
Interests in associates		**1,123,944**	484,699
Other equity investments		**2,289,712**	2,227,673
Restricted deposits		**1,598**	11,812
Other non-current assets	12	**1,125,175**	4,094,876
Deferred tax assets		**380,623**	691,521
Total non-current assets		**9,295,814**	13,233,455
Current assets			
Inventories		**897,296**	4,908,220
Contract assets		**2,029,666**	1,979,535
Trade and bills receivables	13	**5,698,639**	8,676,786
Deposits, prepayments and other receivables		**1,589,781**	2,221,853
Tax recoverable		**35,875**	71,128
Restricted deposits		**103,179**	408,556
Cash at bank and in hand		**4,820,740**	5,283,197
Total current assets		**15,175,176**	23,549,275

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 31 December 2021

(Amounts expressed in RMB unless otherwise stated)

	Notes	2021 RMB'000	2020 RMB'000
Current liabilities			
Borrowings		**4,222,619**	7,400,446
Trade and bills payables	14	**6,441,443**	10,715,283
Other payables and accruals		**1,121,363**	1,333,670
Contract liabilities		**1,176,341**	2,596,279
Income tax payable		**15,405**	44,726
Provisions		**49,416**	381,661
Total current liabilities		**13,026,587**	22,472,065
Net current assets		**2,148,589**	1,077,210
Total assets less current liabilities		**11,444,403**	14,310,665
Non-current liabilities			
Borrowings		**1,969,857**	4,435,119
Deferred income		**198,417**	298,177
Deferred tax liabilities		**457,853**	501,984
Lease liabilities		**95,884**	70,846
Provisions		**5,162**	184,726
Other non-current liabilities		**234,971**	675,675
Total non-current liabilities		**2,962,144**	6,166,527
NET ASSETS		**8,482,259**	8,144,138
CAPITAL AND RESERVES			
Share capital		**6,063,770**	6,063,770
Reserves		**125,448**	(486,320)
Total equity attributable to equity shareholders of the Company		**6,189,218**	5,577,450
Non-controlling interests		**2,293,041**	2,566,688
TOTAL EQUITY		**8,482,259**	8,144,138

1. STATEMENT OF COMPLIANCE

These financial statements have been prepared in accordance with International Financial Reporting Standards ("**IFRSs**"), which include all applicable International Financial Reporting Standards, International Accounting Standards ("**IASs**") and interpretations issued by the International Accounting Standards Board (the "**IASB**") and the disclosure requirements of the Hong Kong Companies Ordinance. These financial statements also comply with the applicable disclosure provisions of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (the "**Stock Exchange**") (the "**Listing Rules**").

The IASB has issued certain new and revised IFRSs that are first effective or available for early adoption for the current accounting period of the Group. Note 3 provides information on any changes in accounting policies resulting from initial application of these developments to the extent that they are relevant to the Group for the current and prior accounting periods reflected in these financial statements.

2. BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS

Basis of consolidation

The consolidated financial statements include the financial statements of the Group for the year ended 31 December 2021. A subsidiary is an entity (including a structured entity), directly or indirectly, controlled by the Company. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee (i.e. existing rights that give the Group the current ability to direct the relevant activities of the investee).

When the Company has, directly or indirectly, less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

(a) the contractual arrangement with the other vote holders of the investee;

(b) rights arising from other contractual arrangements; and

(c) the Group's voting rights and potential voting rights.

The financial statements of the subsidiaries are prepared for the same reporting period as the Company, using consistent accounting policies. The results of subsidiaries are consolidated from the date on which the Group obtains control, and continue to be consolidated until the date that such control ceases.

Profit or loss and each component of other comprehensive income are attributed to the equity shareholders of the Company and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control described above. A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control over a subsidiary, it derecognises (i) the assets (including goodwill) and liabilities of the subsidiary, (ii) the carrying amount of any non-controlling interest and (iii) the cumulative translation differences recorded in equity; and recognises (i) the fair value of the consideration received, (ii) the fair value of any investment retained and (iii) any resulting surplus or deficit in profit or loss. The Group's share of components previously recognised in other comprehensive income is reclassified to profit or loss or retained earnings, as appropriate, on the same basis as would be required if the Group had directly disposed of the related assets or liabilities.

The measurement basis used in the preparation of the financial statements is the historical cost basis except for the financial assets at fair value through other comprehensive income and equity imvestment.

3. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

The Group has not adopted the following new and revised IFRSs that have been issued but not yet effective in the financial statements:

Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16	Interest Rate Benchmark – Phase 2
Amendment to IFRS 16	Covid-19-Related Rent Concessions beyond 30 June 2021 (early adopted)

The nature and the impact of the revised IFRSs are described below:

(a) Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 address issues not dealt with in the previous amendments which affect financial reporting when an existing interest rate benchmark is replaced with an alternative risk-free rate ("RFR"). The amendments provide a practical expedient to allow the effective interest rate to be updated without adjusting the carrying amount of financial assets and liabilities when accounting for changes in the basis for determining the contractual cash flows of financial assets and liabilities, if the change is a direct consequence of the interest rate benchmark reform and the new basis for determining the contractual cash flows is economically equivalent to the previous basis immediately preceding the change. In addition, the amendments permit changes required by the interest rate benchmark reform to be made to hedge designations and hedge documentation without the hedging relationship being discontinued. Any gains or losses that could arise on transition are dealt with through the normal requirements of IFRS 9 to measure and recognise hedge ineffectiveness. The amendments also provide a temporary relief to entities from having to meet the separately identifiable requirement when an RFR is designated as a risk component. When the entity reasonably expects the alternative benchmark interest to become separately identifiable within the next 24 months from the date when it is designated as non-contractually explicit risk components, it is deemed to meet the separately identifiable requirement, the amendments require an entity to disclose additional information to enable users of financial statements to understand the effect of interest rate benchmark reform on an entity's financial instruments and risk management strategy. These amendments had no material impact on the consolidated financial statements of the Group.

(b) Amendment to IFRS 16 issued in April 2021 extends the availability of the practical expedient for lessees to elect not to apply lease modification accounting for rent concessions arising as a direct consequence of the covid-19 pandemic by 12 months. Accordingly, the practical expedient applies to rent concessions for which any reduction in lease payments affects only payments originally due on or before 30 June 2022, provided the other conditions for applying the practical expedient are met. The amendment is effective retrospectively for annual periods beginning on or after 1 April 2021 with any cumulative effect of initially applying the amendment recognised as an adjustment to the opening balance of retained profits at the beginning of the current accounting period. Earlier application is permitted. The amendment did not have any impact on the financial position and performance of the Group as there were no lease payments reduced or waived by the lessors as a result of the covid-19 pandemic during the year.

4. SEGMENT REPORTING

(a) Segment reporting

The Group manages its businesses by subsidiaries, which are organised by business lines (products and services). In a manner consistent with the way in which information is reported internally to the Group's most senior executive management for the purposes of resource allocation and performance assessment, the Group has presented the following four reportable segments.

– Environmental protection segment: this segment provides environmental protection products and services which mainly consist of sulphur oxide control technologies, nitrogen oxide control technologies, rental of desulphurisation and denitrification facilities, ash removal with filter bags, water treatment related technologies and products.

– Energy conservation solutions segment: this segment provides energy saving products and services which mainly consist of plasma ignition and micro-oil ignition equipment and gas turbine improvement services and construction of energy-efficient power plants.

– Wind power products and services segment: this segment produces and sells wind turbine and its components, and provides related system solutions and services to wind power operators.

– The Group combined other business activities that are not reportable in "Others". Revenue included in this category is mainly from the wind and solar power generation and the sale of other electric power control system related products.

(i) Segment results, assets and liabilities

For the purposes of assessing segment performance and allocating resources between segments, the Group's most senior executive management monitors the results, assets and liabilities attributable to each reportable segment on the following bases:

Segment assets include all assets with the exception of interests in associates, other equity investments, tax recoverable, deferred tax assets and other corporate assets. Segment liabilities include all liabilities with the exception of income tax payable, deferred tax liabilities and other corporate liabilities.

Revenue and expenses are allocated to the reportable segments with reference to revenue generated by those segments and the expenses incurred by those segments.

The measure used for reporting segment profit is the gross profit. In addition to receiving segment information concerning the gross profit, management is also provided with segment information concerning depreciation and amortisation, interest income, finance costs, impairment of assets, inventory write-down and additions to segment non-current assets.

Information regarding the Group's reportable segments as provided to the Group's most senior executive management for the purposes of resource allocation and assessment of segment performance for the years ended 31 December 2021 and 2020 is set out below:

	2021				
	Environmental protection *RMB'000*	Energy conservation solutions *RMB'000*	Wind power products and services *RMB'000*	Others *RMB'000*	Total *RMB'000*
Disaggregated by timing of revenue recognition					
Point in time	396,910	283,016	3,237,358	556,053	4,473,337
Over time	3,848,969	3,721,845	20,353	8,753	7,599,920
Revenue from external customers	4,245,879	4,004,861	3,257,711	564,806	12,073,257
Inter-segment revenue	182,841	712,852	217,626	72,511	1,185,830
Reportable segment revenue	4,428,720	4,717,713	3,475,337	637,317	13,259,087
Reportable segment profit/(loss) (gross profit)	704,679	(52,363)	(112,073)	221,288	761,531
Depreciation and amortisation	177,369	19,824	203,256	78,310	478,759
Impairment of property, plant and equipment	41,777	–	–	–	41,777
Impairment of contract assets		–	2,607	–	2,607
Write-down of inventories	1,497	2,000	269,571	–	273,068
(Reversal of impairment)/ impairment of trade and bills receivables	(12,389)	15,843	82,761	(10,793)	75,422
(Reversal of impairment) of other non-current assets	(530)	–	–	–	(530)
Impairment of deposits, prepayments and other receivables	19,250	2	–	65,806	85,058
Interest income	37,682	27,331	11,520	15,303	91,836
Finance costs (other than interest on lease liabilities)	22,752	3,047	85,373	307,417	418,589
Reportable segment assets	9,561,903	4,877,810	1,883,405	3,233,646	19,556,764
Additions to reportable segment non-current assets during the year*	215,329	20,084	399,352	612,216	1,246,981
Reportable segment liabilities	6,305,629	3,386,544	1,458,453	1,777,656	12,928,282

* The amount consists of additions to property, plant and equipment and intangible assets.

	2020				
	Environmental protection *RMB'000*	**Energy conservation solutions** *RMB'000*	**Wind power products and services** *RMB'000*	**Others** *RMB'000*	**Total** *RMB'000*
Disaggregated by timing of revenue recognition					
Point in time	396,538	199,211	5,632,321	469,139	6,697,209
Over time	4,383,341	4,366,662	157,226	20,040	8,927,269
Revenue from external customers	4,779,879	4,565,873	5,789,547	489,179	15,624,478
Inter-segment revenue	283,147	179,645	1,443,564	27,471	1,933,827
Reportable segment revenue	5,063,026	4,745,518	7,233,111	516,650	17,558,305
Reportable segment profit (gross profit)	1,252,430	322,483	1,180,338	209,302	2,964,553
Depreciation and amortisation	234,889	19,034	147,148	91,258	492,329
Impairment of property, plant and equipment	56,046	–	–	–	56,046
Impairment/(reversal of impairment) of contract assets	–	856	(3,824)	–	(2,968)
Write-down of inventories	1,299	514	–	–	1,813
(Reversal of impairment) of trade and bills receivables	(77,584)	(6,679)	(2,672)	(94,505)	(181,440)
Impairment/(reversal of impairment) of deposits, prepayments and other receivables	49,986	(9)	9,965	–	59,942
Interest income	41,813	30,565	23,144	611	96,133
Finance costs (other than interest on lease liabilities)	56,071	4,720	162,018	3,393	226,202
Reportable segment assets	12,101,574	4,617,258	13,301,110	2,805,264	32,825,206
Additions to reportable segment non-current assets during the year*	181,613	17,017	451,509	47,669	697,808
Reportable segment liabilities	7,825,755	2,777,367	11,835,268	645,110	23,083,500

* The amount consists of additions to property, plant and equipment and intangible assets.

(ii) ***Reconciliations of reportable segment revenues, profit or loss, assets and liabilities***

	2021	2020
	RMB'000	*RMB'000*
Revenue		
Reportable segment revenue	**13,259,087**	17,558,305
Elimination of inter-segment revenue	**(1,185,830)**	(1,933,827)
Consolidated revenue	**12,073,257**	15,624,478
Profit		
Reportable segment profit	**761,531**	2,964,553
Elimination of inter-segment (profit)	**(41,001)**	(9,686)
Reportable segment profit derived from the Group's external customers	**720,530**	2,954,867
Other revenue	**258,578**	315,344
Other income	**1,022,166**	22,652
Other expenses	**(10,778)**	(111,342)
Selling and distribution expenses	**(793,097)**	(1,094,852)
Administrative expenses	**(1,859,736)**	(1,380,365)
Finance costs	**(424,481)**	(573,700)
Share of profits less losses of associates	**(15,123)**	72,331
Consolidated (loss)/profit before taxation	**(1,101,941)**	204,935

	2021	2020
	RMB'000	*RMB'000*
Assets		
Reportable segment assets	**19,556,764**	32,825,206
Inter-segment elimination	**(439,788)**	(556,425)
	19,116,976	32,268,781
Interests in associates	**1,123,944**	484,699
Other equity investments	**2,289,712**	2,227,673
Tax recoverable	**35,875**	71,128
Deferred tax assets	**380,623**	691,521
Unallocated head office and corporate assets	**1,523,860**	1,038,928
Consolidated total assets	**24,470,990**	36,782,730
Liabilities		
Reportable segment liabilities	**12,928,282**	23,083,500
Inter-segment elimination	**(508,963)**	(520,674)
	12,419,319	22,562,826
Income tax payable	**15,405**	44,726
Deferred tax liabilities	**457,853**	501,984
Unallocated head office and corporate liabilities	**3,096,154**	5,529,056
Consolidated total liabilities	**15,988,731**	28,638,592

(iii) Geographical information

The Group did not have significant business operations outside the PRC, and therefore, no geographic segment information is presented.

(iv) Major customers

Revenue of approximately RMB8,224,138,000 (2020: RMB12,532,793,000) was derived from China Energy Investment Corporation Ltd.* ("**China Energy**") and related parties under China Energy relating to the environmental protection segment, the energy conservation solutions segment, the wind power products and services segment and the others segment of the Group.

5. REVENUE

An analysis of revenue is as follows:

	2021 *RMB'000*	2020 *RMB'000*
Revenue from contracts with customers	**11,441,478**	15,012,357
Revenue from other sources		
Gross rental income from operating leases *(Note)*	**631,779**	612,121
	12,073,257	15,624,478

Note:

The amount mainly represents income related to service arrangements entered into by the Group with power plants to operate the desulphurisation and denitrification facilities for the treatment of sulphur oxide and nitrogen oxide generated by power plants during their electricity generation. The Group acquires or constructs the facilities and then maintains and operates the facilities to provide pollutant treatment services to power plants during the useful lives of power plants. The service charge is based on the volume of electricity sold by the power plant and a tariff determined by the National Development and Reform Commission of the PRC. These arrangements are not in the legal form of leases, but are deemed as operating leases based on their terms and conditions and are continued to be accounted for as such by applying the transition practical expedients under IFRS 16.

(a) Disaggregated revenue information

Revenue from contracts with customers for the year ended 31 December 2021

Segments	Environmental protection *RMB'000*	Energy conservation solutions *RMB'000*	Wind power products and services *RMB'000*	Others *RMB'000*	Total *RMB'000*
Types of goods or services					
Sale of industrial products	**396,910**	**283,016**	**3,237,358**	**556,053**	**4,473,337**
Revenue from construction contracts	**2,236,443**	**3,721,845**	**–**	**–**	**5,958,288**
Rendering of services	**806,538**	**–**	**20,353**	**8,753**	**835,644**
Service concession arrangement revenue	**174,209**	**–**	**–**	**–**	**174,209**
Total	**3,614,100**	**4,004,861**	**3,257,711**	**564,806**	**11,441,478**
Geographical market					
Mainland China	**3,614,100**	**4,004,861**	**3,257,711**	**564,806**	**11,441,478**
Total	**3,614,100**	**4,004,861**	**3,257,711**	**564,806**	**11,441,478**

The revenue information above is based on the geographical locations of where the customers signed the contracts or agreements.

Segments	Environmental protection *RMB'000*	Energy conservation solutions *RMB'000*	Wind power products and services *RMB'000*	Others *RMB'000*	Total *RMB'000*
Timing of revenue recognition					
Goods transferred at a point in time	**396,910**	**283,016**	**3,237,358**	**556,053**	**4,473,337**
Services transferred over time	**3,217,190**	**3,721,845**	**20,353**	**8,753**	**6,968,141**
Total	**3,614,100**	**4,004,861**	**3,257,711**	**564,806**	**11,441,478**

Revenue from contracts with customers for the year ended 31 December 2020

Segments	Environmental protection *RMB'000*	Energy conservation solutions *RMB'000*	Wind power products and services *RMB'000*	Others *RMB'000*	Total *RMB'000*
Types of goods or services					
Sale of industrial products	396,538	199,211	5,632,321	469,139	6,697,209
Revenue from construction contracts	2,725,430	4,366,662	–	–	7,092,092
Rendering of services	746,812	–	157,226	20,040	924,078
Service concession arrangement revenue	298,978	–	–	–	298,978
Total	4,167,758	4,565,873	5,789,547	489,179	15,012,357
Geographical market					
Mainland China	4,167,758	4,565,873	5,789,547	489,179	15,012,357
Total	4,167,758	4,565,873	5,789,547	489,179	15,012,357

The revenue information above is based on the geographical locations of where the customers signed the contracts or agreements.

Segments	Environmental protection *RMB'000*	Energy conservation solutions *RMB'000*	Wind power products and services *RMB'000*	Others *RMB'000*	Total *RMB'000*
Timing of revenue recognition					
Goods transferred at a point in time	396,538	199,211	5,632,321	469,139	6,697,209
Services transferred over time	3,771,220	4,366,662	157,226	20,040	8,315,148
Total	4,167,758	4,565,873	5,789,547	489,179	15,012,357

Set out below is the reconciliation of the revenue from contracts with customers to the amounts disclosed in the segment information:

For the year ended 31 December 2021

Segments	Environmental protection *RMB'000*	Energy conservation solutions *RMB'000*	Wind power products and services *RMB'000*	Others *RMB'000*	Total *RMB'000*
Revenue from contracts with customers	**3,614,100**	**4,004,861**	**3,257,711**	**564,806**	**11,441,478**
Gross rental income from operating leases	**631,779**	**–**	**–**	**–**	**631,779**
Total	**4,245,879**	**4,004,861**	**3,257,711**	**564,806**	**12,073,257**

For the year ended 31 December 2020

Segments	Environmental protection *RMB'000*	Energy conservation solutions *RMB'000*	Wind power products and services *RMB'000*	Others *RMB'000*	Total *RMB'000*
Revenue from contracts with customers	4,167,758	4,565,873	5,789,547	489,179	15,012,357
Gross rental income from operating leases	612,121	–	–	–	612,121
Total	4,779,879	4,565,873	5,789,547	489,179	15,624,478

The following table shows the amounts of revenue recognised in the current reporting period that were included in the contract liabilities at the beginning of the reporting period:

	2021 *RMB'000*	2020 *RMB'000*
Revenue recognised that was included in contract liabilities at the beginning of the reporting period:		
Sale of industrial products	**805,028**	1,159,802
Revenue from construction contracts	**683,164**	1,014,841
	1,488,192	2,174,643

(b) ***Performance obligations***

Information about the Group's performance obligations is summarised below:

Sale of industrial products

The performance obligation is satisfied upon delivery of the industrial products or after installation and payment is generally due within 60 days from the date of billing.

Revenue from construction contracts

The performance obligation is satisfied over time as services are rendered and payment is generally due within 60 days from the date of billing. A certain percentage of payment is retained by customers until the end of the retention period as the Group's entitlement to the final payment is conditional on the satisfaction of the service quality by the customers over a certain period as stipulated in the contracts.

Rendering of services

The performance obligation is satisfied over time as services are rendered and payment is generally due within 30 days from the date of billing.

Service concession arrangement revenue

Under service concession arrangement, the Group concluded that the performance obligations are the provision of construction services and operation services. Both of the performance obligations are satisfied over time as services are rendered and payment is generally due within 30 days from the date of billing.

The amounts of transaction prices allocated to the remaining performance obligations (unsatisfied or partially unsatisfied) as at 31 December are as follows:

	2021 ***RMB'000***	2020 *RMB'000*
Amounts expected to be recognised as revenue:		
Within one year	**3,087,096**	7,152,231
After one year	**440,303**	1,625,887
	3,527,399	8,778,118

The amounts of transaction prices allocated to the remaining performance obligations which are expected to be recognised as revenue after one year relate to construction services, of which the performance obligations are to be satisfied within two years. All the other amounts of transaction prices allocated to the remaining performance obligations are expected to be recognised as revenue within one year. The amounts disclosed above do not include variable consideration which is constrained. Using the practical expedient in IFRS 15, the amounts disclosed above do not include revenue to be recognised under the service agreements entered into by the Group with power plants to operate the desulphurisation and denitrification facilities for the treatment of sulphur oxide and nitrogen oxide generated by power plants during their electricity generation in the amount to which the Group has a right to invoice.

6. OTHER REVENUE

	2021	2020
	RMB'000	*RMB'000*
Government grants	**119,314**	166,062
Interest income	**91,836**	97,509
Dividend income from equity investments	**29,439**	40,699
Others	**17,989**	11,074
	258,578	315,344

7. OTHER INCOME AND OTHER EXPENSES

	2021	2020
	RMB'000	*RMB'000*
Other income		
Net gains on sales of raw materials	**–**	2,295
Net gains on disposal of subsidiaries *(Note i)*	**1,014,800**	989
Others	**7,366**	19,368
	1,022,166	22,652

	2021	2020
	RMB'000	*RMB'000*
Other expenses		
Net loss on sales of raw materials	**(866)**	–
Net losses on disposals of property, plant and equipment	**(1,350)**	(7,300)
Net foreign exchange losses	**(2,601)**	(12,867)
Others *(Note (ii))*	**(5,961)**	(91,175)
	(10,778)	(111,342)

Notes:

(i) Net gains on disposal of subsidiaries for the year ended 31 December 2021 presented the net gains on disposal of Guodian United Power Technology Co., Ltd.* ("**United Power**") amounting to RMB1,091,537,000, the net gains on disposal of Jiangsu Dekema Electric Co., Ltd.* ("**Jiangsu Deke**") amounting to RMB31,418,000 and the net loss on disposal of Guodian Galaxy Water Co., Ltd.* ("**Galaxy Water**") amounting to RMB108,155,000.

(ii) Others included in other expenses for the year ended 31 December 2020 represented the compensations accrued for two arbitrations, Datong Huajian Water Treatment Co., Ltd.* ("**Huajian Water**") and Laiyuan Suntien Wind Energy Co., Ltd.* ("**Laiyuan Suntien**").

8. FINANCE COSTS

	2021	2020
	RMB'000	*RMB'000*
Interest on bank loans and other borrowings	**421,129**	570,890
Interest on lease liabilities	**5,892**	7,046
Less: Interest expenses capitalised into property, plant and equipment	**(2,540)**	(4,236)
	424,481	573,700

9. (LOSS)/PROFIT BEFORE TAXATION

(Loss)/profit before taxation is arrived at after charging/(crediting):

(a) Staff costs

	2021	2020
	RMB'000	*RMB'000*
Salaries, wages and other benefits *(Note)*	**1,420,558**	1,152,932
Contributions to defined contribution retirement plan *(Note)*	**161,980**	75,090
	1,582,538	1,228,022

Note:

The above staff costs include the Directors' and the Company's supervisors' emoluments.

Pursuant to the relevant labour rules and regulations in the PRC, the Company and its PRC subsidiaries participated in defined contribution retirement schemes (the "**PRC Schemes**") organised by the relevant local government authorities for its employees. The Group is required to make contributions to the PRC Schemes at a certain percentage of total salaries of the employees. The local government authorities are responsible for the entire pension obligations payable to retired employees.

In addition, certain subsidiaries and its staff participate in a retirement plan managed by China Energy on a voluntary basis to supplement the above-mentioned schemes and the Group is required to make contributions at 5% to 8% of total salaries of the employees. The Group has no other material obligation to make payments in respect of pension benefits associated with these schemes and the supplementary retirement plan other than the annual contributions described above.

9. (LOSS)/PROFIT BEFORE TAXATION (cont'd)

(b) Other items

	2021	2020
	RMB'000	*RMB'000*
Amortisation		
– intangible assets	**132,362**	79,153
Depreciation		
– investment properties	**9,644**	8,704
– property, plant and equipment	**336,753**	404,472
Impairment/(reversal of impairment)		
– property, plant and equipment	**41,777**	56,046
– trade and bills receivables	**75,422**	(181,440)
– deposits, prepayments and other receivables	**85,058**	59,942
– other non-current assets	**(530)**	–
– inventories	**273,068**	1,813
– contract assets	**2,607**	(2,968)
Auditors' remuneration		
– annual audit services	**7,280**	10,560
– interim review services	**3,980**	3,980
Equity-settled share based expense	**313**	–
Operating lease expense *(Note)*		
– hire of plant, equipment and motor vehicles	**7,511**	11,469
– hire of properties	**23,173**	17,992
Research and development costs	**277,089**	269,622
Provision for warranty	**381,816**	294,814
Rental income from investment properties	**(33,750)**	(35,785)
Direct outgoings of investment properties	**2,525**	21,851
Cost of inventories	**4,475,205**	5,325,212

Note:

Upon the adoption of IFRS 16, operating lease charges only represent the lease charges for the low-value assets and short-term leases.

10. INCOME TAX IN THE CONSOLIDATED STATEMENT OF PROFIT OR LOSS

Taxation in the consolidated statement of profit or loss represents:

	2021	2020
	RMB'000	*RMB'000*
Current tax		
Provision for the year	**55,503**	171,678
(Overprovision)/underprovision and adjustments of prior year	**(5,507)**	46,340
	49,996	218,018
Deferred tax		
Origination and reversal of temporary differences	**57,719**	31,350
	107,715	249,368

Note:

The charge for PRC enterprise income tax for the Group's subsidiaries established in Mainland China is calculated at the statutory rate of 25% (2020: 25%) on the estimated assessable profit of the period determined in accordance with relevant enterprise income tax rules and regulations. Certain of the Group's subsidiaries in Mainland China were designated as "High New Technology Enterprise" and were entitled to a preferential tax rate of 15%.

Hanchuan Longyuan Boqi Environmental Technology Co., Ltd.*, a subsidiary of the Company, is engaged in pollution prevention and control projects as a qualified third-party enterprise, which is levied at a preferential rate of 15% (2020: 15%).

Besides, a subsidiary of the Group which is a small-scale enterprise is subject to enterprise income tax at 20% (2020: 20%).

11. (LOSS)/EARNINGS PER SHARE

The calculation of basic (loss)/earnings per share is based on the (loss)/profit attributable to ordinary equity shareholders of the Company, and the weighted average of 6,063,770,000 ordinary shares (2020: 6,063,770,000 ordinary shares) in issue during the year ended 31 December 2021.

There were no dilutive potential ordinary shares in existence during the years ended 31 December 2021 and 2020.

(Loss)/profit attributable to ordinary equity shareholders of the Company used in the basic (loss)/ earnings per share calculation:

	2021	2020
	RMB'000	*RMB'000*
(Loss)/profit attributable to ordinary equity shareholders of the Company, used in the basic (loss)/ earnings per share calculation	**(839,574)**	57,123

12. OTHER NON-CURRENT ASSETS

	2021 RMB'000	2020 *RMB'000*
Long-term trade receivables due from:		
– related parties under China Energy	**3,499**	36,641
– third parties	**61,477**	–
Long-term service concession receivables due from third parties	**156,930**	700,970
Less: Loss allowance	**(1,641)**	(4,473)
	220,265	733,138
Advance to third parties	**14,396**	161,991
Less: Loss allowance	**(14,396)**	(14,926)
	–	147,065
Contract assets	**778,231**	3,012,197
Long-term prepayments	**21,397**	17,131
Deductible VAT	**105,282**	185,345
	1,125,175	4,094,876

As of the end of the reporting period, the ageing analysis of long-term trade receivables and long-term service concession receivables, based on the invoice date (or date of revenue recognition, if earlier) and net of loss allowances, is as follows:

	2021 *RMB'000*	2020 *RMB'000*
Within 1 year	**61,477**	9,733
Over 3 years	**158,788**	723,405
	220,265	733,138

13. TRADE AND BILLS RECEIVABLES

	31 December 2021 *RMB'000*	31 December 2020 *RMB'000*
Trade receivables for contract work due from:		
– related parties under China Energy	**1,788,587**	2,027,582
– associates	**18,316**	147
– third parties	**1,666,748**	2,171,050
	3,473,651	4,198,779
Trade receivables for operating leases due from:		
–related parties under China Energy	**64,555**	67,369
	64,555	67,369
Trade receivables for sale of goods and rendering of services due from: *(Note (ii))*		
– China Energy	**1,816**	1,740
– related parties under China Energy	**756,649**	1,872,899
– associates	**204,635**	26,765
– third parties	**1,148,551**	2,280,813
	2,111,651	4,182,217
	5,649,857	8,448,365
Less: Loss allowance	**(1,355,991)**	(1,725,017)
	4,293,866	6,723,348

	31 December 2021 *RMB'000*	31 December 2020 *RMB'000*
Bills receivable for contract work due from:		
– related parties under China Energy	**259,238**	583,040
– third parties	**625,966**	419,063
	885,204	1,002,103
Bills receivable for sale of goods and rendering of services due from:		
– related parties under China Energy	**96,137**	246,845
– associates	**126,307**	–
– third parties	**454,725**	711,221
	677,169	958,066
	1,562,373	1,960,169
Less: Loss allowance	**(157,600)**	(6,731)
	1,404,773	1,953,438
Net value of trade and bills receivable	**5,698,639**	8,676,786

Notes:

(i) Trade and bills receivables of the Group include bills endorsed to suppliers totalling RMB293,427,000 (2020: RMB56,797,000). These receivables were not derecognised as the Group remains exposed to the credit risk of these receivables. The carrying amount of the trade payables was RMB293,427,000 (2020: RMB56,797,000). As at 31 December 2021, the fair value of the transferred assets and the associated liabilities was the same as their carrying amount with the net position of nil (2020: Nil).

At 31 December 2021, the Group endorsed certain bills receivable accepted by banks in Mainland China to certain of its suppliers in order to settle the trade payables due to such suppliers with a carrying amount in aggregate of RMB356,180,000 (2020:RMB1,234,165,000) and factored certain bills receivables accepted by banks in Mainland China with a carrying amount in aggregate of RMB62,193,000 (2020:RMB10,000,000) (the "**Derecognised Bills**"). The Derecognised Bills had a maturity of one to twelve months at the end of the reporting period. In accordance with the Law of Negotiable Instruments in the PRC, the holders of the Derecognised Bills have a right of recourse against the Group if the PRC banks default (the "**Continuing Involvement**"). In the opinion of the Directors, the Group has transferred substantially all risks and rewards relating to the Derecognised Bills. Accordingly, it has derecognised the full carrying amounts of the Derecognised Bills and the associated trade payables. The maximum exposure to loss from the Group's Continuing Involvement in the Derecognised Bills and the undiscounted cash flows to purchase these Derecognised Bills is equal to their carrying amounts. In the opinion of the Directors, the fair values of the Group's

Continuing Involvement in the Derecognised Bills are not significant. During the year ended 31 December 2021, the Group has not recognised any gain or loss on the date of transfer of the Derecognised Bills. No gains or losses were recognised from the Continuing Involvement, both during the year or cumulatively. The endorsement has been made evenly throughout the year.

(ii) As at 31 December 2021, trade receivables of the Group amounting to nil (2020: RMB117,747,000) were pledged as collateral for interest-bearing bank loans and other borrowings.

All trade and bills receivables (net of loss allowance) of the Group are expected to be recovered within one year.

(a) Ageing analysis

As of the end of the reporting period, the ageing analysis of trade receivables, based on the invoice date (or date of revenue recognition, if earlier) and net of loss allowance of the Group, is as follows:

	2021	2020
	RMB'000	*RMB'000*
Within 1 year	**2,566,764**	3,856,040
Between 1 and 2 years	**652,499**	1,321,999
Between 2 and 3 years	**593,443**	568,487
Over 3 years	**481,160**	976,822
	4,293,866	6,723,348

(b) Impairment analysis

Movement in the loss allowance account in respect of trade receivables during the year is as follows:

	2021	2020
	RMB'000	*RMB'000*
Balance at 1 January	**(1,725,017)**	(2,001,070)
Impairment losses, net	**(46,040)**	188,171
Uncollectible amounts written off	**3,403**	87,882
Reclassified to bills receivable	**22,745**	–
Disposal of subsidiaries	**388,918**	–
Balance at 31 December	**(1,355,991)**	(1,725,017)

An impairment analysis is performed at each reporting date using a provision matrix to measure expected credit losses. The provision rates are based on the ageing of balance of trade receivables for groupings of various customer segments with similar loss patterns. The calculation reflects the probability weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions.

The following table provides information about the Group's exposure to credit risk and ECLs for trade receivables as at 31 December 2021 and 2020:

2021	**Expected loss rate** *%*	**Gross carrying amount** ***RMB'000***	**Loss allowance** ***RMB'000***
Within 1 year	**0.9%**	**2,590,371**	**(23,607)**
Between 1 and 2 years	**3.3%**	**674,809**	**(22,310)**
Between 2 and 3 years	**4.8%**	**623,664**	**(30,222)**
Over 3 years	**72.7%**	**1,761,013**	**(1,279,852)**
		5,649,857	**(1,355,991)**

2020	Expected loss rate *%*	Gross carrying amount *RMB'000*	Loss allowance *RMB'000*
Within 1 year	0.8%	3,885,471	(29,432)
Between 1 and 2 years	5.0%	1,391,536	(69,537)
Between 2 and 3 years	10.6%	636,114	(67,627)
Over 3 years	61.5%	2,535,244	(1,558,421)
		8,448,365	(1,725,017)

Movement in the loss allowance account in respect of bills receivable during the year is as follows:

	2021 ***RMB'000***	2020 *RMB'000*
Balance at 1 January	**(6,731)**	–
Impairment losses, net	**(29,382)**	(6,731)
Reclassified from trade receivables	**(22,745)**	–
Reclassified from other receivables	**(98,742)**	–
Balance at 31 December	**(157,600)**	(6,731)

Bills receivable as at 31 December 2021 were bank acceptance bills and commercial acceptance bills with a maturity of six to twelve months, and the management made the loss allowance according to the probability of default.

14. TRADE AND BILLS PAYABLES

	2021	2020
	RMB'000	*RMB'000*
Bills payable to:		
– sub-contractors and equipment suppliers	**413,936**	265,405
– raw material suppliers	**202,477**	2,052,838
	616,413	2,318,243
Trade payables to		
– sub-contractors and equipment suppliers:		
– related parties under China Energy	**42,554**	66,536
– associates	**133,566**	667
– third parties	**4,202,757**	3,902,637
	4,378,877	3,969,840
– raw material suppliers:		
– related parties under China Energy	**33,983**	23,480
– associates	**10,766**	4,215
– third parties	**1,401,404**	4,399,505
	1,446,153	4,427,200
	6,441,443	10,715,283

As at 31 December 2021 and 2020, the trade and bills payables of the Group were generally repayable within six months. All trade and bills payables were expected to be settled within one year.

An ageing analysis of the trade and bills payables as at the end of the reporting period, based on the invoice date, is as follows:

	2021	2020
	RMB'000	*RMB'000*
Within 1 year	**4,447,956**	8,887,058
1 to 2 years	**1,227,510**	649,520
2 to 3 years	**229,911**	346,479
Over 3 years	**536,066**	832,226
	6,441,443	10,715,283

15. DIVIDENDS

(i) Dividends payable to equity shareholders of the Company attributable to the year

The Board did not recommend the payment of a final dividend in respect of the years ended 31 December 2021 and 2020.

(ii) Dividends payable to equity shareholders of the Company attributable to the previous financial year, approved during the year

The Board did not approve or pay any dividend in respect of the previous financial year during the years ended 31 December 2021 and 2020.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Certain statistical data and other information relating to the PRC and the industries in which the Group operates contained in, for instance, the section titled "Key Industry Developments" in this announcement, have been derived from various publicly available official publications. The Company believes that the sources of these data are appropriate and has taken reasonable care in extracting and reproducing such information. The Company has no reason to believe that such information is false or misleading or that any fact has been omitted that would render such information false or misleading. The information has not been independently verified by the Company or any other relevant party. The Company makes no representation as to the accuracy of the information contained in such sources, which may not be consistent with other data compiled within or outside the PRC. Accordingly, these data may not be accurate and the information should not be unduly relied upon for your investment in the Company.

This announcement contains certain forward-looking statements and information relating to the Group or the Company that are based on the belief and assumptions of the management of the Company. The words "anticipate", "believe", "expect", "going forward" and similar expressions, as they relate to the Company, the Group or the Company's management, are intended to identify forward-looking statements. Such statements reflect the current views of the Company's management with respect to future events and are subject to certain risks, uncertainties and assumptions. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, the Group's business, financial condition and operating results may be adversely affected and may vary materially from those described herein as anticipated, believed or expected.

INDUSTRY AND BUSINESS OVERVIEW IN 2021

Key Industry Developments

In 2021, facing the challenges and risks under the new normal of economic development, the PRC government has introduced new regulations and policy measures applicable to China's electricity and electricity-related industries.

For the purpose of this announcement, the "PRC" refers to the People's Republic of China, excluding Taiwan, the Macau Special Administration Region of the PRC and the Hong Kong Special Administration Region of the PRC.

Set forth below are the key regulations and policy initiatives issued by the PRC government and other relevant regulatory authorities in 2021 till the date of this announcement that are expected to have a material effect on the Group's businesses, operations and financial conditions:

1. On 4 January 2021, the National Development and Reform Commission, Ministry of Industry and Information Technology of the People's Republic of China, the Ministry of Finance of the People's Republic of China and 10 other departments jointly issued the Guiding Opinions on Promoting the Utilization of Sewage Resources (the "**Guiding Opinions I**").

   The Guiding Opinions I clearly states that by 2025, the national sewage collection efficiency will be significantly improved, the sewage treatment capacity of county towns and cities will basically meet the needs of local economic and social development, and the sewage treatment in water environment sensitive areas will be basically upgraded; the utilization rate of reclaimed water in prefecture level and above water-deficient cities in China will be over 25%, and that of Beijing-Tianjin-Hebei region will be over 35%; the reuse of industrial water and utilization level of livestock and poultry manure and fishery tail water will be significantly improved; the policy system and market mechanism of sewage resource utilization will be basically established. By 2035, a systematic, safe, environmentally friendly and economical pattern of sewage resource utilization will be formed.

   In order to ensure the effective implementation of sewage resource utilization in key areas, the Guiding Opinions I also deployed implementation of a series of key projects, and proposed to improve the system and mechanism of sewage resource utilization from five aspects: perfecting laws and regulations, constructing policy system, perfecting price mechanism, perfecting financial policies and strengthening scientific and technological support.

   The issuance of the Guiding Opinions I clearly states the policy direction of sewage treatment in China's environmental protection industry, and the reclaimed water treatment business of the Group's environmental protection industry will continue to maintain a good development trend.

2. On 22 February 2021, the State Council issued the Guiding Opinions on Accelerating the Establishment and Perfection of a Green and Low-carbon Circular Development Economic System (the "**Guiding Opinions II**").

   The Guiding Opinions II clearly states that by 2025, the industrial structure, energy structure and transportation structure will be significantly optimized, the proportion of green industries will be increased significantly, the greening level of infrastructure will be continuously improved, the level of cleaner production will be continuously improved, the green transformation of production and lifestyle will have remarkable results, the allocation of energy resources will be more rational and the utilization efficiency will be greatly improved, the total emission of major pollutants will be continuously reduced, the carbon emission intensity will be significantly reduced, the ecological environment will be continuously improved, the market-oriented green technology innovation system will be improved, the laws, regulations and policies will be more effective, and the production system, circulation system and consumption system of green and low- carbon circular development will be initially formed. By 2035, the endogenous driving force of green development will be significantly enhanced, the scale of green industry will reach a new level, the utilization efficiency of energy resources in key industries and key products will reach the international advanced level, and a green production lifestyle will be widely formed. After peaking, carbon emissions will decline steadily, the ecological environment will be fundamentally improved, and the goal of building a beautiful China will be basically achieved.

The issuance of the Guiding Opinions II will bring opportunities for the sustainable and healthy development of the Group's environmental protection and energy-saving solutions business and wind/photovoltaic power plants business.

3. On 11 May 2021, National Energy Administration issued the Notice on Matters Related to the Development and Construction of Wind and Photovoltaic Power Generation in 2021 (the "**Notice**").

The Notice makes general requirements that the objectives of peak carbon dioxide emissions and carbon neutrality need to be achieved, and that non-fossil energy need to account for about 25% of primary energy consumption, and the total installed capacity of wind power and solar power need to reach over 1.2 billion kW by 2030. In 2021, the generating capacities of wind and photovoltaic power generation throughout China should account for about 11% of the total electricity consumption of the society. This ratio should also increase year by year to ensure that non- fossil energy consumption accounts for about 20% of the total primary energy consumption in 2025.

The Notice calls for establishing diversified guarantee mechanisms for grid connection. For new grid-connected projects required to complete the annual minimum non-hydropower utilization responsibility at the provincial (district, municipal) levels, guaranteed grid connection is provided by power grid enterprises, in order to ensure the guaranteed grid-connected scale is not lower than 90 million KW in 2021.

The issuance of the Notice marks a new stage for the development of wind and photovoltaic power generation, and also brings new opportunities for the construction and operation of wind and photovoltaic power plants of the Group.

4. The Ministry of Ecology and Environment issued the Guiding Opinions on Enhanced Control of Ecological and Environmental Pollution Sources for Energy- and Emission-intensive Construction Projects on 30 May 2021 (the "**Guiding Opinions III**").

   The Guiding Opinions III states that the ecological environment departments at all levels should strengthen the prevention and control of the ecological environment of the high pollution and high energy-consuming projects from the source. The main tasks are to strengthen the zoning management and control and planning constraints of ecological environment, to strictly implement the review and approval of environmental impact assessment of the high pollution and high energy-consuming projects, and to promote the coordinated control of pollution and carbon reduction in the high pollution and high energy-consuming industries. Particularly, the high pollution and high energy-consuming industries include coal power, petrochemical, chemical, iron & steel, nonferrous metal smelting, and building materials industries.

   The Guiding Opinions III calls for improving the level of cleaner production and pollution prevention and control. The newly built and expanded high pollution and high energy-consuming projects should adopt advanced and applicable technologies and equipment; material consumption, energy consumption, and water consumption per unit product should reach the advanced level of cleaner production; measures to prevent and control soil and groundwater pollution should be formulated and strictly implemented in accordance with laws and regulations. If the national or local requirements for ultra-low emissions have been issued, the construction projects in the high pollution and high energy-consuming industries should meet such requirements.

   The Guiding Opinions III sets requirements of ultra-low emissions for the high pollution and high energy-consuming industries, which is expected to bring benefits for the environmental protection and energy-saving business of the Group.

5. On 7 November 2021, the State Council issued the Opinions on the Further Pollution Prevention and Control (the "**Opinion I**").

   The Opinion I includes a clear statement that the ecological environment should be continuously improved by 2025, in particular the heavy polluted weather and urban sewage should be essentially eliminated, and the risk of soil pollution should be effectively controlled. The document highlights the key industries and fields with obvious synergistic effect of reducing pollution and carbon, and emphasizes the key tasks to promote green and low-carbon development, in particular, the clean and low-carbon transformation of energy should be promoted, and the blind development of high-energy-consuming and high-emission projects should be resolutely curbed.

According to Opinion I, to keep our sky blue, we should make efforts in air pollution prevention and control, in addition to noise pollution control; to keep our water clear, we should make efforts in urban water treatment, in addition to collaborative pollution treatment; to keep our land pollution-free, we should make efforts in soil pollution prevention and soil safe use, in addition to synergistic prevention of groundwater pollution.

The release of Opinion I is beneficial to the development of clean energy, and as a result, it will ensure a favorable environment for the construction and operation of the Group's businesses in environmental protection and energy conservation, as well as wind power and photovoltaic plants.

6. On 24 January 2022, the State Council issued the Comprehensive Work Plan for Energy Conservation and Emission Reduction in the 14th Five-Year Plan Period (the "**Plan**").

   It is specified in the Plan that, by 2025, China's energy consumption per unit of GDP will drop 13.5% compared to 2020, the total energy consumption will be reasonably controlled, the total emission of chemical oxygen demand, ammonia nitrogen, nitrogen oxide, and volatile organic compounds will decrease by 8%, 8%, more than 10%, and more than 10% respectively compared to 2020.

   The Plan defines key projects and specifies their objectives and tasks such as green upgrading projects in key industries, energy-saving and environmental protection projects in parks, pollutant reduction projects in key regions, coal clean and efficient utilization project, and comprehensive remediation projects for volatile organic compounds.

   The release of the Plan is expected to be beneficial to the construction and operation of the Group's businesses in environmental protection and energy conservation, as well as wind power and photovoltaic plants.

Key Business Development

Environmental Protection Business

As of 31 December 2021, the Group's desulphurisation and denitrification projects under construction were set out as follows:

Projects	Number	Installed capacity *(MW)*
Desulphurisation projects under construction	17	16,710
Including: Renovation EPC projects	6	3,870
Newly built EPC projects	11	12,840
Denitrification projects under construction	18	18,000
Including: renovation EPC projects	13	11,580
Newly built EPC projects	5	6,420

The models of concession operations of the Group's environmental protection business are categorised into three types: general concession model, the operation and maintenance model of general contracting for tariff (generating income from tariff on desulphurisation, and assuming the responsibility for the supply of materials and the disposal of desulphurisation by-products in addition to general operation and maintenance) and the operation and maintenance model (generating income from general operation and maintenance). As of 31 December 2021, the operating units of desulphurisation concession operation of the Group had an aggregate installed capacity of 15,740MW, and the operating units of denitrification concession operation had an aggregate installed capacity of 11,840MW; the desulphurisation generating units under the operation and maintenance model of general contracting for tariff had an installed capacity of 4,040MW; the desulphurization generating units under the operation and maintenance model had an installed capacity of 18,130MW.

As of 31 December 2021, the annual production capacity of denitrification catalysts, the key material for denitrification service of the Group was 26,000 m^3. At present, the application of the Group's small pore catalysts in the gas-fired generating units of Hami Xuanli Gas-fired Power Generation Co., Ltd.*, which indicated that the new catalysts technology has broken the monopoly of foreign companies.

The environmental protection business has been further expanded, and the sludge disposal project of Guoneng Changzhou Power Generation Co., Ltd.*, the synergistic treatment of multiple pollutants project of Salaqi Power Plant of Beijing GD Power Co., Ltd.*, the operations at high standards of comprehensive utilization project of China Shenhua Coal Liquefaction and Chemical Co., Ltd.*, which indicated the mature application of sludge mixed burning technology and Haber process, semi-dry process and other new desulfurisation processes.

In terms of water treatment, Guodian Zhejiang Beilun No. 1 Power Generation Co., Ltd.* has passed 168-hour trial operation of the comprehensive utilization project of desulphurisation wastewater of the whole plant, and coal-power integrated wastewater zero emission demonstration project of Guodian Construction Investment Inner Mongolia Energy Co., Ltd.* has been put into trial operation.

A breakthrough has been made in the field of coal and coal chemical industry, the Company won the bids for the renovation EPC of quality improvement project of domestic sewage stations in Heishan open-pit coal mines and Hongshaquan open-pit coal mines of China Shenhua Xinjiang Energy Co., Ltd.*.

As of 31 December 2021, the Group processed approximately 105,000,000 tons of sewage (including reclaimed water) and reduced the cumulative COD (chemical oxygen demand) emissions by approximately 28,000 tons.

In terms of acoustic treatment, the Company won the bids for the newly built comprehensive environmental noise control of the whole plant construction project of Shenhua Luoyuanwan Power Plant in Fujian, the engineering project of the installation of sound barriers from Wangjiazhai to Nanpo bottom section of Baoshen Railway of Shenshuo Company, the design and construction project of newly installation of sound barriers (Suning) of Guoneng Shuohuang Railway Company, the research project contract of comprehensive control technologies of long-distance tubular belt transportation of equipment noises of Zhunneng Energy Group, and the Company was rich in performance types, covering four industries, namely electricity, coal, transportation and municipal transportation.

Energy Conservation Solutions Business

The first domestic demonstration project of autonomous controllable intelligent distributed control system (iDCS) of Guoneng Zhishen Control Technology Co., Ltd.* ("**Guoneng Zhishen**") was successfully accepted by Bulian Power Plant and was successfully applied in 100MW coal-fired generating unit for the first time.

Wind Power Products and Services Business

The Group accelerated the research and development of new products and optimized the integrated product platform and formed five product lines: 3.XMW platform, 4.X-5.XMW platform, 6.X-8.XMW platform, 9.X-10.XMW platform and offshore wind turbines platform. The Company accelerated the iterative design of products and completed the design certification of models including 3.6MW/4MW-166, 5.5MW-176, 6.5MW-184, 7MW-195 models. The Company accelerated the introduction, absorption and transformation of international leading technology, signed a memorandum of understanding with Siemens Gamesa at the Shanghai Import Expo, and carried out comprehensive cooperation in technology transfer, manufacturing, quality assurance system and operation and maintenance of 11MW offshore turbines, which helped deeply participate in the competition in the offshore wind power market.

The Group has comprehensively improved quality services. The Group adhered to the goal-oriented method, systematically formulated 10 core quality targets such as malfunction rate and troubleshooting time of wind turbines, with an annual malfunction rate of 0.005 occurrence per unit per day, a year-on-year decrease of 37.5%. The Company accelerated service response, improved customer service satisfaction, the average daily malfunction downtime of a single unit is 0.31 hours per unit per day, representing a year-on-year decrease of 6.1%.

Stable Performance in Domestic Market

In 2021, the Group received new orders valuing RMB16.259 billion in total, representing a year-on-year increase of 17.05% and an increase of 14.73% compared with the average value of new orders during the 13th Five Year Plan period, showing stably improved performances. To be specific:

- The performance in thermal power market was stable. The Group received new orders valuing RMB9,558 million in total in the year, accounting for 58.79% of its total new order value.

  - Beijing Guodian Longyuan Environmental Engineering Co., Ltd.* ("**Longyuan Environmental**") won the bidding for the new desulfuration EPC project of Guoneng Qingyuan Power Generation Co., Ltd.* and Guoneng Guangtou Beihai Power Generation Co., Ltd.*, with a contract amount of about RMB301 million;

  - Guoneng Long Yuan Power Technology & Engineering Co., Ltd.* ("**Longyuan Engineering**") won the bidding for the phase-II power plant EPC project of Guodian Power Shuangwei Inner Mongolia Shanghaimiao Energy Co., Ltd.*, with a contract amount of RMB4,536 million.

  - Guoneng Zhishen won the bidding for the full-factory field bus DCS and intelligent power generation project of Guodian Power Shuangwei Inner Mongolia Shanghaimiao Energy Co., Ltd.*, beginning the application of iDCS, an all domestically developed intelligent control system, in a 1000MW-class power unit.

- The new energy market was continuously expanded. The Group won new energy orders of RMB4,827 million in the year, accounting for 29.69% of the total.

  - Longyuan Environmental and Guoneng Longyuan Lantian Energy Saving Technology Co., Ltd.* ("**Longyuan Energy Conservation**") set foot in the photovoltaic market for the first time, winning contracts of RMB220 million and RMB250 million, respectively.

  - Guoneng I&C Interconnection Technology Co., Ltd.* ("**Guoneng I&C**") entered into its first 10MW offshore variable-pitch wind turbine contract with a new client Taiyuan Heavy Industry New Energy Equipment Co., Ltd.*

- The new markets were continuously boosted. The Group entered into new contracts in new markets like coal and coal chemical industry, reporting contract amount of RMB1,739 million. The Group signed strategic cooperation framework agreements with Wuhai City, Kunshan City and many internal and external entities, to vigorously advance the comprehensive energy service business.

  - Yantai Longyuan Power Technology Co., Ltd.* ("**Longyuan Technology**") made actively efforts in the metallurgical cement market, with an annual contract amount of RMB113 million, and won the first environmental protection transformation project in the cement industry – the ultra-low emission transformation and cement kiln denitrification SCR project of Shanxi Jin Brand Cement Group.

  - Guoneng I&C won the bidding for the standard setting project for smart mine construction of Guodian Construction & Investment Inner Mongolia Energy Co., Ltd.*, marking its new breakthrough in the coal industry.

  - Guoneng Lucency Environment and Technology Co., Ltd.* ("**Lucency**") contracted the domestic sewage station transformation EPC project for Hongshaquan and Heishan open coal mines of China Energy Group Xinjiang Energy Co., Ltd.*, laying a solid foundation for its full entry into the coal and coal chemical industry operation and maintenance markets.

Continuous Expansion in Overseas Market

In 2021, despite the rampant global pandemic and frequent regional conflicts, we managed to steadily run our main business, make major efforts in the target markets and steadily further overseas business:

- Longyuan Environmental won a wet desulfurization project in Indonesia, and its environmental protection transformation projects in Bangladesh and Taiwan of China entered the installation and debugging stages, respectively.

- Longyuan Technology explored Russia, Thailand and Laos for market opportunities, and made stable progress in the energy-saving transformation projects in Indonesia, Turkey and Zimbabwe. Among them, the plasma modification EPC project it undertook for Zimbabwe Power Company entered the delivery stage.

- United Power went on providing operation and maintenance services for the De Aar wind power project in South Africa in the charge of China Longyuan Power Group Corporation Limited* ("**Longyuan Power**"), making an outstanding contribution to the power supply of the local place.

- The automation project for a thermal power plant in Pakistan undertaken by Guoneng Zhishen entered the equipment installation and debugging stages, paving path to the application of automatic control systems in Southeast Asia and South Asia.

- The project of supplying desalination equipment to a Pakistani power plant in the charge of Lucency has finished the equipment delivery.

ANALYSIS OF 2021 FINANCIAL RESULTS

Please read this section in conjunction with the consolidated financial statements of the Group for the year ended 31 December 2021.

Analysis on consolidated results

Revenue

Consolidated revenue of the Group for the year ended 31 December 2021 was approximately RMB12,073.3 million, representing a decrease of approximately RMB3,551.2 million, or 22.7% as compared with approximately RMB15,624.5 million in 2020. As compared with 2020, revenue from wind power products and services decreased by approximately RMB2,531.8 million, or 43.7%, which was mainly due to the fall of wind power "rush of installation tide", and the disposal of United Power which was no longer consolidated into the consolidated financial statements of the Group since October 2021. leading to a decrease in revenue from wind power products. The revenue of energy-saving solutions business decreased by approximately RMB561.0 million, or 12.3%, mainly due to the decrease of revenue from general contracting business line of wind power plant construction caused by the fall of wind power "rush of installation tide".

The following table sets out the Group's revenues by segment and as a percentage of the total revenue of the Group as at 31 December 2021 and 2020, respectively:

	2021 *(RMB million)*	*%*	**2020** *(RMB million)*	*%*
Environmental protection and Energy conservation solutions:				
Environmental protection solutions	**4,245.9**	**35.2**	4,779.9	30.6
Energy conservation solutions	**4,004.9**	**33.1**	4,565.9	29.2
Total	**8,250.8**	**68.3**	9,345.8	59.8
Renewable energy equipment manufacturing and services:				
Wind power products and services	**3,257.7**	**27.0**	5,789.5	37.1
Others	**564.8**	**4.7**	489.2	3.1
Total	**12,073.3**	**100.0**	15,624.5	100.0

Cost of sales

As at the end of 31 December 2021, consolidated cost of sales for the Group amounted to approximately RMB11,352.7 million, representing a decrease of approximately RMB1,316.9 million or 10.4%, as compared to that in 2020 of approximately RMB12,669.6 million. The decrease was primarily due to that, firstly, the wind turbines production has gradually transformed to the large MW models, and the cost per unit of wind turbines production increased at the transformation stage; secondly, the recognition cost of parts of the wind turbines components in this period were purchased during the "rush of installation tide", and the cost was relatively high.

The following table sets out the Group's gross profit and gross profit margin by segment for the years ended 31 December 2021 and 2020, respectively:

	2021		2020	
	(RMB million)	***%***	*(RMB million)*	*%*
Environmental protection and Energy conservation solutions:				
Environmental protection solutions	**3,554.9**	**31.3**	3,526.5	27.8
Energy conservation solutions	**4,070.3**	**35.9**	4,238.2	33.5
Total	**7,625.2**	**67.2**	7,764.7	61.3
Renewable energy equipment manufacturing and services:				
Wind power products and services	**3,375.6**	**29.7**	4,630.0	36.5
Others	**351.9**	**3.1**	274.9	2.2
Total	**11,352.7**	**100.0**	12,669.6	100.0

Gross profit and gross profit margin

For the foregoing reasons, gross profit of the Group in 2021 amounted to approximately RMB720.5 million, representing a decrease of approximately RMB2,234.4 million, or 75.6%, as compared to that in 2020 of approximately RMB2,954.9 million. The average gross profit margin significantly decreased from 18.9% in 2020 to 6.0% in the corresponding period in 2020. The decrease in gross profit margin was mainly due to the significant decrease in the gross profit margin of the general contracting business of power station construction and wind power products and services business.

The following table sets out the Group's gross profit and gross profit margin by segment for the years ended 31 December 2021 and 2020, respectively:

	2021		2020	
	(RMB million)	*%*	*(RMB million)*	*%*
Environmental protection and Energy conservation solutions:				
Environmental protection solutions	**690.9**	**16.3**	1,253.4	26.2
Energy conservation solutions	**(65.4)**	**(1.6)**	327.6	7.2
Renewable energy equipment manufacturing and services:				
Wind power products and services	**(117.9)**	**(3.6)**	1,159.6	(20.0)
Others	**212.9**	**37.7**	214.3	43.8
Total	**720.5**	**6.0**	2,954.9	18.9

Other revenue

Other revenue of the Group decreased by approximately RMB56.7 million, or 18.0%, from approximately RMB315.3 million for 2020 to approximately RMB258.6 million for 2021, which was primarily due to the decrease in the government grants and the dividend income from unlisted equity investment.

Other income

Other income of the Group for 2021 was approximately RMB1,022.2 million, while other income for 2020 was approximately RMB22.7 million, representing an increase of approximately RMB999.5 million, or 4,403.1%, which was primarily due to the recognition of investment income approximately amounting to RMB1,091.5 million related to the disposal of United Power United Power in 2021.

Other expenses

Other expenses of the Group decreased by approximately RMB100.6 million or 90.3%, which was mainly due to the compensations accrued for two arbitrations, Huajian Water and Laiyuan Suntine in the year of 2020.

Selling and distribution expenses

Selling and distribution expenses of the Group decreased by approximately RMB301.8 million or 27.6%, from approximately RMB1,094.9 million for 2020 to approximately RMB793.1 million for 2021, which was primarily due to the disposal of Guodian United Power, which has significant selling and distribution expense, was no longer consolidated into the consolidated financial statements of the Group from October of 2021..

Administrative expenses

Administrative expenses of the Group increased by approximately RMB479.3 million or 34.7%, from approximately RMB1,380.4 million for 2020 to approximately RMB1,859.7 million for 2021, which was mainly due to provision of the expected credit losses, and the increase of social insurance premium which caused by the end of the preferential policy social insurance premium in 2021.

Operating (loss)/profit

As a result of the foregoing factors the operating loss of the Group for 2021 is approximately RMB662.3 million, while the operating profit of the Group for 2020 was approximately RMB706.3 million.

Finance costs

Finance costs of the Group decreased by approximately RMB149.2 million, or 26.0%, from approximately RMB573.7 million for 2020 to approximately RMB424.5 million for 2021, which was mainly due to the decrease of interest expenses of bank and other loans resulting from the decrease in borrowings.

(Loss)/profit before taxation

As a result of foregoing factors, loss before taxation of the Group is RMB1,101.9 million for 2021, and profit before taxation of the Group was RMB204.9 million for 2020, decreased by approximately RMB1,306.8 million or 637.8%.

Income tax

Income tax decreased by approximately RMB141.7 million or 56.8% as compared to last year resulting from the decrease of current income tax of approximately RMB168.0 million and the increase of deferred income tax of RMB26.4 million. The decrease of current income tax was mainly attributable to the decrease in demand for new construction or renovation of thermal power environmental protection facilities and the fall of "rush of installation tide" of wind turbines during the year of 2021, resulting in a decrease in current taxable profit for the environmental protection, wind power and energy-efficient power plant business.

Loss for the year

As a result of the foregoing factors, the Group recorded loss for the year of approximately RMB1,209.7 million in 2021, increased by approximately RMB1,165.3 million, or 2,624.5%, compared with a loss of RMB44.4 million in 2020.

Loss attributable to non-controlling interests

Loss attributable to non-controlling interests of the Group increased by approximately RMB268.5 million, from approximately RMB101.6 million for 2020 to approximately RMB370.1 million for 2021, which was mainly due to the increase of the loss of United Power in which the Company has the material non-controlling interests.

(Loss)/profit attributable to equity shareholders of the Company

As a result of the foregoing factors, loss attributable to equity shareholders of the Company was approximately RMB839.6 million for 2021, and the profit attributable to equity shareholders of the Company was approximately RMB57.1 million for 2020.

Analysis of segment results

The following table sets out the Group's revenue, gross profit and operating profit/(loss) of each business segment as a percentage of the total revenue, gross profit and operating profit/(loss) of the Group as at 31 December 2021 and 2020, respectively:

	2021		**2020**	
	(RMB million)	***%***	*(RMB million)*	*%*
Environmental protection and energy conservation solutions				
Environmental protection solutions:				
Revenue	**4,245.9**	**35.2**	4,779.9	30.6
Gross profit	**690.9**	**95.9**	1,253.4	42.4
Operating profit	**90.1**	**(13.7)**	736.5	104.4
Energy conservation solutions:				
Revenue	**4,004.9**	**33.2**	4,565.9	29.2
Gross profit	**(65.4)**	**(9.1)**	327.6	11.1
Operating profit/(loss)	**(394.4)**	**59.8**	137.0	19.4
Renewable energy equipment wind power products and services:				
Revenue	**3,257.7**	**27.0**	5,789.5	37.1
Gross profit	**(117.9)**	**(16.4)**	1,159.6	39.2
Operating loss	**(1,265.5)**	**192.0**	(253.3)	(35.9)

ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION SOLUTIONS

Environmental protection solutions

Revenue

Revenue from the environmental protection business decreased by approximately RMB534.0 million or 11.2%, from approximately RMB4,779.9 million for 2020 to approximately RMB4,245.9 million for 2021. On the one hand, due to the national policies on atmospheric treatment and emission reduction, the market of desulphurisation and denitrification EPC has shrunk, and the large-scale construction of desulphurisation and denitrification were basically completed, resulting in the decrease of the number of corresponding construction projects of power plants and the income of desulphurisation/denitrification EPC business; on the other hand, the income of water treatment business decreased, which was due to the completion progress of EPC project of off-site expansion and transformation of desulphurisation wastewater treatment system of Guodian Zhejiang Beilun No. 1 Power Generation Co., Ltd.*, and the comprehensive wastewater treatment transformation project of the whole plant of Guodian Qingshan Thermal Power Co., Ltd.* reached over 90% in 2020, and the revenue recognised in 2021 was lower compared with the previous year.

The following table sets out the revenues from each business line of the Group's environmental protection business, each as a percentage of the revenue from this business, for the years as at 31 December 2021 and 2020, respectively:

	2021		**2020**	
	(RMB million)	***%***	*(RMB million)*	*%*
Desulfurisation	**1,884.5**	**44.4**	2,340.9	49.0
Denitrification	**801.3**	**18.9**	943.3	19.7
Low NO_X combustion equipment	**132.2**	**3.1**	59.9	1.3
Water treatment	**1,120.6**	**26.4**	1,151.4	24.1
Ash removal	**184.5**	**4.3**	169.0	3.5
Coal yard renovation and smoke plume treatment	**102.2**	**2.4**	115.4	2.4
Sludge disposal	**20.6**	**0.5**	–	–
Total	**4,245.9**	**100.0**	4,779.9	100.0

Cost of sales

Cost of sales for the environmental protection business of the Group increased by approximately RMB28.4 million or 0.8%, from approximately RMB3,526.5 million for 2020 to approximately RMB3,554.9 million for 2021. It was mainly due to that the traditional business shrunk, the environmental protection sector still need to work hard to develop new business, and it takes quite a long time to nurture new business, while the cost of developing new markets is higher.

Gross profit and gross profit margin

As a result of the foregoing reasons, gross profit attributable to the environmental protection business decreased by approximately RMB562.5 million, or 44.9%, from approximately RMB1,253.4 million for 2020 to approximately RMB690.9 million for 2021. Average gross profit margin for this business decreased from 26.2% in 2020 to 16.3% in 2021.

The following table sets out the changes of the gross profit margin for the business lines comprising the Group's environmental protection business as at 31 December 2021 compared with that as at 31 December 2020:

	2021	**2020**
	(%)	*(%)*
Desulfurisation	**13.2**	22.9
Denitrification	**27.3**	39.9
Low NO_X combustion equipment	**18.2**	19.2
Water treatment	**12.6**	25.4
Ash removal	**26.0**	21.6
Coal yard renovation and smoke plume treatment	**17.5**	11.5
Sludge disposal	**14.4**	–

ENERGY CONSERVATION SOLUTIONS

Revenue

Revenue attributable to the energy conservation solutions business decreased by approximately RMB561.0 million or 12.3%, from approximately RMB4,565.9 million for 2020 to approximately RMB4,004.9 million for 2021. Among them, the revenue of general contracting business line of power station construction decreased significantly, which was mainly due to the fall the "rush of installation tide" this year, resulting in the obvious decrease in the number of orders compared with 2020 which led to the decrease in the revenue.

The following table sets out the revenues from the business lines of the Group's energy conservation business, each as a percentage of revenue from this business as at 31 December 2021 and 2020, respectively:

	2021		2020	
	(RMB million)	***%***	*(RMB million)*	*%*
Plasma-assisted coal ignition and combustion stabilization	**283.0**	**7.1**	199.2	4.4
Energy conservation service	**275.1**	**6.9**	300.6	6.6
General contracting for power stations	**3,412.3**	**85.2**	4,055.5	88.8
Comprehensive utilization and renovation of boiler	**34.5**	**0.8**	10.6	0.2
Total	**4,004.9**	**100.0**	4,565.9	100.0

Cost of sales

The cost of sales of the Group's energy conservation solutions business decreased from approximately RMB4,238.2 million in 2020 to approximately RMB4,070.3 million in 2021, representing a decrease of RMB167.9 million or 4.0%, which was mainly due to the time gap between order signing and project implementation. The craned, high-voltage cabinet and other equipment in the wind power station used in the implementation of the project this year were purchased during the "rush of installation tide", and the cost was significantly higher than expected at the time of order signing.

Gross profit and gross profit margins

As a result of the foregoing factors, gross profit attributable to the energy conservation solutions business decreased significantly by approximately RMB393.0 million or 120.0%, from approximately RMB327.6 million for 2020 to gross loss of approximately RMB65.4 million for 2021. The average gross profit margin of the business decreased significantly from 7.2% in 2020 to -1.6% in 2021, which was mainly due to the decrease in gross profit margin of the general contracting business line for power station construction, which accounted for a large proportion of the revenue.

The following table sets out the changes in gross profit margins for the business lines comprising the Group's energy conservation business as at 31 December 2021 compared with that as at 31 December 2020:

	2021	2020
	(%)	(%)
Plasma-assisted coal ignition and combustion stabilisation	**21.3**	28.3
Energy conservation services	**16.5**	38.7
General contracting for power stations	**(5.1)**	3.9
Comprehensive utilization and renovation of boiler	**17.1**	(21.4)

Renewable Energy Equipment Manufacturing and Services

Wind power products and services

Revenue

Revenue attributable to the wind power products and services business decreased by approximately RMB2,531.8 million, or 43.7%, from approximately RMB5,789.5 million for 2020 to approximately RMB3,257.7 million for 2021. The decrease in the revenue was mainly attributable to the decline in the sales volume of wind turbines. The domestic wind power industry was greatly affected by the policy. Affected by the "rush of installation tide" in 2020, the Group accelerated the implementation of the wind turbine sales contract, and the vast majority of the projects connected to the grid before the end of 2020, so the revenue of the Group was at a relative high level in 2020. With the gradual fall of the "rush of installation tide", there were fewer wind power projects in 2021, and the decrease in sales led to a significant drop in revenue as compared with the previous year.

Cost of sales

Cost of sales attributable to the wind power products and services business decreased by approximately RMB1,254.4 million or 27.1%, from approximately RMB4,630.0 million for 2020 to approximately RMB3,375.6 million for 2021. The decrease was primarily due to that, firstly, the wind turbines production has gradually transformed to the large MW models, and the cost per unit of wind turbines production increased at the transformation stage; secondly, the recognition cost of parts of the wind turbines components in this period were purchased during the "rush of installation tide", and the cost was relatively high.

Gross profit and gross profit margin

As a result of the foregoing factors, gross profit attributable to the wind power products and services business decreased by approximately RMB1,277.5 million or 110.2%, from approximately RMB1,159.6 million for 2020 to gross loss of approximately RMB117.9 million for 2021. Gross profit margin for this business decreased significantly from 20.0% for 2020 to -3.6% for 2021.

Liquidity and source of capital

In 2021, the Group's cash is mainly used in business operations and the repayment of bank borrowings due.

The following table sets out the net cash flows of the Group as at 31 December 2021 and 2020, and the cash and cash equivalents as at 31 December 2021 and 2020, respectively:

	2021 ***(RMB million)***	2020 *(RMB million)*
Net cash (used in)/generated from operating activities	**(409.0)**	1,816.0
Net cash generated from/(used in) investing activities	**951.0**	(107.4)
Net cash used in financing activities	**(778.4)**	(478.0)
Cash and cash equivalents as at 31 December	**4,136.8**	4,373.2

Net cash (used in)/generated from operating activities

Net cash (used in) the Group's operating activities for 2021 was approximately RMB409.0 million, as compared to the net cash generated from the Group's operating activities of approximately RMB1,816.0 million for 2020, which was mainly due to the significant increase in the payment of the Group for the procurement of wind power equipment and materials in this year.

Net cash generated from/(used in) investing activities

Net cash generated from the Group's investing activities for 2021 was approximately RMB951.0 million, while the net cash used in the Group's investing activities of approximately RMB107.4 million for 2020. The increase in the net cash generated from investing activities was mainly due to the disposal of equity investment of Tianjin Zhonghuan Semiconduct Co.,Ltd. ("Zhonghuan Semiconductor").

Net cash used in financing activities

Net cash used in the Group's financing activities for 2021 increased by approximately RMB300.4 million as compared with the previous year, which was mainly due to the repayment of private placement notes and borrowings during the year.

Working capital

As at 31 December 2021, the Group's cash and cash equivalents were approximately RMB4,136.8 million in total, representing a decrease of approximately RMB236.4 million, as compared to approximately RMB4,373.2 million for 2020. As at 31 December 2021, the Group had total unutilized bank facilities of approximately RMB7,580.3 million.

The Group's liability-to-asset, which is calculated as total liabilities divided by total assets, decreased from 77.9% as at 31 December 2020 to 65.3% as at 31 December 2021.

The Group's net liability-to-asset (including the cash and cash equivalent deducted in the other interest-bearing payables, interest-bearing borrowings, and lease liabilities), which is calculated as total net liabilities divided by total equity and total net liabilities, was 19.6% as at 31 December 2021 (31 December 2020: 45.1%).

Based on the existing cash resources and unutilized bank credit facilities, the Directors are of the view that the Group will have sufficient working capital to support current demand and daily operations for the coming 12 months.

Inventory

The inventories were approximately RMB897.3 million as at 31 December 2021, which decreased by approximately RMB4,010.9 million, or 81.7%, from approximately RMB4,908.2 million as at 31 December 2020. The decreased was primarily attributed to the decrease of raw materials, products in process and finished products of wind power products caused by the disposal of United Power, which was no longer consolidated into the consolidated financial statements of the Group.

Trade and bills receivables

Trade and bills receivables decreased by approximately RMB2,978.2 million or 34.3% from approximately RMB8,676.8 million as at 31 December 2020 to approximately RMB5,698.6 million as at 31 December 2021. The decrease was primarily attributed to the disposal of subsidiaries which have significant trade receivables and bill balance.

Deposits, prepayments and other receivables

The Group's deposits, prepayments and other receivables decreased by approximately RMB632.1 million or 28.4%, from approximately RMB2,221.9 million as at 31 December 2020 to approximately RMB1,589.8 million as at 31 December 2021. The decreased was primarily attributable to the decrease of the prepayments, security deposit of construction contracts and performance and the decrease of the relevant receivables resulting from the disposal of subsidiaries.

Trade and bills payables

Trade and bills payables decreased by approximately RMB4,273.9 million or 39.9% from approximately RMB10,715.3 million as at 31 December 2020 to approximately RMB6,441.4 million as at 31 December 2021, which was primarily attributable to the decrease of the amount payables to raw material suppliers resulting from the disposal of United Power.

Indebtedness

The following table sets forth the Group's borrowings as at 31 December 2021 and 2020:

	As at 31 December 2021 ***(RMB million)***	As at 31 December 2020 *(RMB million)*
Long-term interest-bearing borrowings		
Bank loans:		
– Secured	**–**	14.7
– Unsecured	**539.3**	851.6
Other loans	**630.0**	304.9
Private placement notes	**1,007.6**	2,012.9
Corporate bonds	**2,950.6**	2,945.5
Sub-total	**5,127.5**	6,129.6
Less: Current portion of long-term borrowings	**(3,157.6)**	(1,694.4)
Total	**1,969.9**	4,435.2
Short-term interest-bearing borrowings		
Bank loans:		
– Unsecured	**790.0**	5,106.0
Other loans:		
China Energy (unsecured)	**–**	600.0
Related parties under China Energy (unsecured)	**275.0**	–
Current portion of long-term borrowings	**3,157.6**	1,694.4
Total	**4,222.6**	7,400.4
Lease liabilities	**135.7**	132.9
Total indebtedness	**6,328.2**	11,968.5

As at 31 December 2021, the Group's indebtedness decreased by approximately 47.1% from approximately RMB11,968.5 million as at 31 December 2020 to approximately RMB6,328.2 million as at 31 December 2021. Among them, the proportion of short-term indebtedness to overall indebtedness increased from approximately 61.8% as at 31 December 2020 to approximately 66.7% as at 31 December 2021, which was mainly due to changes in the structure of long-term borrowings and short-term borrowings as the long-term borrowings decreased.

All of the Group's borrowings are denominated in RMB. The following table sets out the maturity status of the Group's long-term borrowings (including current portion) as at 31 December 2021 and 31 December 2020, respectively:

	As at 31 December 2021 ***(RMB milllion)***	As at 31 December 2020 *(RMB milllion)*
Within 1 year or on demand	**3,157.6**	1,694.4
After 1 year but within 2 years	**265.6**	81.3
After 2 year but within 5 years	**1,521.7**	4,205.5
After 5 years	**182.6**	148.4
Total	**5,127.5**	6,129.6

The effective interest rate of the Group (determined by dividing total interest expenses for the current year by the average of the sums of outstanding opening and closing borrowings) decreased from approximately 4.85% for 2020 to approximately 4.60% for 2021. It was primarily due to the increase in the proportion of short-term borrowings during the year.

Contingent liabilities

The Group's contingent liabilities as at 31 December 2021 primarily consisted of performance guarantee provided by the Group.

Employment, training and development

As of 31 December 2021, the Group has 4,125 employees in total. The Group has established and improved the management system of total salary based on market value and performance evaluation. The salary of staff is composed of basic salary, performance salary and reward salary. The performance salary is determined on the basis of the Company's performance and performance evaluation, and reward salary is determined according to the completion of the Company's annual key work. The Group will pay social insurance premiums, housing funds, corporate annuities, etc., for the employees strictly in accordance with applicable national and local government policies and regulations. The Group also attaches great importance to the selection, training, incentive and development of talents, concentrates all kinds of superior resources on high-potential and high-performance employees.

Significant investment

The Group did not have any significant investment during the year ended 31 December 2021.

Material acquisitions and disposals

Lucency, a wholly-owned subsidiary of the Company, entered into a transaction contract with Goldwind Environmental Protection Co., Ltd.* ("**Goldwind Environmental**") on 19 April 2021. Pursuant to the contract, Lucency agreed to sell, and Goldwind Environmental agreed to acquire 70% equity capital of Galaxy Water at a consideration of RMB514,983,000. For details, please refer to the announcement of the Company dated 20 April 2021 and the circular of the Company dated 26 May 2021.

On 16 June 2021, the Company entered into an equity transfer and capital injection agreement with China Energy, Longyuan Power and United Power, to sell 40% equity of United Power through equity transfer and capital injection. The Company received a consideration of RMB407,681,944. Upon completion of the transaction, the registered capital of United Power is owned as to 40%, 30% and 30% by China Energy, the Company and Longyuan Power. United Power is no long a subsidiary of the Company since then. For details, please refer to the announcement of the Company dated 16 June 2021 and the circular of the Company dated 30 June 2021.

On 23 September 2021, the Company entered into a capital injection and equity transfer agreement with the investor, employee shareholding platform and Guoneng I&C, to transfer 16.33% equity of Guoneng I&C to the investor at a consideration of RMB97,475,936. The investor injected RMB194,951,871 in Guoneng I&C to receive 32.67% equity of the latter, and the employee shareholding platform injected RMB29,839,572 in Guoneng I&C to receive about 5% equity of the latter. Upon completion of the transaction, the equity interests in Guoneng I&C will be held as to approximately 49%, 46% and 5% by the Investors, the Company and the Employees' Shareholding Platforms, respectively, and Guoneng I&C will become a non-wholly owned subsidiary of the Company. For details, please refer to the announcement of the Company dated 23 September 2021 and the circular of the Company dated 24 November 2021.

From 16 August 2021 to 31 December 2021, the Group sold 33,682,834 shares of Zhonghuan Semiconductor on Shenzhen Stock Exchange, receiving a total consideration of RMB1,626,646,227.76 (excluding the transaction costs). The average selling price per share was about RMB48.293 (excluding the transaction costs). For details, please refer to the announcement of the Company dated 11 August 2021 and the circular of the Company dated 14 September 2021.

Save as disclosed above, the Group did not have other material acquisition and disposal during the year ended 31 December 2021.

Market risk

The Group is exposed to various risks associated with its business operations, including credit risk, interest rate risk, liquidity risk and exchange rate risk.

Credit risk

The Group's credit risk is primarily attributable to cash at bank and in hand, trade and bills receivables, deposits, prepayments and other receivables and other non-current assets. Management has a credit policy in place and the exposure to these credit risks are monitored on an ongoing basis.

Substantially all of the Group's cash at bank and in hand are deposited in the stated owned/controlled PRC banks which the Directors of the Company assessed the credit risk to be insignificant.

The Group performed credit evaluations on all of its customers, and monitors outstanding receivables due from such customers on an ongoing basis. The Group's credit evaluation focuses on a customer's payment history and its ability to pay and takes into account industry and customer-specific considerations, as well as the general macroeconomic climate. The Group generally requires its customers to settle progress billings and other debts in accordance with agreed contract terms.

Interest rate risk

The Group's interest rate risk arises primarily from long-term borrowings. Borrowings issued at variable rates expose the Group to cash flow interest rate risk.

The Group regularly reviews and monitors the mix of fixed and variable rate borrowings in order to manage its interest rate risks. During the year, the management of the Group did not consider it is necessary to use interest rate swaps to hedge its exposure to interest rate risk.

Liquidity risk

The nature of the Group's business gives rise to significant irregularity in its cash flow. Through regular collection of receivables and while ensuring sound operations, the Company is able to significantly increase its operating cash. Meanwhile, the Group proposed to improve its financing structure by issuing mid-term and long-term bonds and introducing financial leasing. The Group is committed to ensuring sufficient working capital to meet its operating needs or having access to adequate bank credit to maintain uninterrupted operations. The Group's cash flow position is essential for its continuous development and expansion.

Exchange rate risk

The continued development and expansion of the Group's international operations is expected to result in increased exposure to exchange rate risk, arising primarily through export sales which would typically be denominated in foreign currencies. The Group expects that its future export sales will principally be denominated in either United States dollars or Hong Kong dollars. The foreign currencies assets of the Company mainly include the Hong Kong dollars deposits and other receivables priced in Hong Kong dollars due from Guodian Technology & Environment Group Hong Kong Corporation Limited, a subsidiary. As there had been a depreciation in the Hong Kong dollars against RMB in 2021, the Group recorded an exchange loss of RMB2.6 million during the year. The Directors consider that the Group's exchange rate risk is insignificant. The Group does not currently hedge against its exchange rate risk.

RMB currently is not a freely convertible currency and the PRC government may at its discretion restrict access to foreign currency exchange for current account transactions in the future. Changes in such foreign exchange controls may adversely affect the Group's international operations and sales, and may limit the Group's ability to satisfy its foreign exchange denominated obligations. In addition, the Group may be restricted from paying dividends on its listed H shares to shareholders by any such policy changes.

Subsequent events

On 24 January 2022, Beijing Chunhui Qingyun Technological and Environmental Corporation Limited (the "**Offeror**"), which is a wholly-owned subsidiary of China Energy incorporated in the PRC with limited liability, entered into a merger agreement (the "**Merger Agreement**") with the Company. Pursuant to the Merger Agreement, the Offeror and the Company will implement the merger subject to the terms and conditions of the Merger Agreement, including the pre-conditions and the conditions. After the merger, the Company will be merged into and absorbed by the Offeror in accordance with the PRC Company Law and other applicable PRC Laws (the "**Pre-conditional Privatization**").

Pursuant to the Merger Agreement, conditional upon the fulfilment (or waiver, as applicable) of the pre-conditions and the conditions, the Offeror will pay the cancellation price in the amount of HK$1.08 per H share to the H shareholders for the cancellation of the H shares. China Energy will be issued with RMB0.8793576 registered capital of the Offeror for each domestic share. Guodian Power Development Co., Ltd. will receive the consideration for the cancellation of its domestic shares in the same way as China Energy as described above.

After the completion of the merger, the Offeror will assume all assets, liabilities, interests, businesses, employees, contracts and all other rights and obligations of the Company and the Company will be eventually deregistered. Upon satisfaction of the pre-conditions and all the conditions to effectiveness, the Company will apply to the Stock Exchange for voluntary withdrawal of the listing of the H shares from the Stock Exchange pursuant to Rule 6.15 of the Listing Rules. The composite document is expected to be despatched to H shareholders within seven days after the satisfaction of the pre-conditions. For details, please refer to the announcement of the Company dated 24 January 2022.

Saved as disclosed above, as of the date of this announcement, the Company did not have any material subsequent events.

BUSINESS PROSPECTS FOR 2022

Lay a solid foundation for high-quality development

Firstly, the Group will make great efforts to conduct the refined management, continue to improve the overall budget management and control, strengthen the whole process cost management and control, and continue to improve the level of capital management and control. Secondly, the Group will improve the level of safety and environmental protection, practically accelerate the establishment of the safety system, and build the enterprise with inherent safety. Thirdly, the Group will improve the legal risk prevention system to promote the full coverage of audit supervision and risk management and control.

Stimulate the high-quality development force

Firstly, the Group will promote scientific and technological innovation, increase the investment in research and development, and conduct the refined management of scientific and technological projects in the whole process. Secondly, the Group will promote the technology cultivation, actively cultivate the core technologies for pollution abatement, such as air, water, and solid wastes, and promote the continuous improvement of the core technologies in application. Thirdly, the Group will promote the transformation of science and technology, build the service system for the transformation of scientific and technological achievements around the whole process, complete flow scheme, and complete cycle of the transformation of scientific and technological achievements.

Optimize the structure of high-quality development

Firstly, the Group will strengthen the marketing, conduct the transformation of the business system of the regional market service centers, and explore the implementation of the digital marketing transformation. Secondly, the Group will increase the development efforts of key projects and strengthen the development of new markets and new businesses. Thirdly, the Group will strengthen the overseas business, firmly establish the awareness of "go global", plan the new target markets, and deepen the green international exchange and cooperation.

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

Neither the Company nor any of its subsidiaries had purchased, sold or redeemed any listed securities of the Company during the year ended 31 December 2021.

DIVIDEND

The Board does not recommend a distribution of dividends for the year ended 31 December 2021.

COMPLIANCE WITH THE CODE ON CORPORATE GOVERNANCE PRACTICES

The Company has established the system of corporate governance in accordance with the requirements under the Corporate Governance Code as set out in Appendix 14 to the Listing Rules (the "**Corporate Governance Code**"). The Company has complied with the principles and code provisions as set out in the Corporate Governance Code for the year ended 31 December 2021.

COMPLIANCE WITH THE MODEL CODE FOR SECURITIES TRANSACTIONS

The Company has adopted the Model Code for Securities Transactions by Directors of Listed Issuers (the "**Model Code**") set out in Appendix 10 to the Listing Rules as the code of conduct regarding all directors' and supervisors' dealings in the Company's securities. After specific enquiries were made by the Company to them, all Directors and supervisors have confirmed that they have strictly complied with the required standard set out in the Model Code for the year ended 31 December 2021.

To ensure the compliance with relevant requirements under the Listing Rules and protect the interests of the shareholders of the Company, the Board will examine the corporate governance practices and the operations of the Company from time to time.

MATERIAL LITIGATION AND ARBITRATION

For the year ended 31 December 2021, the Company has not been involved in any litigation or arbitration that has material adverse effect on the overall business, operational or financial position of the Company.

AUDIT COMMITTEE

According to the Listing Rules, the Group has established the audit committee (the "**Audit Committee**"), the responsibilities of which including providing suggestions to the Board on the appointment, re-appointment and dismissal of external independent auditors, and monitoring their works. The Audit Committee comprises Mr. YEUNG Chi Tat (independent non-executive Director), Mr. SHEN Xiaoliu (independent non-executive Director) and Mr. ZHANG Wenjian (non-executive Director). The 2021 annual results of the Group and the consolidated financial statements as of and for the year ended 31 December 2021, which have been prepared in accordance with the International Financial Reporting Standards, have been reviewed by the Audit Committee.

AUDITORS

Ernst & Young was appointed as the Company's international auditor for the year ended 31 December 2021.

The figures in respect of the Group's consolidated statement of profit or loss and other comprehensive income, consolidated statement of financial position and the related notes thereto for the year ended 31 December 2021 as set out in this announcement have been agreed by the Company's auditors, Ernst & Young, to this amounts set out in the Group's draft consolidated financial statements for the year. The work performed by the Company's auditors in this respect did not constitute audits, reviews and other assurance engagement in accordance with 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 the Company's auditors on the preliminary results announcement.

PUBLICATION OF THE ANNUAL RESULTS AND THE ANNUAL REPORT

The results announcement of the Group for the year ended 31 December 2021 is published on the website of the Stock Exchange at http://www.hkexnews.hk and the Company's website at http://www.khjt.com.cn/khjtwwEn, respectively.

The Company's 2021 annual report containing all the information required under the Listing Rules will be dispatched to the relevant shareholders and will be published on the websites of the Company and the Stock Exchange in due course.

By order of the Board
Guodian Technology & Environment Group Corporation Limited
Mr. CHEN Dongqing
Chairman

Beijing, China, 29 March 2022

As at the date of this announcement, the executive directors of the Company are Mr. Chen Dongqing and Mr. Li Caiyun; the non-executive directors are Mr. Song Chang, Mr. Jiang Jianwu, Mr. Zhang Wenjian, Mr. Gu Yuchun and Ms. Ge Xiaojing; and the independent non-executive directors are Mr. Shen Xiaoliu, Mr. Qu Jiuhui, Mr. Xie Qiuye and Mr. Yeung Chi Tat.