



北控清潔能源集團有限公司  
Beijing Enterprises Clean Energy Group Limited

(Incorporated in the Cayman Islands with limited liability)

Stock Code: 01250

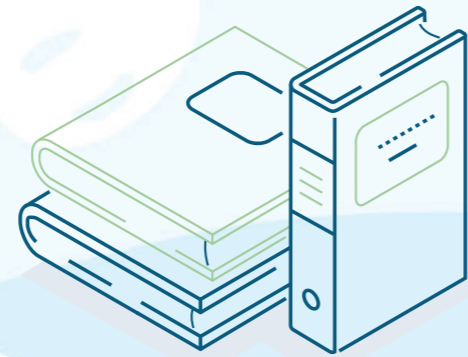


2021

ENVIRONMENTAL, SOCIAL AND  
GOVERNANCE REPORT

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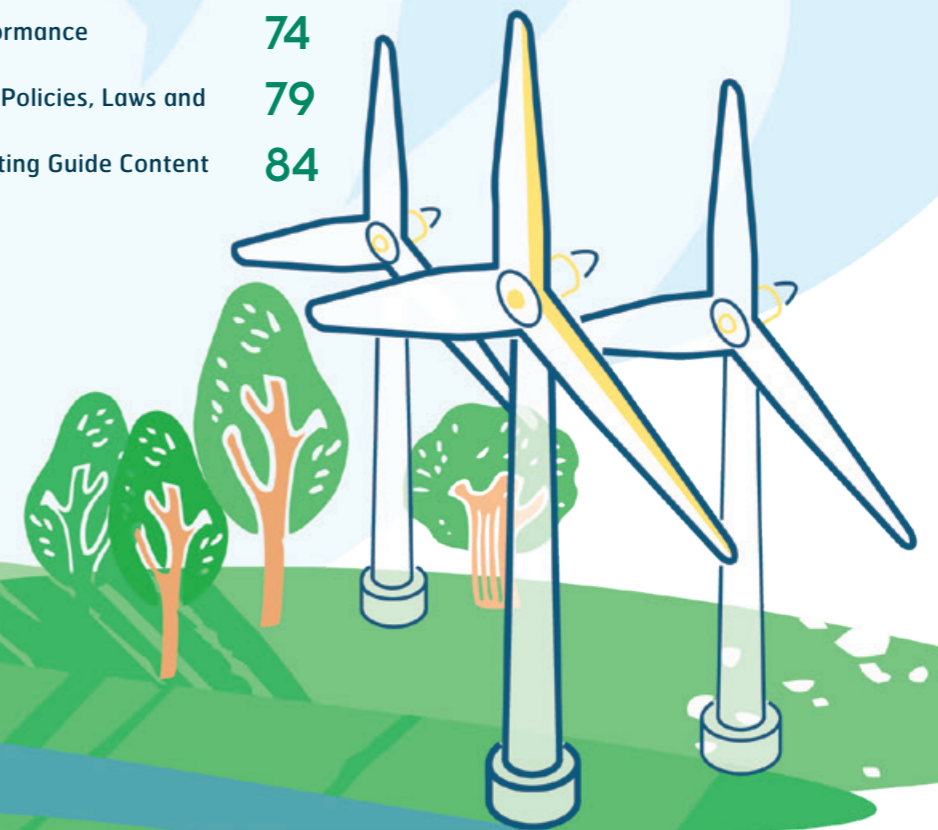
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# PREFACE: CHAIRMAN'S STATEMENT

## PREFACE: CHAIRMAN'S STATEMENT

The "14th Five-Year Plan" unveils a new blueprint for China's economic development, and the "Carbon Dioxide Emissions Peak and Carbon Neutrality" plan promotes a new chapter in the leap-forward development of China's new energy industry. In the historical opportunity of this ever-changing era, we were born with the mission of "focusing on clean and low-carbon, accelerating energy transformation, and creating an industrial ecosystem".

Everything in the past is a prologue. In 2021, amid the challenges of complicated and severe international environment and pandemic resurgence, the Group actively follows the national policy and situation, accurately grasps the development direction of clean energy, steadily expands photovoltaic power businesses, wind power businesses and clean heat supply business and proactively explores other clean energy areas such as energy storage, distribution and sales of electricity and hydrogen production, in an effort to become a clean energy enterprise with leading position and differentiated competitiveness in the industry.

## PREFACE: CHAIRMAN'S STATEMENT

As at 31 December 2021, the total installed capacity of the power plants (including photovoltaic power and wind power) held and/or managed by the Group and in operation reached 3,540MW. The Group's actual clean heat supply area in operation reached approximately 49.67 million square meters, representing a year-on-year increase of approximately 70.4%. The number of clean heat supply service users was approximately 310,478 households, representing a year-on-year increase of approximately 36.1%. According to the national goals of "Carbon Dioxide Emissions Peak and Carbon Neutrality", we will continue to strengthen our own carbon emission reduction and carbon neutral strategy and planning research, and formulate the specific path and timetable for the group's carbon peak and carbon neutrality.

We continued to improve the management and control system, standardise internal management and stimulate organisational vitality. The Group strengthened the construction of cost and quota database, established a standard list of construction quantity and equipment and material price database, improved design and equipment technological standards, streamlined the procurement process and shortened the approval time, carried out the pilot project of hierarchical authorisation and independent procurement of operation and maintenance services, and further improved the efficiency of small and sporadic procurements. The Group adjusted and improved the meeting processes and rules of procedure, updated the projects' review and approval standards and negative list, formulated and improved

the project application template, improved the investment decision-making efficiency, and reduced costs and improved the overall operation efficiency. It designated finance BP of development and engineering, who will provide professional financial services based on business requirements to support middle and front office businesses; strengthened multi-dimensional trainings for employees, adopted the combination of "job rotation and concurrent post", and implemented "customised" cultivation programmes to maintain a vibrant talent team of endogenous growth and to further consolidate the team construction and the core talent pool; allocated HRBP to each department, deeply understood the need of talents for the business and strengthened the introduction of talents to support the business development.

We are always committed to building a strong line of defense against risks and stabilising the cornerstone of security. We have always placed safety management as the top priority. The Production Safety Committee of the Group (the "Safety Committee") carried out safety, quality and environmental supervision and inspection for the Group's projects on the project sites from time to time. The Safety Committee also regularly organised cultural building activities such as "Environmental Management Promotion Month", "Occupational Disease Prevention Law Promotion Week" and "Production Safety Month"; carried out the three-level safety education and training for all employees in 2021 and the training of the newly announced *Production Safety Law of the People's Republic of China* in 2021, and established the regular supervision and management

## PREFACE: CHAIRMAN'S STATEMENT

mechanism that reviews each unit's fulfilment of safety responsibility, so as to enhance the safety awareness of all employees and to achieve a 100% passing rate of trainings. The Group participated in the compilation of *Standards for the Implementation of Production Safety Standardisation of Power Construction Enterprises* by the NEA and hosted the fourth draft review meeting, building up the Group's influence in the power construction industry.

Any future can be expected. Facing the development opportunities brought by the "dual carbon" ("Carbon Dioxide Emissions Peak and Carbon Neutrality") targets, the Group always keeps in mind the original aspiration of "promoting the revolution in energy production and consumption, building a clean, low-carbon, safe and efficient energy system", closely follows the "14th Five-Year" development plan of the industry, takes account of the development of each business, persistently promotes the clean energy development with photovoltaic power, wind power, clean heat supply and smart energy management service as the business core, and stays committed to becoming an integrated operator and provider of efficient, green, low-carbon and smart energy solutions with cutting-edge technologies, cost advantage, high-quality assets and solid operation in China.

On the road of chasing dreams, we will also continue to promote the construction of a community with shared future for mankind in the global village so as to benefit all mankind and future generations, forge ahead and write a new chapter to the development of BECE!

# PART 1: ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT OVERVIEW

## PART 1: ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT OVERVIEW

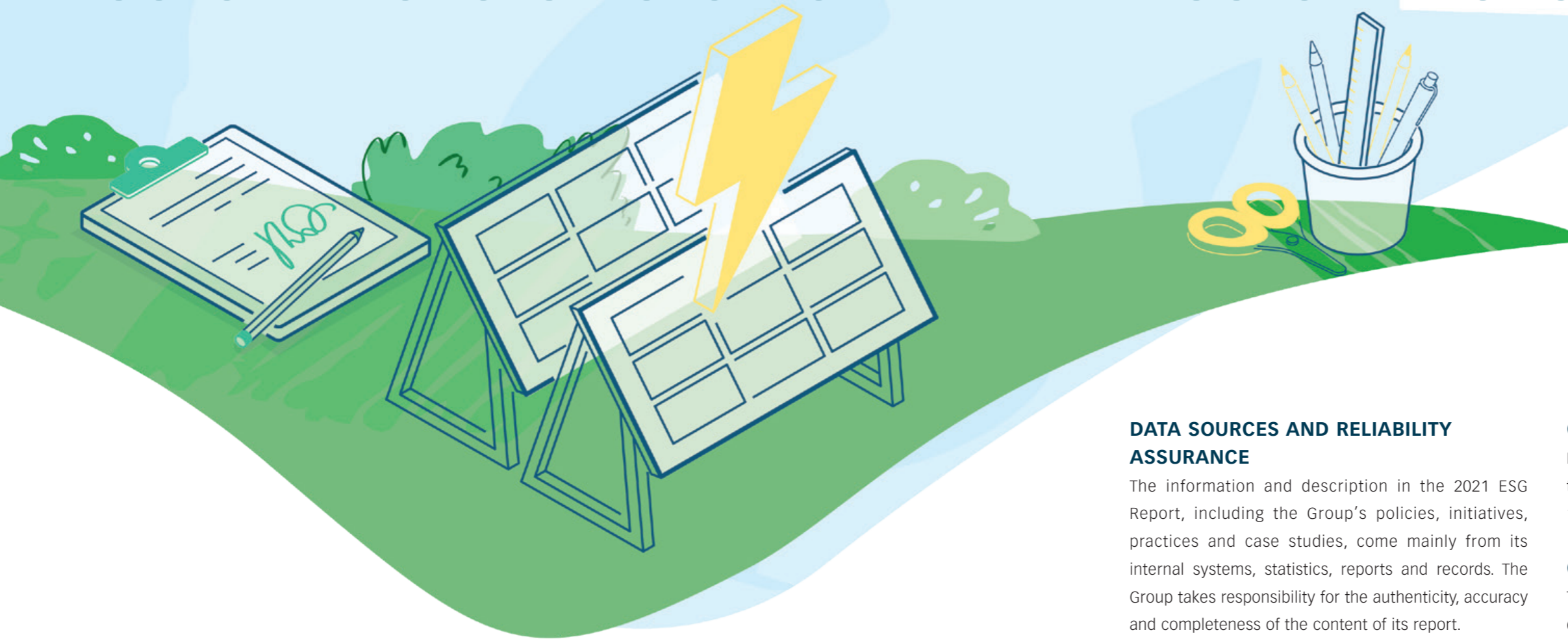
### ABOUT THIS REPORT

Beijing Enterprises Clean Energy Group Limited (together with its subsidiaries hereinafter referred to as “the Group”, “BECE” or “we”) has prepared this 2021 Environmental, Social and Governance Report (the “2021 ESG Report”) in accordance with the latest update of the Environmental, Social and Governance Reporting Guide (the “Reporting Guide”), which is contained in Appendix 27 to the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (“Main Board Listing Rules”) as stipulated by The Stock Exchange of Hong Kong Limited (“SEHK”). This report satisfies the “comply or explain” requirement of the Reporting Guide and incorporates a statement from the Board of Directors (“the Board”) and has followed the reporting principles of Materiality, Quantitative and Consistency as well as the Reporting Boundary in respect of collecting relevant materials, analysing data and reviewing information over the course of its preparation and compilation.

For details of the corporate governance practices of the Group, please refer to the Corporate Governance Report section on pages 43 to 57 of the 2021 Annual Report.

# PART 1: ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT OVERVIEW

# PART 1: ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT OVERVIEW



## REPORTING PERIOD AND SCOPE

This report focuses on the Group's environmental, social and governance ("ESG") policies, targets and initiatives relating to the investment, development, construction, management and maintenance of its photovoltaic power business, wind power business and clean heat supply business in the People's Republic of China ("China" or "the PRC") as well as the depth of integration of the corporate strategy and risk management within the organisation for the period from 1 January 2021 to 31 December 2021 (the "Reporting Period"). Unless otherwise specified,

the businesses covered by the policies, systems, representations and key performance indicator data in this report are consistent with the scope of its financial report.

The Group will continue to refine the key performance indicators and control systems for its ESG practices. In case of inclusion or deletion of topics in future reports, necessary data will be clearly explained and listed in the corresponding report accordingly.

## DATA SOURCES AND RELIABILITY ASSURANCE

The information and description in the 2021 ESG Report, including the Group's policies, initiatives, practices and case studies, come mainly from its internal systems, statistics, reports and records. The Group takes responsibility for the authenticity, accuracy and completeness of the content of its report.

## REPORT DISCLAIMER

The Board is accountable for the ESG strategy formulation and ESG reporting. This report is published in both Chinese and English versions. Should there be any discrepancies in any of the information, the Chinese version shall prevail. In case of any conflict or inconsistency between this report and the Annual Report, the Annual Report shall prevail.

This report is available for downloading on the website of the SEHK ([www.hkexnews.hk](http://www.hkexnews.hk)) and the website of the Company ([www.bece.com.hk](http://www.bece.com.hk)).

## CONFIRMATION AND APPROVAL

Following confirmation by the Audit Committee of the Board, this report was approved by the Board on 11 May 2022.

## CONTACT AND ENQUIRY

The Group is committed to continuously improving the quality of its ESG disclosures and is looking forward to suggestions from investors and other stakeholders. Our contact information is as follows:

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## PART 2: ESG STRATEGY AND OVERSIGHT



## PART 2: ESG STRATEGY AND OVERSIGHT

### ABOUT THE GROUP

Established amid global energy transition, the Group has become one of the leading companies in clean energy industry in the PRC over the past seven years, through acquisitions initially and investment in building new generation capacities more recently. As at 31 December 2021, the Group has a total of 3,540 megawatts (“MW”) on-grid capacity across centralised and distributed photovoltaic power projects and wind power projects under management and in operation, each with on-grid capacity of 2,252 MW, 700 MW and 588 MW, respectively.

The Group is committed to playing a pivotal role in the global economic transition to become less fossil-energy dependent and contributing to the Nationally Determined Contributions of the PRC. These manifest precisely our corporate values of “being responsible, having values and being sharing”. In 2021, the Group recorded an aggregate power generation of 4,774,654 megawatt-hour (“MWh”) from both photovoltaic and wind power projects, representing a year-on-year increase of 26%, which is equivalent to a reduction of 3,972,512 tonnes of CO<sub>2</sub>, representing a year-on-year increase of 28%, should the same amount of electricity be generated by coal-fired power stations.

# PART 2: ESG STRATEGY AND OVERSIGHT

## Centralised Photovoltaic Power and Wind Power Businesses held by the Group in the PRC as at 31 December 2021

### CENTRALISED PHOTOVOLTAIC POWER BUSINESSES

Our services have covered **16** Provinces, municipality and autonomous regions

Number of centralised photovoltaic power plants **51**

Approximate total on-grid capacity **2,186 MW**

Weighted average utilisation hours **1,259 HOURS**

Photovoltaic resource areas mainly located **AREA III**

### WIND POWER BUSINESSES

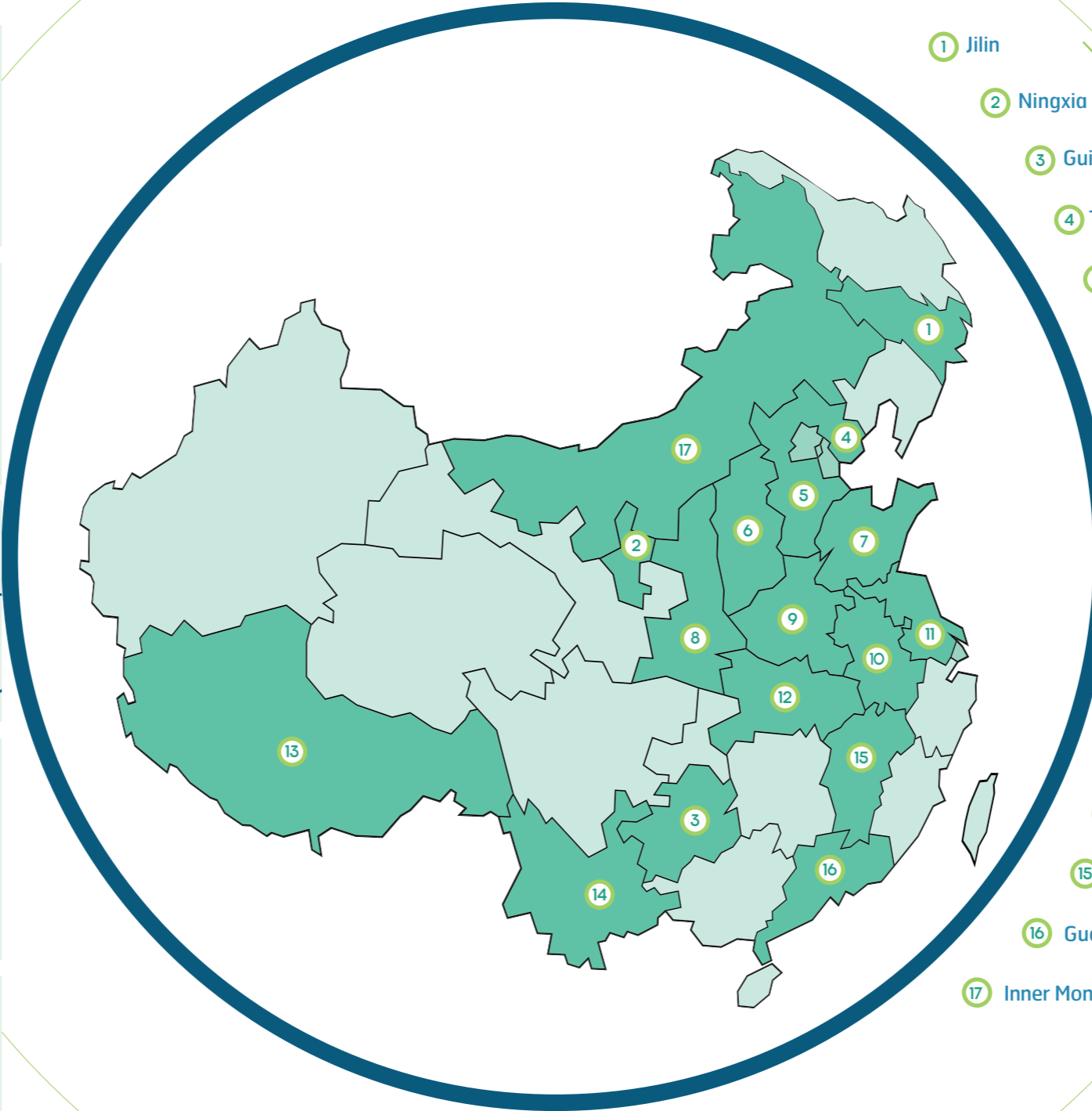
Our services have covered **5** Provinces and autonomous region

Number of wind power plants **13**

Approximate total on-grid capacity **588 MW**

Weighted average utilisation hours **2,902 HOURS**

Wind resource areas mainly located **AREA IV**



# PART 2: ESG STRATEGY AND OVERSIGHT

Locations	Centralised Photovoltaic Power Capacity	Wind Power Capacity
1 Jilin	30 MW	
2 Ningxia	100 MW	
3 Guizhou	211 MW	
4 Tianjin	30 MW	
5 Hebei	575 MW	100 MW
6 Shanxi	20 MW	50 MW
7 Shandong	248 MW	148 MW
8 Shaanxi	160 MW	
9 Henan	264 MW	171 MW
10 Anhui	191 MW	
11 Jiangsu	100 MW	
12 Hubei	70 MW	
13 Tibet	30 MW	
14 Yunnan	22 MW	
15 Jiangxi	125 MW	
16 Guangdong	10 MW	
17 Inner Mongolia		119 MW



## PART 2: ESG STRATEGY AND OVERSIGHT

In addition to photovoltaic and wind power businesses, the Group also supplies indoor heating to approximately 310,000 households in cities mainly located in northern China during winter, for a total clean heat supply area of 49.67 million square meters, representing an increase of 70.40% from last year. To date, there are a total of 14 heat supply projects in operation, six of them are projects by recovered industrial excess heat, four by natural gas-fired boilers and four by coal-fired boilers.

The Group's revenue in 2021 recorded a year-on-year increase of 8%, and Scope 1 and Scope 2 greenhouse gas ("GHG") emissions generated from corresponding business activities increased by 6% from last year. Nevertheless, GHG emission intensity was 247 tonnes, decreased by approximately 2.02% from last year.

## PART 2: ESG STRATEGY AND OVERSIGHT

### HONOURS

#### 1. Key honours and recognitions for the Year

##### i. Two wind power plants awarded 5A rating

In June 2021, Xianghetu wind power plant and Jinyuan Chaolu wind power plant (phase III) operated by 北控風力發電有限公司 (Beijing Enterprises Wind Power Generation Company Limited\*) ("BE Wind Power"), a subsidiary of the Group, were rated Grade 5A Enterprise by China Electricity Council.

##### ii. Appointed as the Secretariat for Carbon Neutrality Sub-committee under the Power & Energy Society of the Institute of Electrical and Electronics Engineers ("IEEE PES")

In October 2021, the IEEE PES established its Energy Development and Power Generation Technology Committee (China), among all, the Group was appointed the Secretariat for Carbon Neutrality Sub-committee. We commit to organising top-class technical exchanges and seminars to propel technical advancement and innovation, particularly in adopting academic achievements for applications.



# PART 2: ESG STRATEGY AND OVERSIGHT

## 2. Awards for the Year

Awards	Award-winning Unit	Award-winning Time
Special Contribution Enterprise in Project Construction in 2020	山西北控文水供熱有限公司 (Shanxi Beijing Enterprises Wenshui Heat Supply Company Limited*) ("Shanxi Wenshui")	February 2021
Establishment of Technical Centre in the City during 2020	Shanxi Wenshui	February 2021
National Grade 3A Enterprise of Production and Operation Indicators Benchmarking against Wind Power Plants	Chengkou Lusa Wind Power Plant operated by BE Wind Power	June 2021
Excellence Enterprise Award of Opening and Development in 2020	鄒城北控新能源有限公司 (Zoucheng Beijing Enterprises New Energy Company Limited*)	June 2021
Second Prize for the 1st Competition of Skill of Operation and Maintenance in New Energy	天津北清電力智慧能源有限公司 (Tianjin Beiqing Electric Smart Energy Co., Ltd.*)	June 2021
Third Prize for Legal Knowledge Competition Citywide	北控城市服務 (鄂溫克族自治旗) 有限公司 (Beijing Enterprises City Service (Ewenki Autonomous Qi) Company Limited*)	November 2021



# PART 2: ESG STRATEGY AND OVERSIGHT

## STATEMENT FROM THE BOARD

### Strategy and Approach

As a player in clean energy industry, we are deeply concerned that climate change resulting from global warming impacts steady crop yields that human lives rely on, induces multiple secondary disasters, widens systemic social inequality in wealth distribution and, together, threatens to fundamentally change the living condition and our global ecosystems. It is clearer than ever that the causation of global warming is drastically increased the emissions of greenhouse gases that composed largely of CO<sub>2</sub> from human economic activities over the last two centuries. Therefore, the economic growth powered by fossil fuel energy must be transformed to a growth model that runs on green energy from solar and wind primarily.

The modern energy structure and system of the PRC was outlined in the national 14th Five-Year Plan and Long-range Objectives through the year 2035, accelerating non-fossil fuel energy build-outs of centralised, distributed photovoltaic and wind energy infrastructures, with a target of non-fossil fuel energy reaching approximately 20% of the total energy consumption. In response to these national policies, the Group is keen to play its role as a renewable energy generator contributing to the country's energy transition by way of quality development in new project build-outs and improved operation and maintenance capabilities enabled by cloud technology and big data. Considerations to stakeholders' concerns and expectations are essential in our growth of scale and efficiency, with a view to achieving overall corporate reputation.

As photovoltaic power sector seeks to scale up its green energy build-out, the carbon-intensive manufacturing processes of solar panel in the upstream of the supply chain remain a concern. The Group acknowledges such situation and expresses its expectations to suppliers, when circumstances allow in its supplier appraisal process, to work towards decarbonising the whole supply chain. Despite the upstream carbon intensity challenges in the upstream of supply chain, from the perspective of the whole industry chain and photovoltaic power plants, the emissions of photovoltaic power generation throughout the lifecycle on the basis of 20 to 30 years, can mostly be offset within the first two years, on a rough calculation.

The Group also runs a clean heat supply business to address the inelastic demand from households in winter times, which has a strong social service nature. We follow steadfastly the principle of securing heating supply for residences and offices by all means, with a priority to adopting recovered industrial excess heat and other cleaner means of heat sources. In regard to coal-fired boilers, we stay fully compliant with all emissions requirements through continued improvement.

The Group's core values anchor on a strong sense of "being responsible, having values and being sharing", which align the corporate proposition and the mindsets of all staff, and underpin how we conduct ourselves as a corporation and individuals. In the context of sustainable transition, such long-standing values are proven foundation to propel us navigating further, together.

# PART 2: ESG STRATEGY AND OVERSIGHT

## BECE's core values



### Being responsible

It represents BECE's firm commitment to nature, human, society and green development!

It takes courage to undertake responsibilities. Only when we are responsible can we stay true to our mission and create value; can we rise to the difficulties and face the challenges; and can we fulfil our commitment and take responsibilities for results. Only when we are capable of taking responsibilities can we lead our teams to overcome all obstacles; can we help our organisation to realise leapfrog development; and can we lead ourselves to stay at the cutting edge of the industry.

### Having values

It represents the delicate balance BECE draws between social impact and economic results, as well as the alignment of individual goals with organisational aspirations!

Having values guides us to achieve corporate value creation in the context of social wellbeing. We contribute to the protection of blue sky and green water for our society while producing economic results as a company, create value in both social benefit and economic benefit. It effectively helps align personal value with organisational value. We create value in a mutually enabling way to achieve both sound business development and personal growth.

### Being sharing

It represents the openness and generosity that BECE holds with all stakeholders!

Reciprocity is underpinned by the genuine trust of and from partners, the company and teams to mutually share resources, experiences and achievement. It takes an open and inclusive mind. It needs confidence and honesty, and, most importantly, embodies the wisdom of believing in collaboration.

# PART 2: ESG STRATEGY AND OVERSIGHT

## Risks and Opportunities

We are aware that climate change brings physical risks to our operations, including supply chain disruption, wind and solar resource volatility, damages made to energy generating and heat supply facilities by climate disasters, and demand fluctuations in heat supply induced by extreme weather conditions, etc. The likelihood and degree of impact from such risks vary depending on the geographic location of our facilities and the industry characteristics we are in. The goal to limit global warming to 1.5 °C above pre-industrial levels as agreed by parties to the Paris Agreement has been adopted by the Task Force on Climate-related Financial Disclosures ("TCFD") as the baseline for scenario settings. The Group is in the process of reviewing multiple scenarios under the TCFD framework in an effort to crystallise corresponding physical risks and relevant impacts on our businesses.

### Physical Risks



1. Wind and solar resource volatility
2. Damages to energy generating or heating supply facilities by climate disasters
3. Demand fluctuations in heat supply induced by extreme weather conditions
4. Supply chain disruption resulting from shortage of materials upstream and natural disasters

During the changes in regulations and industrial policies, technological advancements and innovations and the growing market demand of shifting to a low-carbon economy, the Group faces transitional risks in business and operations but also opportunities, including investments to be channelled to low carbon sectors, and government policies to steer towards accommodating local consumption of clean energy with a gradual liberalisation of sales channels. We also anticipate major technological breakthroughs in energy storage over the next 10 to 15 years, which will redefine the renewable energy supply model. The improvement in solar conversion efficiency is expected to uplift the operational quality of future projects. In addition, the Group is looking forward to participating in a fully-fledged carbon market to monetise the carbon credits made available from our renewable energy generation to further grow our enterprise value.

### Transitional Opportunities



1. Investments channelled to low-carbon intensity sectors
2. Gradual liberalisation of sales channels for clean energy
3. Technological breakthroughs in energy storage to bring about innovative business models
4. Improvement in solar conversion efficiency to uplift operational quality
5. Value creation from participating further in carbon market

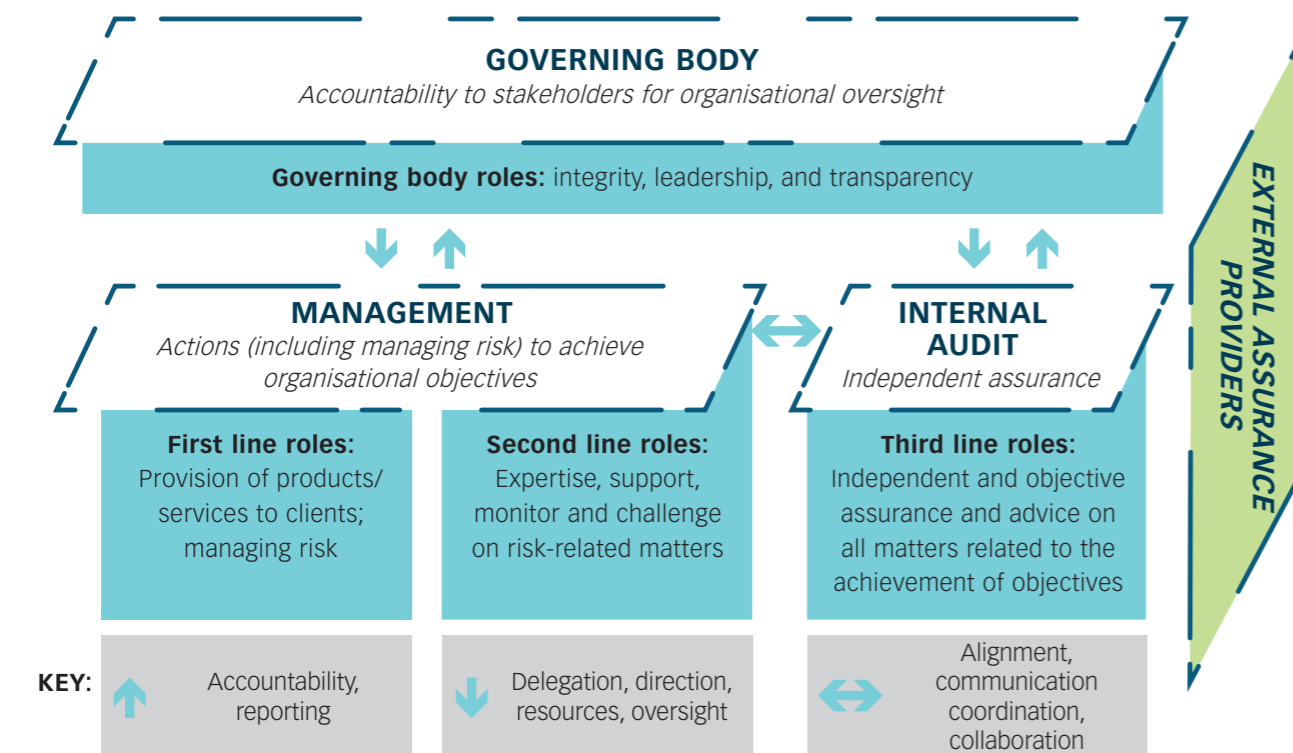
# PART 2: ESG STRATEGY AND OVERSIGHT

## Responsibilities and Oversight

The Board of BECE undertakes ultimate responsibility for the Group's ESG strategy and performance. The Board has delegated authority to the Audit Committee which is responsible for ESG-related matters through covering 11 authorised responsibilities under four major categories. They are: 1) Identify and establish ESG-related risks and opportunities, as well as impacts on businesses; 2) Formulate ESG strategy, approach and prioritised targets, with principles and processes for reaching them, and review relevant progresses made; 3) Integrate ESG into daily operations, in particular the risk management and internal control systems; and 4) Oversee the development and production of the ESG report required by the regulatory body. The implementation at cascaded levels of all ESG targets has been led by a cross-functional working group under the supervision of the Audit Committee.

In 2021, the Group upgraded its risk control management framework to a three-line based model (refer to the diagram below), clarified the role of the governance body, redefined responsibilities of each line, and made prominent the value creation goals and purpose of risk management. The Group carried out its risk assessment and identified 66 major risks from key businesses. A further prioritisation exercise was conducted with an outcome of top ten risks finalised, of which policy risk, corporate governance risk, resource security risk and human resources risk were ESG risks in nature. In addition, during the internal audit process, improvement in respect of production safety and employees interest protection are also defined as key topics.

### Three lines of risk management system



# PART 2: ESG STRATEGY AND OVERSIGHT

## Commitment and Goals to Sustainability

The Group had identified eight from the 17 United Nations' Sustainable Development Goals ("SDGs") in 2020, after taking into consideration the nature and relevance of its business. Such alignments propelled

our business activities ever since. In 2021, we conducted further assessment to add clarity to them, which are shown in the table below.

### Alignment with the UN's SDGs

Identified 8 SDGs	Goals	Aligning BECE's business with the SDGs	Report chapter
	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.	To provide rural population with jobs created from 1) dedicated poverty alleviation programmes; and 2) new project construction and operation.	Part 5
	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.	1) To provide basic and additional medical coverage and occupational hazardous insurance for employees; and 2) To ensure suppliers along the value chain to offer medical coverage for their employees and contract workers.	Part 5 Part 8
	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.	To contribute to a greener grid in the PRC by our business growth in photovoltaic and wind power generation.	Part 1 Part 5
	8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the <i>Ten-Year Framework of Programmes on Sustainable Consumption and Production</i> , with developed countries taking the lead.	During photovoltaic power and wind power plants planning phase, the Group produces high-quality environmental evaluation report, taking on-board environment recovery programmes as necessary. It always explores the opportunities to deploy lands beneath solar panels for agricultural purpose or local fishery. The project planning also covers environmental restoration initiatives following decommissioning of power plants with budgets required.	Part 5

# PART 2: ESG STRATEGY AND OVERSIGHT

Identified 8 SDGs	Goals	Aligning BECE's business with the SDGs	Report chapter
	<p>9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.</p>	To promote distributed photovoltaic power business, so as to support the building and infrastructure industry to achieve energy efficiency.	Part 1 Part 5
	<p>13.2 Integrate climate change measures into national policies, strategies and planning.</p>	To contribute to the PRC's "dual carbon" targets by growing our photovoltaic and wind power businesses.	Part 1
	<p>15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.</p> <p>15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.</p>	During photovoltaic and wind power plants planning phase, the Group produces high quality environmental evaluation report, taking on-board environment recovery programmes as necessary. It always explores the opportunities to deploy lands beneath solar panels for agricultural purpose or local fishery. The project planning also covers environmental restoration initiatives following de-commission of power plants with budgets required.	Part 5
	<p>16.2 End abuse, exploitation, trafficking and all forms of violence against, and torture of, children.</p> <p>16.5 Substantially reduce corruption and bribery in all their forms.</p>	<p>The Group commits to not involving or employing children and safeguards the interests of children. It also requires its suppliers to make similar commitments.</p> <p>The Group includes in its Corporate Code of Conduct its zero tolerance principle to corruption. A set of management measures and processes have been formulated and been put into operation, including a whistleblowing system.</p>	Part 4 Part 5 Part 8

# PART 2: ESG STRATEGY AND OVERSIGHT

## Green Finance Practice

The Group successfully raised two three-year syndicated loans that comply with the International Capital Market Association ("ICMA") and Asia Pacific Loan Market Association ("APLMA") principles for green loans, with an amount of approximately HKD2,340 million in April 2021 and approximately HKD2,730 million in March 2022, respectively. One of the aforementioned syndicated green loans was awarded as the "Best Transition Energy Syndicated Loan – New Energy/Transition Energy" at the Asset Triple A Sustainable Capital Markets Awards 2021. The proceeds raised are dedicated for the use of photovoltaic and wind power plants and other renewable energy projects under the Group's green finance framework, aligning with its commitments to sustainable development and technological innovation in energy production, in support of the low-carbon economy and 2060 carbon neutrality goals of the PRC. The Group has been operating a green finance working team for project screening and evaluation, applying the process of ESG risk identification and management as appropriate. The green finance team also takes charge of tracking the use of proceeds and producing reports covering the following: 1) eligible project names; 2) case studies on eligible projects; 3) green fund allocated to each eligible project and in total; 4) balance of the green loan; and 5) environmental performance of each eligible project.

## ESG Targets and Achievements

Governance:	Established Board oversight mechanism on ESG affairs
Environmental:	4,774,654 MWh of electricity output from both photovoltaic and wind power projects, equivalent to saving 1,445,792 tonnes of standard coal, reducing CO <sub>2</sub> emissions of 3,972,512 tonnes
Environmental:	Water consumption intensity reduced by 50.60% to 2.56 tonnes/10,000 square meters for clean heat supply business
Social:	Zero significant production-related accident or fatality

Laying down its annual targets for ESG in 2021, the Group has achieved a satisfactory result.

## PART 3: IDENTIFICATION, ASSESSMENT AND PRIORITISATION OF MATERIAL TOPICS

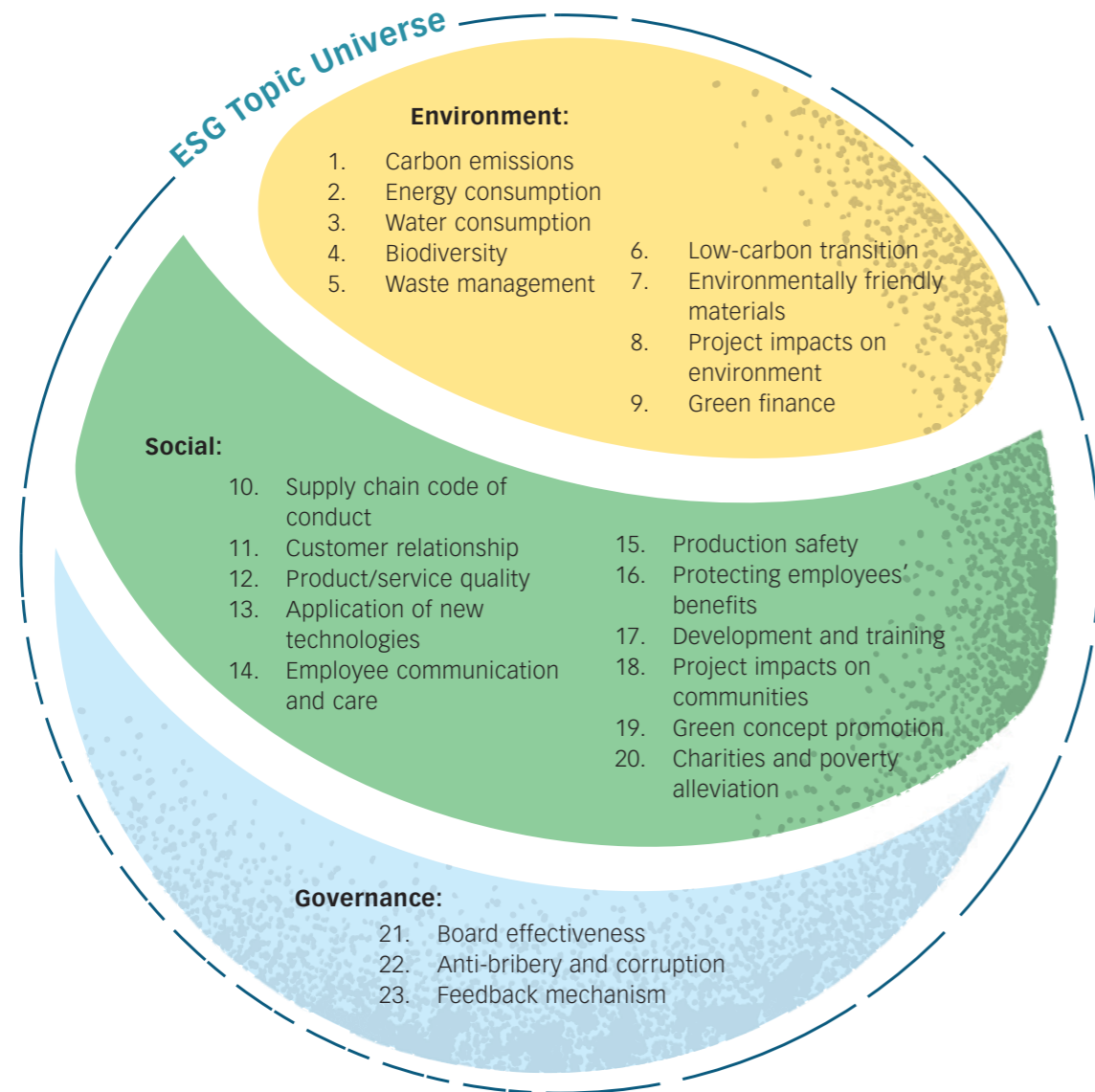
### PART 3: IDENTIFICATION, ASSESSMENT AND PRIORITISATION OF MATERIAL TOPICS

Maintaining positive relationships with all stakeholders founded on mutual respect and benefit are integral to an enterprise's success. We are well aware that the decisions we make in our daily operations may have varying degrees of impact on our stakeholders. We are, therefore, committed to engaging in constructive dialogues with our stakeholders, including end users, governments and regulatory bodies, customers, communities, investors, suppliers and employees through regular and dedicated channels, with the aim of better understanding their views and opinions and soliciting their comments and feedback.

#### **MATERIAL TOPIC IDENTIFICATION**

In 2021, the Group continued to engage and communicate with its stakeholders through channels detailed in the table below. References were made to 1) the material topics for the clean energy industry under the Sustainability Accounting Standards Board ("SASB") Standards; 2) the requirements stipulated by relevant regulatory bodies; 3) media coverage on ESG-related topics in the industry; 4) major events identified by business units and functional departments of the Group during the year; and 5) the results of the materiality assessment of the Group for the year 2020. With our findings from these processes, we compiled the Group's 2021 ESG topic universe, which comprises 9 environmental-, 11 social- and 3 governance-related topics over risks and opportunities. This year, governance topics were included.

# PART 3: IDENTIFICATION, ASSESSMENT AND PRIORITISATION OF MATERIAL TOPICS



Based on the aforementioned 23 topics, we communicated with various stakeholder groups through interviews and/or questionnaires and received 194 valid responses. Their topics of concern were hence gathered and compiled in the table below. In addition to these 23 topics, we received supplementary topics, namely ESG investments and emergency risk control. We will continue to observe the level of interest in these supplementary topics in our work and communication with all stakeholders in the coming year, which will serve as a basis for the topic universe expansion going forward.

# PART 3: IDENTIFICATION, ASSESSMENT AND PRIORITISATION OF MATERIAL TOPICS

## Stakeholder Interaction and Communication

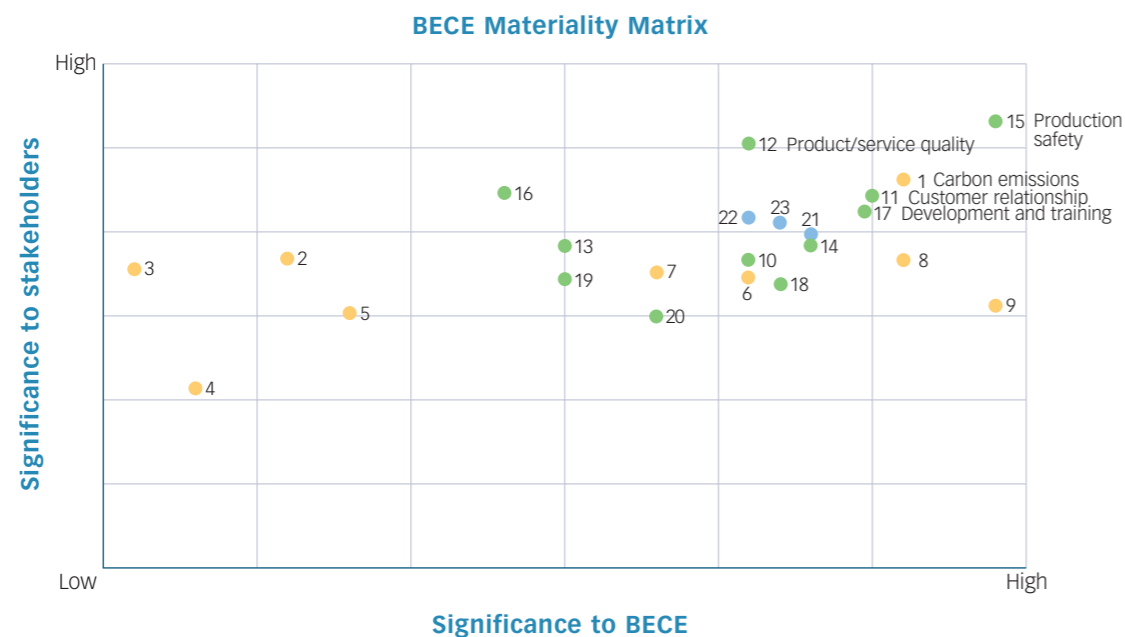
Stakeholder	Topics of Concern	Communication Channels
Employees	<ul style="list-style-type: none"> <li>• Carbon emissions</li> <li>• Energy consumption</li> <li>• Product/service quality</li> <li>• Production safety</li> <li>• Protecting employees' benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Face-to-face interviews with employees and suggestion boxes</li> <li>• Staff meetings</li> <li>• Internal training</li> </ul>
Shareholders/ Investors	<ul style="list-style-type: none"> <li>• Carbon emissions</li> <li>• Production safety</li> <li>• Board effectiveness</li> <li>• Anti-bribery and corruption</li> <li>• Feedback mechanism</li> </ul>	<ul style="list-style-type: none"> <li>• Annual General Meetings/Investor meetings</li> <li>• Results announcements</li> <li>• Public announcements/press releases</li> <li>• Project site visits</li> <li>• Corporate website/emails</li> </ul>
Governments/ Regulatory bodies	<ul style="list-style-type: none"> <li>• Carbon emissions</li> <li>• Product/service quality</li> <li>• Production safety</li> <li>• Protecting employees' benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Project inspection and acceptance</li> <li>• Information disclosures</li> <li>• Forums and seminars</li> </ul>
Suppliers	<ul style="list-style-type: none"> <li>• Carbon emissions</li> <li>• Energy consumption</li> <li>• Product/service quality</li> <li>• Application of new technologies</li> <li>• Production safety</li> </ul>	<ul style="list-style-type: none"> <li>• Supplier daily management</li> <li>• Supplier visits</li> </ul>

# PART 3: IDENTIFICATION, ASSESSMENT AND PRIORITISATION OF MATERIAL TOPICS

Stakeholder	Topics of Concern	Communication Channels
Customers	<ul style="list-style-type: none"> <li>Customer relationship</li> <li>Product/service quality</li> <li>Employee communication and care</li> <li>Production safety</li> <li>Protecting employees' benefits</li> </ul>	<ul style="list-style-type: none"> <li>Market surveys</li> <li>Complaint hotlines</li> <li>Questionnaires</li> <li>Customer visits</li> </ul>
End Users	<ul style="list-style-type: none"> <li>Product/service quality</li> <li>Application of new technologies</li> <li>Production safety</li> <li>Customer relationship</li> </ul>	<ul style="list-style-type: none"> <li>Company website</li> <li>WeChat official accounts/social media</li> <li>User hotlines</li> </ul>
Neighbourhood Communities	<ul style="list-style-type: none"> <li>Project impacts on environment</li> <li>Project impacts on communities</li> </ul>	<ul style="list-style-type: none"> <li>Assemblies of villager representatives</li> <li>Face-to-face communication</li> </ul>

## MATERIALITY ASSESSMENT

In accordance with the relevant requirements of Appendix 27 to the Main Board Listing Rules of the SEHK, the Group embarked upon its materiality assessment from both internal and external perspectives, amalgamating the expectations of stakeholders with the Group's own business strategies and priorities to draw up a materiality matrix for the year of 2021.



# PART 3: IDENTIFICATION, ASSESSMENT AND PRIORITISATION OF MATERIAL TOPICS

The results showed that material topics of high concern include production safety, carbon emissions, customer relationship, product/service quality, and development and training. These material ESG topics covering working concept, practices and performance were approved by the Board and are presented in this report under respective sections as the following table.

<b>Production safety</b>	Part 7: Integrate Safety into Daily Operations
<b>Carbon emissions</b>	Part 5: Safeguard the Dual Value of Clean Energy Generation Part 6: Dedicate Heat Supply to Ensuring People's Livelihood
<b>Customer relationship</b>	
<b>Product/service quality</b>	
<b>Development and training</b>	Part 8: Recognise Talent and Build Corporate Cohesion

As shown in the BECE materiality matrix, energy consumption, water consumption, biodiversity and waste management are the four topics of greater interest to external stakeholders of the Group. We are pleased to know that our stakeholders are much concerned about these environmental topics, which together with other environmental-related subjects, have long become an indispensable part of our daily operations. These four areas of work are also explained and reported in Part 5 and Part 6 of this report.



## PART 4: MANIFEST THE ESSENCE OF BUSINESS ETHICS AND CONDUCT

### PART 4: MANIFEST THE ESSENCE OF BUSINESS ETHICS AND CONDUCT

The Group strictly complies with all the applicable laws and regulations of the countries and regions in which it operates and actively practises and safeguards the market rules for fair competition. As a corporate listed in Hong Kong, we shall abide by the corporate governance rules as stipulated by the SEHK, including but not limited to corporate and financial information disclosures, approval or disclosure of connected transactions and inside information management, and formulate corresponding internal systems and monitoring mechanisms.

In the year of 2021, the Board commissioned external lawyers to provide trainings for all Board members on fund raising activities in the capital market, the public consultation on the review of *Corporate Governance Code* and the building of an anti-bribery and corruption culture. To ensure the compliance and efficiency of the Group's announcements and disclosures, consistent with previous years, the Company Secretarial Department of Hong Kong Headquarters conducted an annual training for all business units in December 2021 on the obligations relating to announcements for notifiable transactions under the Main Board Listing Rules. Clarifications of main types of transactions and related situations requiring public disclosures and/or announcement(s) were touched upon, covering topics such as connected transactions and inside information management as well as categories of financial subjects and the impact of their scales and thresholds on triggering announcements and other technical details, with the aim of enhancing the understanding and capabilities within the organisation pertaining to making public announcements.

# PART 4: MANIFEST THE ESSENCE OF BUSINESS ETHICS AND CONDUCT

The Group upholds honesty and integrity as its operating principles, and has made these a prerequisite for employment with all employees being required to sign the *Letter of Undertaking of Integrity* upon onboarding. Apart from the *Supervision and Management Ordinance* and the *Treatment and Punishment (Temporary) Stipulation for Supervision and Management* issued by the Group, the Group split the anti-bribery and corruption function from regular supervision work in 2021 and issued an upgraded version of the *Anti-bribery and Corruption Policy*. Anti-bribery and corruption programmes were carried out to heighten awareness and recognition companywide. In 2021, all Board members and employees of the Group participated in anti-bribery and corruption training.

## Case study: Promotion on anti-bribery and corruption

Throughout the year of 2021, the Audit and Supervision Department of the Group published a series of seven case studies on anti-bribery and corruption on its intranet, involving themes of position embezzlement, acceptance of commercial bribes and protection of trade secrets, etc.

- Issue 1: Internal control – company chop management
- Issue 2: Protection of trade secrets
- Issue 3: Fraud cases – position embezzlement
- Issue 4: Fraud cases – acceptance of commercial bribes
- Issue 5: Fraud cases – fund management among project partners
- Issue 6: Fraud cases – project construction and management
- Issue 7: Fraud cases – contract signing stages

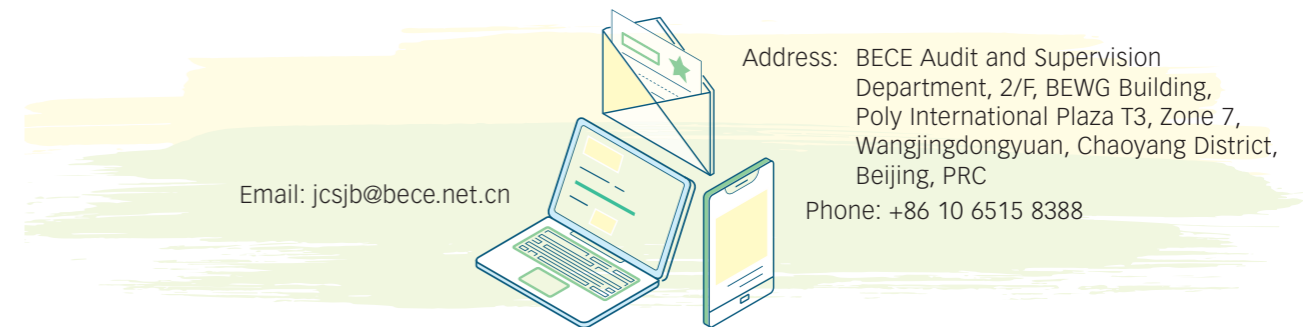


During the reporting period, the Group also fortified its *Whistleblowing Policy*, making explicitly clear about the rights and obligations of all employees and other stakeholders to monitor and report on existing or potential direct and indirect fraud, bribery and corruption acts as well as violations of important company policies. The Group further standardised its protection for whistleblowers in the *Whistleblowing Policy*, including the principle of confidentiality of

their personal information, in a move to protect them against unfair treatment from both the institutional and cultural perspectives. While the Audit Committee of the Group takes the lead in handling such reports, the Audit and Supervision Department is responsible for assisting in performing relevant duties. The Group encourages its business partners to establish and honour similar principles.

# PART 4: MANIFEST THE ESSENCE OF BUSINESS ETHICS AND CONDUCT

## Whistleblowing Channels



In 2021, the Group received a report from a stakeholder. We conducted a special investigation into the case in accordance with relevant policies and proceeded with internal filing and verification work. Based on the facts and evidence, the party concerned was dismissed from the company. To address the issues reflected in the investigation, we revised our internal systems and procedures and strengthened related internal communications and training in this respect during the year.

## Case study: Fairness and compliance management of procurement tenders

The Group has set up a tendering system for company procurement and put into practice relevant tender and procurement work according to the said mechanism and procedures. Founded on this basis, a supervisory and assurance function has further been developed for the Audit and Supervision Department to monitor and review the tendering and evaluation process with a view to identifying any bid-rigging, collusive bidding and other irregularities that would take place and putting forth suggestions for process rationalisation. Once a violation is constituted, the Group will penalise the bidder and/or business unit concerned depending on the severity of the incident. These range from dismissals, cancellations of monthly performance payments to reporting reprimands, etc., which help serve as effective safeguards for administrative discipline within the organisation to prevent and rectify any violation of laws and regulations.

The Group honours intellectual property rights and encourages technological innovation and transformation. Pursuant to the *Patent Law of the People's Republic of China*, the *Trademark Law of the People's Republic of China* and the *Copyright Law of the People's Republic of China*, the Group has in place a management system in respect of technological achievements and proprietary information, applying policies comprising the *Management System of Technological Work*, the *Management of Technological Achievements* and the *Management of Intellectual Property Rights*. The Technology Centre is in full charge of guiding, supervising and inspecting the patent protection work of each business unit as well as the risk assessment and filing of patent usages. During the reporting period, the Group was awarded more than 50 patents for its invention, utility modelling and design work from the China National Intellectual Property Administration. The Group's *Confidentiality Policy of BECE* standardises information management to prevent trade secret and data leakage. In addition to familiarising themselves with the confidentiality system, employees are required to sign a non-disclosure agreement governing that confidential information each has access to will not be made available to any unauthorised parties.

## PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

### PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

#### OVERVIEW OF PHOTOVOLTAIC AND WIND POWER BUSINESSES

The Group embarked on a low-carbon path to clean energy and built its power generation capabilities by way of acquisitions of photovoltaic power projects, and thenceforth wind power projects. To date, the Group has become one of the leaders in the clean energy field, offering vertically integrated services encompassing the development, construction and operation and maintenance of photovoltaic and wind power projects. As at 31 December 2021, the Group had 51 centralised photovoltaic power plants, approximately 200 distributed photovoltaic power plants and 13 wind power plants in operation. There were also 11 photovoltaic and wind power projects under construction and more than 500 MW approved-to-construct installed capacity. The Group has established its leading position and brand reputation in the clean energy industry, as shown by its growing scale and proven operational efficiency.

In 2021, the Group recorded an aggregate power generation of 4,774,654 MWh from both photovoltaic and wind power projects, representing a year-on-year increase of 26%, which is equivalent to a reduction of 3,972,512 tonnes of CO<sub>2</sub>, representing a year-on-year increase of 28%, should the same amount of electricity be generated by coal-fired power stations. This indicates that the Group has achieved meaningful value creation from the perspective of not only profit-yielding to shareholders but also impact-reducing to climate and environment.

# PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

## Production of clean electricity in 2021

Power type	Unit	Total power generation	Operation consumption	Power integrated into the grid
Photovoltaic power plants	MWh	3,380,668	27,503	3,353,165
Wind power plants	MWh	1,440,568	19,079	1,421,489

## Standard coal consumption and emissions savings equivalent

Type of reduction of standard coal and emissions	Unit	2021
Reduction in standard coal consumption	Tonne	1,455,792
Reduction in carbon dioxide emissions	Tonne	3,972,512
Reduction in sulfur dioxide emissions	Tonne	764
Reduction in nitrogen oxides emissions	Tonne	855

### Case study: Jinyuan Chaolu project wins grade 5A title

The Group's Jinyuan Chaolu wind power project is located at the Barun Industrial Park, Damao county in northern Baotou city of Inner Mongolia, with a total installed capacity of 30 MW. The project utilises local wind resources to generate electricity for the industrial park, enabling the companies and facilities on the premises to connect to clean energy. On 26 July 2021, this project was awarded as National Grade 5A Wind Power Plant by the Technology Development Service Center of the China Electricity Council, following a comprehensive evaluation process on power indicators and operational standards in accordance with the *Management Measures for Production and Operation Indicators Benchmarking against Wind Power Plants Nationwide*.

### Case study: Haixing "lead runner" base for photovoltaic power application – project no. 1 2017 – an integrated approach to saline-alkali soils

The Group turned 4,450 Chinese mu of saline-alkali lands into a photovoltaic power plant with a total installed capacity of 145 MW, which is situated in Xinji town, Haixing county, Cangzhou city in Hebei province. It is an example of effectively utilising natural resources on barren lands to yield economic and social benefits.

As our society marches ahead, the demand for energy is expected to see continuous growth. Photovoltaic power generation makes better use of natural resources and brings positive impacts on the environment. This plant is able to provide approximately 195,800 MWh green electricity per annum following its commissioning.

# PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

The power generation business of the Group includes the development, construction and operation and maintenance of power plants, which are at the downstream of the whole supply chain. We acknowledge there are carbon-intensive processes needed to manufacture solar panel components at the upstream of the supply chain. Keeping this in mind, we will constantly monitor the environmental and social impacts exerted by our suppliers, the evolution of industry policies and technologies, and stay in close communication with industry associations, upstream suppliers and regulators, with a view to further reducing carbon footprint across the whole industry.

The Group has identified key ESG challenges across all business units in its operation and developed a series of management principles and approaches, which are gradually evolved into formal internal policies. The table below sets out key ESG topics in the Group's power generation businesses in 2021. Each business unit will make adaptive adjustments annually in response to the changes in the external environment and the adequacy of internal resources.

## Key ESG-related work of power generation businesses



<b>Environmental</b>	Environmental Appraisal	Environmental management and monitoring during construction	Fire and rainstorm prevention and rescue*
		Construction noise and waste disposal management	Disposal of solid wastes and hazardous wastes
<b>Social</b>	Reaching agreement on land use	Oversight of contractors' delivery of their employees' benefits	
	Initiatives to improve local livelihood (e.g. roads projects)	Production safety and job creation for local communities	
	Employee skills training*, employee communication*		
<b>Governance</b>	Compliance approval	Supplier management	Safety operation compliance*
	Implementation of code of conduct*, corruption prevention*		

\* Please refer to related content in Parts 4, 7 and 8

# PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

## FOCUS ON BUILDING SUSTAINABLE BUSINESS ACTIVITIES

### Project Development

The Group's photovoltaic and wind power businesses shall abide by various regulatory requirements. During the site selection phase, centralised photovoltaic and wind power plants not only are required to conform to the relevant laws and regulations on environmental protection, water resources management and waste disposal (please refer to Appendix II), but also to take into account power industry policies and project lifecycle when conducting feasibility studies across eight areas, namely landform and terrain, hydrological conditions, surrounding environment, geological hazards, nature of land use, ecological redlines, administrative area division as well as military and cultural relics. The National Development and Reform Commission of the PRC clearly outlines the types of lands that can be deployed for the construction of photovoltaic and wind power plants. The likes of barren and deserted lands of deserts, gobi and tailings are prioritised, and agricultural and forested land areas outside of national ecological redlines are encouraged to re-deploy, especially for multiple land uses. The Group has formulated the *Provisions on the Administration of Environmental Protection and Water – Soil Conservation*, the *Measures for the Administration of Environmental Protection (For Trial Implementation)*, the *Procedures for Environmental Factor Identification and Evaluation Control (For Trial Implementation)* and other internal policies to guide and standardise relevant business activities.

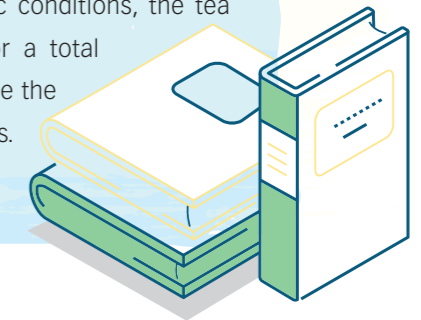
Another important task in the project development phase is to agree on the land lease either with local governments or the villagers through respective local governments. It is our genuine belief that we create job opportunities for local population and bring economic prosperity to local economies as we expand our business scale. We design our photovoltaic power plants as such that solar panels are elevated to allow for needed space and sunlight for farming (i.e. agrivoltaic model), taking into consideration the additional value of the land and the interests of farmers together with the efficiency of the power plants. When selecting sites for wind power plant, the Group strictly follows the legal minimum distance requirement of 400 meters, or more on voluntary basis if eco-conditions permit, away from the residential area so as to limit the impact of noise from wind turbine operation and prevent harms from tower-collapsing hazard.

In the year of 2021, the Group won the approval of building five photovoltaic power plants, of which all will follow the agrivoltaic model. This represents an aggregate installed capacity of more than 500 MW. Riding on the opportunity of land use evaluation, new crops were selected to suit the conditions of two photovoltaic power plants, located in Qifu town of Wannian county in Jiangxi province and Yangfanglin town of Tongshan county in Hubei province, bringing about positive changes to local farming and ecological environment.

# PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

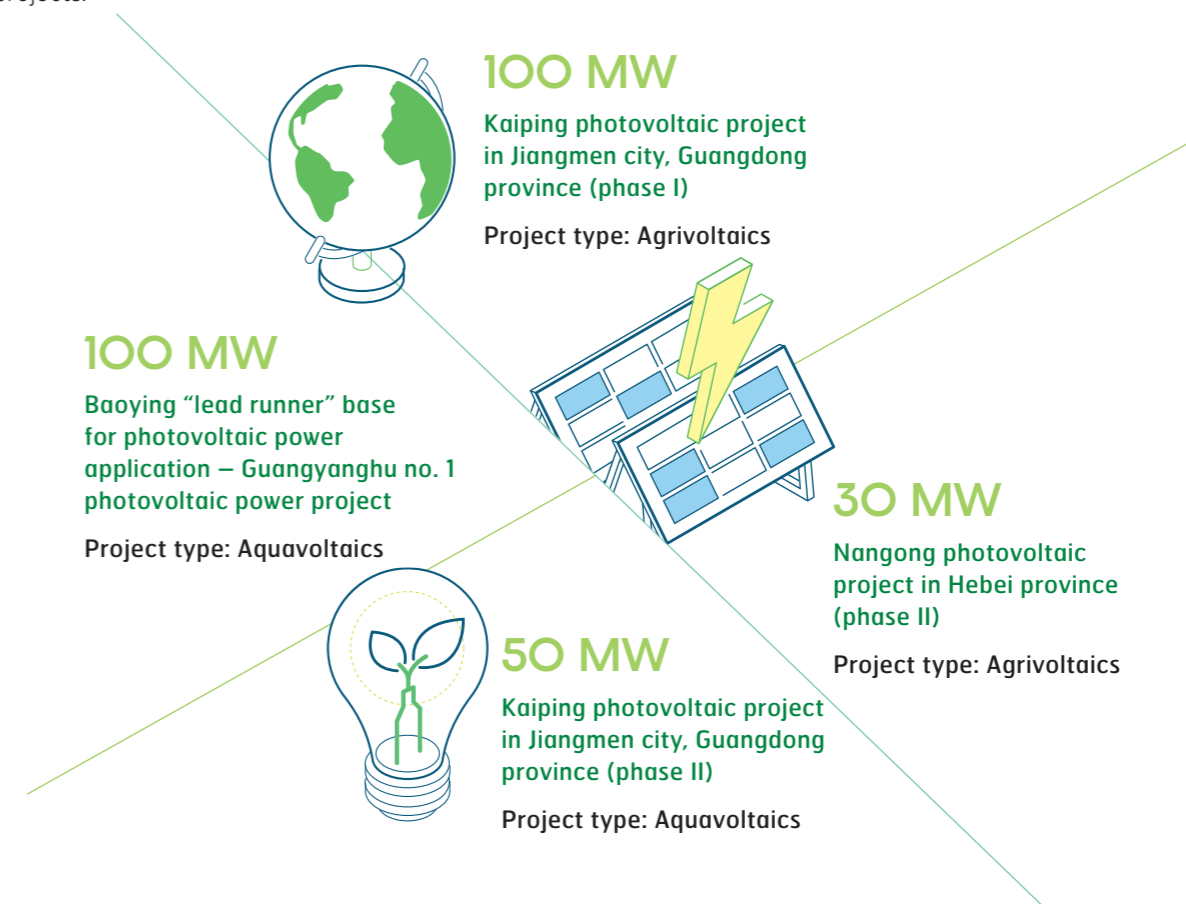
## Qifu 200 MW photovoltaic power project in Wannian county, Jiangxi province

The project area is primarily for general agricultural purpose and was used as a tea plantation before. Due to the sluggish local economic conditions, the tea plantation suffered financial losses and was scheduled for a total removal. Our project has created the opportunity to repurpose the land for building photovoltaic facilities and planting new crops.



## Power Plant Construction

Among the 11 projects under construction in 2021, two were agrivoltaics projects and two were aquavoltaics projects.



## PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

The construction of centralised photovoltaic and wind power plants involves soil excavation and backfilling, while distributed photovoltaic power plants are usually installed on building rooftops. Power plants need to deploy land for booster station to host the boosters, transformers, power distribution units as well as certain office areas. The booster station at Yangzhou aquavoltaic project in Jiangsu province, which was completed in 2021, adopted an indigenous architectural style and neatly integrated into the surrounding landscape, including restored vegetations and greening in and around the power plant and the booster station. The project has not only utilised the water resources and maximised the economic value of the lake, but also turned the site into a local sightseeing spot, opening up a new path for local development.



Yangzhou aquavoltaic project in Jiangsu province

The Group undertakes or outsources qualified contractors to build approved projects. We carry out or supervise the successful contractor from the bidding process, delivering project construction in strict compliance with all requirements specified in the legally-binding project approval documents. These include the environmental impact assessment report, water and soil conservation report, and multiple land use plan, etc. The likely hazards during construction, such as dust, noise and waste, are duly handled in accordance with all relevant laws and regulations, in particular from a safety management perspective. Five sign boards plus a comprehensive map (covering project overview, production safety measures, onsite ethical conduct, environmental protection, fire protection and security, as well as construction floor plan) are erected on the project site with complaint channels and hotlines also being clearly listed.

The Group has laid down the *Classified Management Catalogue of Environmental Impact Assessment of Construction Projects*, which requires construction projects to tackle different environmental challenges with specific approaches. Individuals charged with safety responsibilities are stationed onsite and weekly safety meetings are called to ensure that standard operation and security measures are implemented with strict discipline. Upon completion of construction, soil and vegetation restoration is performed, so does landscape engineering, all subject to inspection and confirmation by a third-party professional institution and local department of environmental protection.

## PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

### Power Generation, Operation and Maintenance

Photovoltaic and wind power plants rely on wind and solar resources for power generation. Over half of the power required to operate photovoltaic and wind power plant facilities is provided from self-generated electricity, and the rest relies on grid power. In addition to domestic water used by employees, water consumption is mainly for solar panel cleansing at the centralised and distributed photovoltaic power plants,

which is modest. Depending on local circumstances, water resources across a variety of means are drawn, including punching wells, water carts and municipal water supply. The Group has formulated the *Provisions on the Administration of Production Energy Consumption (For Trial Implementation)* and the *Energy Conservation and Emission Reduction Management System*, making energy conservation and emission reduction a part of daily operations.

### Electricity usage of photovoltaic and wind power businesses in 2021

Electricity consumption	Unit	Consumption of self-generated electricity	Consumption of grid electricity	Total consumption
Photovoltaic power plants	MWh	27,503	27,558	55,061
Wind power plants	MWh	19,079	15,495	34,574

Power plant equipment maintenance is jointly performed by the Group and related manufacturers based on the terms and conditions of the service agreements concerned. The equipment manufacturer conducts regular maintenance work, such as the replacement of solar panels or batteries. The replaced parts are collected and recycled by insurance companies and/or equipment suppliers. The replaced solid lubricants from the wind turbines are collected by the turbine manufacturers. We have in place internal policies, such as the *Provisions on Facility Maintenance and Disposal* and the *Provisions on the Administration of Hazardous Chemicals*, with established procedures for thorough implementation. There is no other pollutant discharged during our operation.

Our centralised photovoltaic and wind power plants in operation are located in 17 provinces, municipality and autonomous regions, with more than 500 frontline production and maintenance employees. In this respect, we spare no effort to improve communication frequency and methods with our team. We conduct team leader trainings to strengthen middle-level management capabilities and bi-weekly online trainings for all to share their experiences on problem-solving skills. With all these means, we have built strong cohesiveness and communicated a sense of care. In 2021, the operation and maintenance team organised a total of 24 bi-weekly trainings with over 500 participants each time. With the aim of continuously improving employees' professional standards and expertise, the training courses covered a wide range of subjects from procedures for electricity safety, power

# PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

transformers and safety measures, collecting line fault and troubleshooting, crown fire control measures, static VAR generator, secondary circuit of power system and electrical transfer switching operation, etc. In addition, we also arranged three "Captain" trainings and four team building programmes, bringing together operation and maintenance employees from across the country.



## DEEPEN SYNERGIES FOR QUALITY MANAGEMENT SYSTEMS

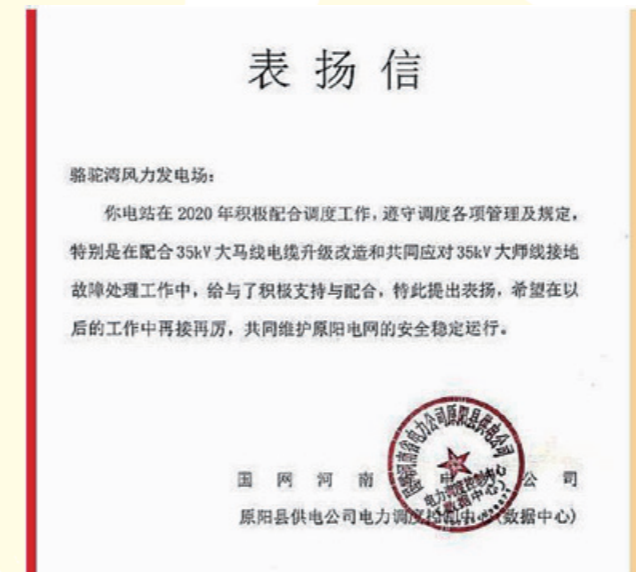
After more than twenty years of development, relevant core technologies of photovoltaic and wind power generation are seen to become mature. Nevertheless, the intermittency of wind and solar resources remains. Pertaining to the nature of photovoltaic and wind power generation, the Group brings in the grid companies as well as corporate clients for distributed photovoltaic power projects at the very beginning of the planning stage, collectively signing off on equipment configurations as appropriate for agreed power output and the voltage performance range, in addition to conformity to relevant industry standards. During the construction process, we perform in accordance with the *Wind Power Engineering Quality Process Standardisation Manual*, the *Photovoltaic Engineering Quality Process Standardisation Manual* and the *Project Quality Management System* to ensure quality. We follow closely the *Production Management Manual* and the *Equipment Management Manual* in power generation and facility maintenance. The Group is ISO 9001 and ISO 14001 certified for its quality management systems and environmental management systems, respectively, across the aspects of development, construction and operation and maintenance.

# PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

In daily operations, the Group keeps constant track of the changes in sufficiency of natural resources at the power plants, and generates and sends transmission power forecast/prediction data every 15 minutes to the local grid company from the system, to enable power distribution efficiency of the grid company. The level of accuracy achieved of these predictions is resulted from our operational efficiency and maintenance standards. The advanced solar power projection model is also instrumental in achieving high quality power forecast. The accuracy of short-term forecast is one of the most important indicators for grid companies in their appraisal of our services and quality. In 2021, the Group maintained the level of transmission power forecast accuracy above 90%, which was well in line with our clients' requirements. During the reporting period, we also received a letter of appreciation from the Electric Power Company of State Grid Corporation of China in Yuanyang county, Henan province, recognising the collaborative spirit demonstrated by Luotuowan wind power plant in supporting power distribution work.

## Case study: Second prize in an operation and maintenance competition organised by a business partner

In June 2021, Power China Guizhou Engineering Corporation hosted their first new energy operation and maintenance skills competition, consisting of hands-on experience, Q&A and tie-breaker questions. Our employees from the wind power plant located in Lingcheng county, Shandong province took part in the competition against seven other companies and garnered the second prize in the event.



# PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

The Group has formulated the *Customer Service Management Manual*, requiring all business units to respond timely to the feedback of and provide solutions to the customers, from respective businesses and within defined authorities. In 2021, most customer complaints were related to the distributed photovoltaic power plants for alleging rooftop leakage resulting from installation of panels. The project management company already followed up to address the disputes.

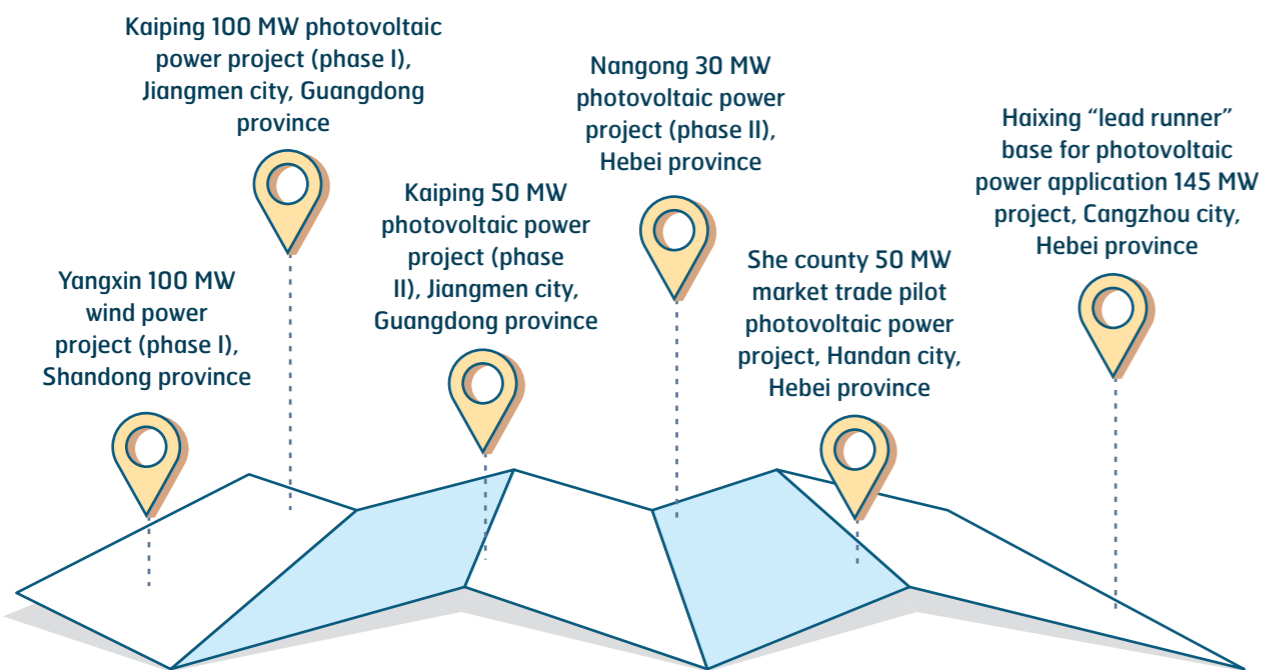
## EMPOWER HARMONIOUS COMMUNITY DEVELOPMENT

The Group is keen to build a trusting relationship with the communities, villagers, residents and local governments where it operates its renewable energy business, with a view to achieving mutual benefits throughout the whole lifecycle of the power plants.

As early as at the project planning and construction stages, the Group gives in-depth introduction to the project to local villagers, in an effort to reach mutually beneficial terms for the land lease. The project team, with the help from local government, often explains in detail how the land will be deployed and how the compensation plan is arrived at, before reaching a consensus with local villagers. After signing the lease contract, there are cases whereby our project team would visit the villagers to track the compensation payment status, accelerating procedures for timely remittance.

Among the Group's 11 projects under construction in 2021, six projects involved villagers as the principal party for the land lease. For all such projects, the project teams hosted assemblies of villager representatives to cover a variety of issues including land use compensation, land reclamation and new road building, etc. before reaching a final agreement.

### Six projects hosted assemblies of villager representatives



# PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

## Case study: Communication with villagers for Yangxin project

Yangxin wind power project is located at Yangxin county, Binzhou city of Shandong province. With a total installed capacity of 100 MW, the project has 32 wind turbines where each turbine occupies an area of 199 square meters, and a 220 KV booster station that spans an area of 11,000 square meters. The wind turbines and booster are located 400 and 500 meters away from the residential area, respectively, which are in line with relevant national and local regulations.

The project team hosted an assembly of villager representatives at the beginning of the construction to explain the macro trend of new energy, national policy of compensation on land requisition and the project's commitment to environmental protection.

The project team also reinforced that the relationship between the power plant and villagers would not end at the compensation agreements, rather, a long-lasting relationship for over 20 years. The team also promised to prioritise local hires for its construction, equipment maintenance, operation and maintenance of the power plant as a way to create more jobs and improve income. Our communication with local residents allowed us to proceed with the project smoothly.



Yangxin project case

Both parties signed the land lease agreement after the assembly of villager representatives. We had dedicated employees to follow up on related matters, including paying out regular annual compensation based on local standards and hiring local residents for the project.

## CULTIVATE HEALTHY SUPPLIER RELATIONSHIPS

The Group has four types of suppliers in the power generation business, namely equipment suppliers, accessory components suppliers, professional service suppliers, and engineering/operation and maintenance service suppliers. As at 31 December 2021, there were a total of 199 qualified suppliers. The primary equipment suppliers join every step of building the power plant, from equipment selection, power plant design, power generation performance testing to completion, before the commissioned project is handed over to the operation's teams who are further supported by such suppliers in continuously providing equipment maintenance directions and onsite services. The Group has formed an indispensable strategic partnership with its suppliers.

The suppliers of photovoltaic panels and components provide typically a ten-year quality assurance, which sufficiently covers a longer period of time where the equipment would maintain steady operation amid gradual power attenuation. The wind turbine suppliers would normally make guarantees in the contract following their assessment, for instance, certain key performance indicators such as the capacity utilisation rate of a single turbine and in aggregate of the plant, as well as the running hours of power generating units based on local wind speed. The suppliers' assurance on the equipment and our operation and maintenance efficiency have allowed us to achieve a high level of power generating capability.



# PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

## Qualified suppliers in the PRC in 2021

Number of qualified suppliers in all regions	199	100%
East China (including Shandong, Jiangsu, Anhui, Zhejiang, Fujian, Shanghai, Jiangxi)	85	42%
North China (including Beijing, Tianjin, Hebei, Shanxi, Inner Mongolia)	68	34%
Central China (including Hubei, Hunan, Henan)	17	8%
Northeast China (including Liaoning, Jilin, Heilongjiang)	5	3%
Northwest China (including Ningxia, Xinjiang, Qinghai, Shaanxi, Gansu)	11	6%
Southwest China (including Sichuan, Yunnan, Guizhou, Tibet, Chongqing)	5	3%
South China (including Guangdong, Guangxi, Hainan)	8	4%
Hong Kong, Macau, Taiwan	0	0%

The majority of our photovoltaic component and wind turbine suppliers are renowned companies in the industry, with leading production techniques and craftsmanship, and enjoy remarkable reputation about their product quality with ISO 9001 quality management system certifications. In order to keep up with the rapidly changing cutting-edge technology of photovoltaic products, the procurement and technical teams host regular monthly meetings with chosen suppliers discussing technological breakthroughs, industry standards and project progresses. This channel forms the backbone of effective communication with upstream suppliers to keep abreast of industry trends. In addition, our operations and maintenance teams also send core personnel to manufacturers for onsite trainings for the cultivation of new batch of technical experts.

### Case study: Field study trip at supplier site

From 24 to 30 October 2021, the Group's Operations Business Unit sent 42 operation and maintenance employees to the manufacturing base of Envision Energy for a professional training on wind turbines. It was a systematic training about wind turbines' mechanical system, doubly-fed induction generator, frequency converter, rotation axis, master control, hydrocooler and lightning protection, etc. The training has also raised the awareness of our employees with regard to safety operation, such as lifting for large parts, climbing the wind turbines, wind turbine evacuation and fire prevention.

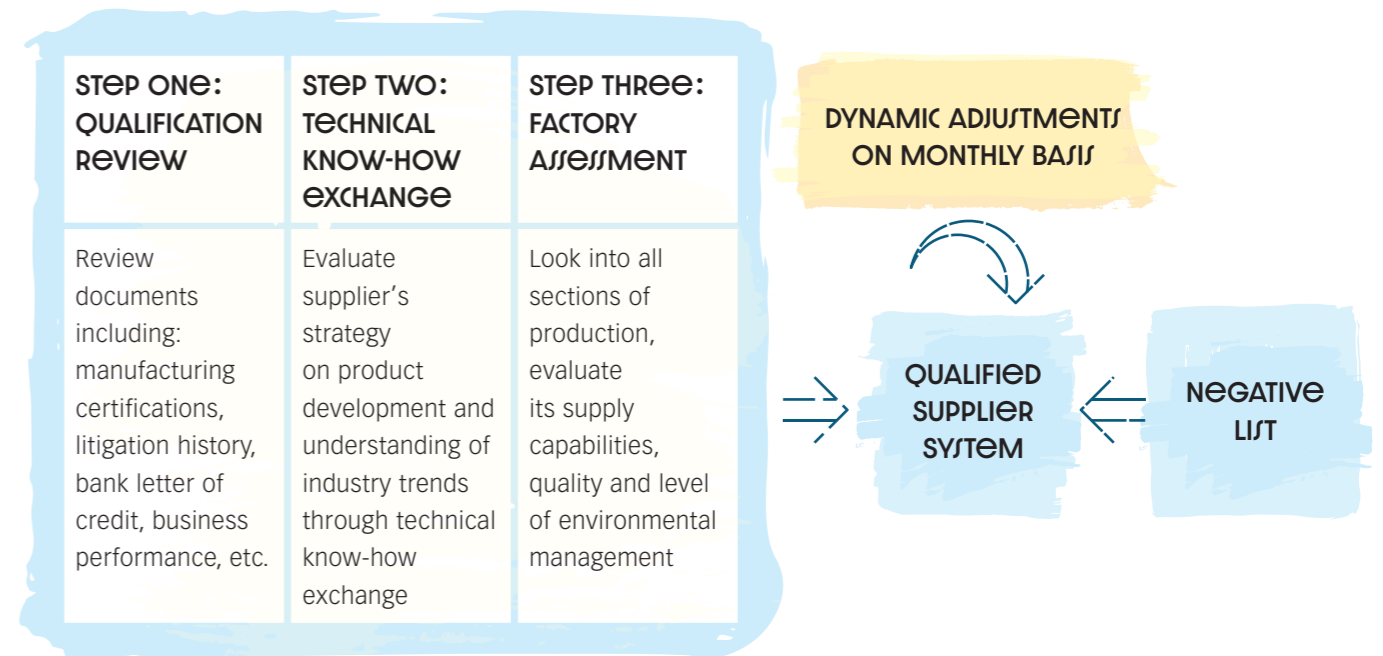


# PART 5: SAFEGUARD THE DUAL VALUE OF CLEAN ENERGY GENERATION

The Group has drawn up the *Supplier Management System* and the *Tendering and Procurement Management System for the Group*. Upon qualification review, technical know-how exchange and factory assessment, the Group will incorporate qualified suppliers into the system. For those who are already in the system and have collaborated with us, the Group conducts monthly review and feedback. With regard to major quality and safety production issues, as well as breach of trust and violations exposed via public channels, the Group has

developed a separate record. Depending on the severity of the situation, the Group would suspend the collaboration until the problems are resolved, or remove the companies concerned out of the qualified supplier system.

For major equipment suppliers, the Group either engages own staff or third-party agencies for on-site supervision of the production process, so as to ensure product quality, manufacturing compliance and timely product delivery.

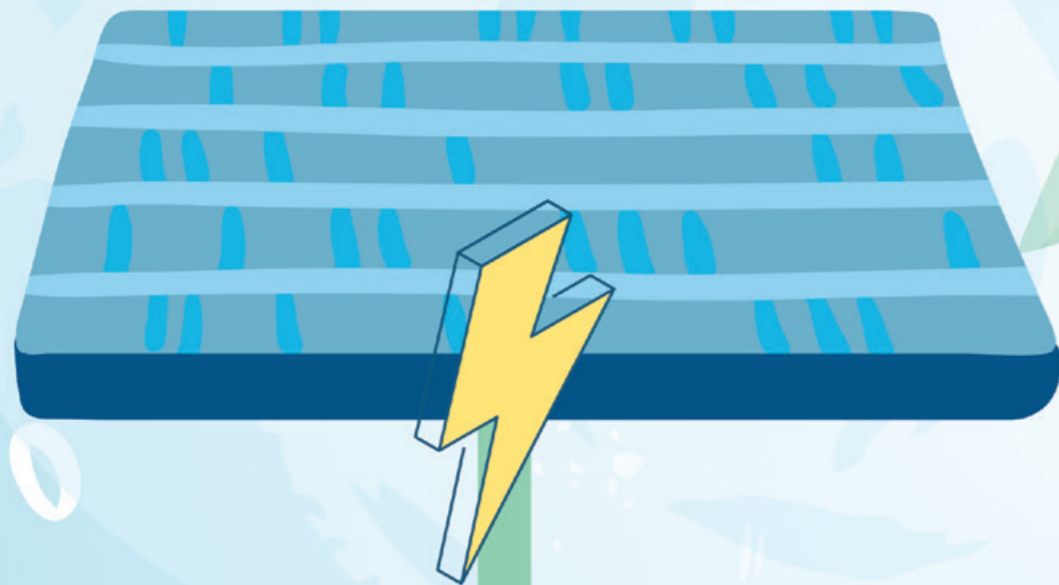


The Group upholds the corporate value of "Growing by Sharing", promotes sustainability development in the supply chain and aligns with the United Nations' eight sustainable development goals. During our regular communication and evaluation with suppliers, the Group incorporates environmental and corporate social responsibility elements and encourages key suppliers to acquire ISO 14001 environmental management system certifications and ISO 45001 occupational health and safety management system certifications. Suppliers are also required to deliver their anti-corruption commitments when entering into business

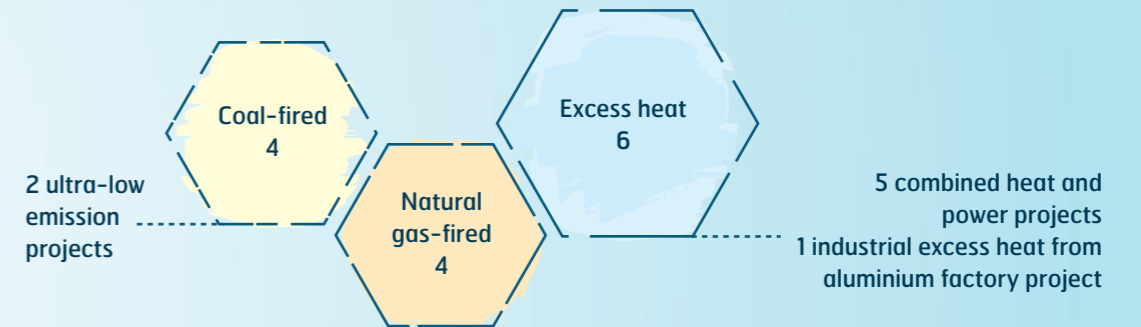
contracts. In the project management agreements with contractors, the Group requires that all suppliers shall not default on the wages of migrant workers, and shall provide necessary insurance, labour protection, welfare according to state regulations, as well as decent housing and living conditions at the construction site. Suppliers are also expected to maintain a healthy relationship with the local communities, and ensure environmental protection and water and soil conservation measures are taken in strict compliance with the project planning and relevant regulations.

# PART 6: DEDICATE HEAT SUPPLY TO ENSURING PEOPLE'S LIVELIHOOD

## PART 6: DEDICATE HEAT SUPPLY TO ENSURING PEOPLE'S LIVELIHOOD



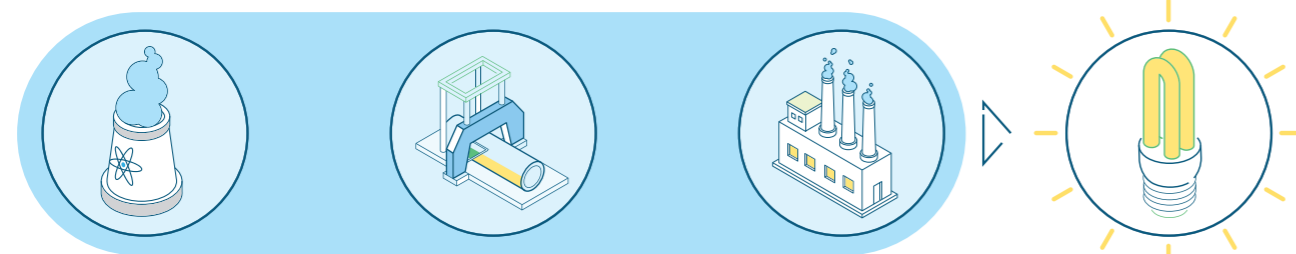
Heat supply in winter months is a rigid demand as well as a basic service to ensure the wellbeing of people residing in northern part of China. The provision of clean heat supply services of the Group offers a comfortable winter experience for approximately 310,000 households in Henan, Jiangsu, Shanxi, Shaanxi, Liaoning, Ningxia, etc. Upholding the primary principles of "Government Trust, Customer Satisfaction, Business Success, Employee Benefits, and Partners Win", the Group's clean heat supply businesses comprise mainly non-coal fired projects. To date, there are a total of 14 clean heat supply projects in operation. In terms of heat sources, six of which are of excess heat, four of natural gas-fired and four of coal-fired.



# PART 6: DEDICATE HEAT SUPPLY TO ENSURING PEOPLE'S LIVELIHOOD

Clean heat source and efficient transmission and distribution network are the two foundational pillars of the Group's clean heat supply businesses that ensure us to achieve environmental benefits. We prioritise excess heat type of non-emission, non-fossil fuel consumption projects when selecting heat sources. At the same time, we have gradually completed retrofitting the tail flues of our coal-fired boilers in order to meet the national requirements for ultra-low emissions. The high efficiency of the transmission and distribution network hinges largely on the rich experience and refined management methods of

the Group's operation and maintenance team. The team adopts a three-pronged management approach covering pipeline network, heat exchange station and users to tackle issues of evaporating, emitting, dripping and leaking, maintain highly efficient hydraulic balance and thermal performance, and ensure a comfortable user experience while maximising energy efficiency. Our operational objectives are to maximise energy efficiency, minimise environmental pollution, optimise safe use of heat energy, support low carbon and energy-saving buildings, and create comfortable indoor temperature.



## Low Emission Energy Sources

- Efficiently use low emission energy sources
- Low emission energy includes: natural gas, electricity, geothermal, biomass, solar, wind, air energy, power plant/excess heat, clean coal and nuclear energy

## High Efficiency Pipelines

- High efficiency in hydraulic balance and thermal performance
- Unmanned heat exchange station with secondary temperature adjustment feature
- Water loss under 1.5% in direct connection
- Water loss under 0.5% in indirection connection
- Pipeline temperature loss under 0.1 °C
- Hydraulic disturbances under 10%

## Energy Conservation in Buildings

- Building energy efficiency greater than 65%
- Coal consumption per square meter under 8.75kg

## Clean Heat Supply

- Maximise energy efficiency
- Minimise environmental pollution
- Safe use of heat energy
- Low carbon emission through energy conservation in buildings
- Comfortable indoor temperature

# PART 6: DEDICATE HEAT SUPPLY TO ENSURING PEOPLE'S LIVELIHOOD

## Case study: Protect the environment, benefit the people and upgrade the city – An excess heat recycling project in Jinzhou city, Liaoning province

In 2021, the Group completed a heat network project in Jinzhou unitising the excess heat of the power plant of China Resources Power (Liaoning). Through a 19 kilometers long supply-and-return, high-temperature and long-distance heat supply pipeline, excess heat from

power generation is managed to be distributed to Jinzhou city replacing the former winter heat supply model of relying on scattered small coal-fired boilers serving several households each, which was of low energy efficiency and high air pollution. The new model of centralised heat supply not only improves the local environment, but also brings forth immediate benefits to the people.

### The amount of excess heat recycled and emissions reduced in this excess heat supply project

Annual amount of recycled excess heat	Kilowatt-hours ("kWh")	450,567,287
Annual savings of standard coal	Tonne	55,344
Annual reduction of carbon dioxide emissions	Tonne	143,900
Annual reduction of sulfur dioxide emissions	Tonne	830
Annual reduction of nitrogen oxide emissions	Tonne	1,100
Annual reduction of ash and slag	Tonne	14,390
Equivalent to number of trees planted annually	Tree	3,024,000

## TIGHTEN CONTROL OVER COAL EMISSIONS

Pursuant to the *Emission Standard of Air Pollutants for Boilers* published by the Chinese Ministry of Ecology and Environment, and taking into consideration the local resources availabilities, the Group has utilised low-sulfur coal that generates lower air emissions for its coal-fired heat supply projects. Moreover, the Group conducts dust removal, desulfurisation and denitrification treatments to combustion emissions,

with the further support of ozone generator and molecular sieve oxygen generating equipment. These actions have helped reduce nitrogen oxide emissions in a considerable way. Our clean heat supply projects in Lingyuan county of Liaoning province and Cao county of Shandong province have both fulfilled the national standards for ultra-low emissions, which are on par with the emission levels achieved by gas-fired plants.

## PART 6: DEDICATE HEAT SUPPLY TO ENSURING PEOPLE'S LIVELIHOOD

The Group has particularly drawn up the *Detailed Rules of Coal Management (For Trial Implementation)* to facilitate the use of coal, regulating the aspects of purchase quantity, consumption amount, storage, quality appraisal and emergency measures, etc. It is required that fully enclosed containers shall be used during transportation and storage, buttressed with a sprinkler system to minimise dust pollution. Environmental matters during production are managed in strict compliance with the *Measures for the Administration of Environmental Protection (For Trial Implementation)*, which administers three specific areas of exhaust gas, solid waste and noise. Boiler emissions come under direct control of the Ministry of Ecology and Environment, where our flue-gas monitoring system shares real-time data with the government. In 2021, the Group did not exceed any permitted emission limits.

### Case study: Ultra-low emission heat supply project in Cao county, Shandong province

The project at Cao county has a heat source plant, over 30 kilometers of principle pipeline network, 75 heat exchange stations and 106 heat exchange units, providing heat supply to a population of 1.8 million in close to 70 residential communities in winter months.

In order to further cut down air emissions, the project has used ozone generator and molecular sieve oxygen generating equipment in addition to the existing denitrification process, reducing the concentration of nitrogen oxides significantly by 66%. Furthermore, the Group has put into operation a continuous flue-gas online monitoring installation which is equipped with an ultra-low range concentration analysis of such gases. Upon retrofitting, the boilers have comfortably met the national standards for ultra-low emissions.

The project has also equipped itself with an energy consumption monitoring system of heat supply and carried out corporate energy efficiency evaluation and energy consumption audit to further strengthen its management of energy efficiency. The project team received the "2021 Most Outstanding Organisation" award from the local government.



## PART 6: DEDICATE HEAT SUPPLY TO ENSURING PEOPLE'S LIVELIHOOD

In 2021, the clean heat supply business of the Group provided clean heat supply services to users spanning over a gross floor area of 49.67 million square meters. Our coal-fired and natural gas-fired projects use coal and natural gas as the main energy source, while a small amount of liquefied petroleum gas ("LPG") and diesel would be consumed when igniting the boilers.

The main air emissions are dust, sulfur oxides and nitrogen oxides generated from heating the boilers, and solid waste are boiler slags and coal ashes, which are handed to qualified agencies for treatment. The consumption of resources and emissions of the clean heat supply businesses for the year of 2021 is listed as below.

### Energy consumption of the clean heat supply business

Use of other fuel and resources	Unit	2021
Coal consumption of clean heat supply projects	Tonne	449,692
Coal usage intensity of clean heat supply projects	Tonne/Revenue (HKD million)	74.66
LPG consumption	Tonne	232
LPG usage intensity	Tonne/Revenue (HKD million)	0.04
Natural gas consumption of clean heat supply projects	10,000 Cubic Meters	4,768
Natural gas usage intensity of clean heat supply projects	10,000 Cubic Meters/Revenue (HKD million)	0.79
Consumption of purchased hot water of clean heat supply projects	Giga-Joule	5,105,482
Usage intensity of purchased hot water of clean heat supply projects	Giga-Joule/Revenue (HKD million)	847.61
Diesel consumption of clean heat supply projects	Litre	10,778
Diesel usage intensity of clean heat supply projects	Litre/Revenue (HKD million)	1.79

### Compliant discharge of air pollutants and non-hazardous solid wastes

Air pollutants and non-hazardous solid wastes of clean heat supply projects	Unit	2021
Dust	Tonne	29
Sulfur Oxides (SO <sub>x</sub> )	Tonne	155
Nitrogen Oxides (NO <sub>x</sub> )	Tonne	458
Boiler slags generated from clean heat supply projects	Tonne	64,860
Coal ashes generated from clean heat supply projects	Tonne	23,592

# PART 6: DEDICATE HEAT SUPPLY TO ENSURING PEOPLE'S LIVELIHOOD

The clean heat supply businesses provide heating to people with the aid of water, which is smartly used in replenishing leakage of the pipeline network during production and operation as well as when operating the boilers in coal-fired projects. Water replenishment consumes municipal water supply, which is often softened prior to being added to the heat supply pipeline network. Water leakage rate, which the Group manages to keep at a low level of 1%, is a key indicator

of the operational efficiency of the heat supply system. Water is also needed during desulfurisation, de-slugging and temperature reduction for the coal-fired boilers, all of which utilise only recycled water. There will be water evaporation in the process, but the vast majority of the water vapour will be cooled and recycled. There is no discharge of wastewater containing pollutants from such activities.

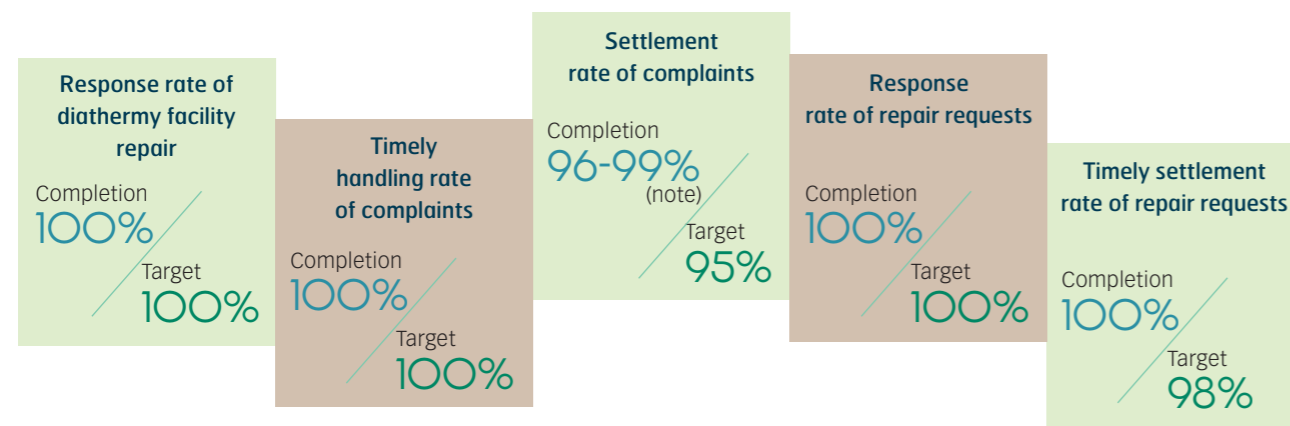
## Water consumption of the clean heat supply businesses

Water consumption	Unit	2021
Clean heat supply projects	Tonne	1,272,867
Water intensity	Tonne/10,000 Square Meters	2.56

## DELIVER USER-CENTRIC SERVICES

The Group's clean heat supply projects span across seven provinces and autonomous regions and one municipality. 80% of the users are city and town dwellers, and the remaining 20% are corporate clients in office buildings, hospitals and schools. Heat supply in winter is fundamentally important to people's everyday lives, for which reason local governments

have attached great importance to the service quality of heating supply. The authorities concerned have laid down specific requirements including the setting of a minimum temperature for heat supply at 18 degrees celsius as well as five indicators related to maintenance and repair.



Note: Heat supply season lasts from November to March of the following year.

# PART 6: DEDICATE HEAT SUPPLY TO ENSURING PEOPLE'S LIVELIHOOD

In addition to meeting all suggested targets by the authorities concerned, the Group pays particular attention to user experience and satisfaction and has formulated the *Provisions on the Administration of Customer Services (For Trial Implementation)*. An additional performance indicator measuring overall customer satisfaction is also introduced to assess our client work. Before the heat supply season starts, all of our service stations would organise regular events in local communities to promote common knowledge of heat supply, arrange replacements of heat units and set up payment desks nearby. These services not only offer convenience and facilitate information sharing, but also win the cooperation and support from the residents for our inspection and maintenance work.

The Group has set up three communication channels with customers, namely hotlines, online and offline service centres. We also publish announcements and receive repair requests, complaints and suggestions through the service platforms of local governments.

Customer service personnel receive business training on a regular basis to improve problem solving capabilities with a view to enhancing customer experience. In 2021, the Group conducted seven trainings for customer service staff and those in charge of payment handling. The trainings covered heat supply-related information (e.g. heat supply policy, fee standard, user responsibilities and repair specifications), code of conduct for customer communication and relevant procedures, etc. Customer service team is responsible for multiple evaluation indicators, such as promptness in answering calls, order dispatching, follow-ups and other

timeliness indicators, as well as proactiveness, service quality, customer satisfaction, government evaluation and other quality indicators.

Our customer service network is centred around the heat exchange stations and expands to the surrounding residential districts. A request for repairs is registered within 15 minutes and house visit for inspection takes place within 50 minutes. In case of emergency, technicians are expected to arrive within 15 minutes and contain the situation during the visit. The Group also conducts trainings on expressions and attire for maintenance service personnel. Upon completion of maintenance service, users are invited to fill out a *Maintenance Service Feedback Form* for service feedback. Moreover, depending on the severity of the issue and the scale of impact, the customer service team would arrange follow-up calls to actively seek customer feedback on the maintenance service provided. If new issues are identified during the call, another round of maintenance service will be scheduled accordingly. In the event that the second customer visit fails to achieve any satisfactory result, the case will be escalated and handled with particular attention.

The Group has incorporated customer follow-ups into routine work to track customer feedback and maintain a high level of customer satisfaction, which also serves as a basis of evaluating our customer service. In 2021, the clean heat supply business of the Group received 35,001 customer requests and reported a customer satisfaction rate of 98.89% based on follow-up work. During this year, there was no major interruption of heat supply caused by severe equipment damage or pipeline network accidents.

19,522 quality-related issues	3,288 service-related cases	12,191 other issues	Satisfaction rate based on follow-up feedbacks 98.89%
Non-compliant heat supply temperature Home/onsite testing, etc.	Heat units and valve replacement Other paid services	Business enquiries, emergency repairs, equipment maintenance, service complaints, etc.	

## PART 7: INTEGRATE SAFETY INTO DAILY OPERATIONS

## PART 7: INTEGRATE SAFETY INTO DAILY OPERATIONS

Production safety has a key role to play in helping support the robust business growth of the Group throughout the years. Upholding the principles of “Promoting Safety First through Preventive Measures and Integrated Governance”, the Group has strived to adhere to framework enhancements, system implementations and a well-qualified workforce to ensure it holds a strong position in safety management and evaluation.

In the year of 2021, China’s Ministry of Emergency Management promulgated an amended version of the *Work Safety Law of the People’s Republic of China*, which places particular emphasis on the formation of an accident prevention and early warning system with the building of a strong line of defence to eliminate any potential safety hazards as the core. Going in line with the revised laws and regulations, the Group has further strengthened its governance as per its own business orientation and achieved its annual targets of “zero serious injuries” and “zero local and municipal (and above) accidents and public safety incidents” across all business operations during the reporting period.

# PART 7: INTEGRATE SAFETY INTO DAILY OPERATIONS

## ENSURE COMPLETE POLICY FRAMEWORK

Power production and winter heat supply are among the most highly regulated sectors in China. The Group's daily operating activities shall strictly abide by the *Work Safety Law of the People's Republic of China*, the *Fire Protection Law of the People's Republic of China*, the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*, the *Special Equipment Safety Law of the People's Republic of China*, the *Regulations on the Safety Management of Hazardous Chemicals*, the *Measures for Regulating the Work Safety of Electricity*, the *Guidelines for Enterprises to Develop Emergency Response Plan for Work Place Accidents*, the *Basic Norms for Work Safety Standardisation of Enterprises*, the *Regulation on Safety Technology and Supervision of Steam Boilers*, the *Regulation on Safety Technology and Supervision of Heating Boilers* as well as other relevant laws and regulations. Grounded on this basis and combined with its own business model, operation and work characteristics, the Group has laid down a total of 24 safety management policies, rules and regulations, such as the *Regulations on the Management of Safety, Quality and Environmental Targets*, the *Regulations on the Management of Responsibility System for Production Safety*, the *Regulations on Fire Safety Management*, the *Regulations on the Inspections, Management and Governance of Safety Hazards*, the *Regulations on the Emergency Management of Production Safety Incidents* and the *Regulations on the Management of Photovoltaic Power Plant Safety and Equipment Signs*. These speak for the relentless efforts of the company to formalise all safety standards and

operating procedures in the project life cycle across project construction, operations management and daily maintenance to ensure an orderly operation of the whole safety system.

In 2021, in keeping with the updates of such laws and regulations as well as changes to the organisational structure and functions of the company, the Group also made adaptive additions and revisions to the contents of relevant policies and procedures internally. For instance, following the update of the *Guidelines for Enterprises to Develop Emergency Response Plan for Work Place Accidents* (GB/T 29639-2020), the Group's comprehensive emergency plans for production safety and special plans for traffic and fire protection at headquarters, etc. were revised accordingly.

In 2021, BECE participated in a project led by the National Energy Administration – the compilation of the *Code of Practice for Standardisation of Production Safety in Power Construction Enterprises*. Relevant work was completed in July 2021 and is expected to soon be published as an industry specification. Moreover, the Group actively participated in industry expert's level of safety and quality related work, striving to give full play to the positive influences of the company and employees in the industry.

# PART 7: INTEGRATE SAFETY INTO DAILY OPERATIONS

## DELIVER SYSTEMATIC EXECUTION Strengthen leadership and accountability

The Group's highest authority in respect of production safety management rests upon the Product Safety Committee (the "Safety Committee"), under which the Safety Committee Office is responsible for supervising and reviewing the performance of safety production duties by different business units and functional departments, as well as coordinating the inter-regional or functional work relating to production safety. In the year of 2021, adhering to the working philosophy of "Co-responsibility of the Party and Government, One Post Dual Responsibilities, Joint Supervision and Management, and Accountability for Dereliction of Duty", the Group refined the organisational structure of its Safety Committee and formed a leadership body composing the Chief Executive Officer, Chief Operation Officer and the Secretary to the Communist Party Committee of the Company, strengthening further the lineup of top executives to earnestly fulfil the spirit of collective accountability.

In 2021, the Safety Committee held four committee meetings, where it deployed and followed through the Group's key production safety undertakings. Hinging on seasonal conditions, the Committee also directed each of the business units to take precautions against and manage specific safety risks on a quarterly basis.

### Case study: Participating in major security project of the National Energy Administration

The Group is among the seven companies taking part in the compilation work of China's *Code of Practice for Standardisation of Production Safety in Power Construction Enterprises*.

Being an industry standard that regulates the safety of power construction of the country, the Code consists of eight first-level divisions, namely targets and responsibilities, institutionalised management, education and training, on-site management, operation safety, safety risk control and hazard identification and management, emergency management, incident management as well as continuous improvement. There are also 46 second-level sections and 111 third-level parts, covering topics such as workforce participation, safety information construction, job compliance, safety risk management, work permit and individual protection, etc.



# PART 7: INTEGRATE SAFETY INTO DAILY OPERATIONS

The Safety Committee conducts quarterly review on the performance of safety duties of each unit, which helps to form a normalised supervision and management mechanism and fortify the standardisation process of safety management within the organisation. For the sake of better implementing the responsibility system for production safety and promoting the safety management work through division of responsibilities for project management and task execution, the Group has a three-tier architecture for safety management with the Safety Committee being the top safety management body at the group-level. Furthermore, dedicated production safety management personnel are assigned at the level of business units across project planning, project construction, operation and

maintenance to take charge of safety-specific work. At the project level of each business unit, there are colleagues specialising in implementing daily safety work and performing supervision and inspection tasks.

The safety management architecture has seamlessly integrated into the entire business chain of "Investment, Construction and Operation". From the initial phase of project planning and investment, the construction process that comes after, to the ultimate phase of operation and maintenance upon completion, the Group has had in place sets of early warning and precautionary measures to act in response to different potential safety matters at different stages.



Safety priorities	Field visit for geospatial and climate data collection and analysis	Well qualified contractors	Flood control, fire prevention and weeding, abnormal weather
	Confirm impact on safety and quality	Construction safety	Electric shock prevention, working in confined spaces
		Fire protection, work at height	Equipment safety and maintenance
	Occupational safety in workplace, epidemic prevention and protection in workplace, emergency drills		

# PART 7: INTEGRATE SAFETY INTO DAILY OPERATIONS

## Safety and quality certification

Under the management principle of "Three Standards System", the Group has been persistent in building the environmental management, quality management and occupational health and safety management systems in tandem. In 2021, the Group was again certified with the ISO 14001:2015 environmental management system certification, the ISO 9001:2015 quality management system certification as well as the ISO45001:2018 occupational health and safety management certification. The scope of such certifications covers all clean energy projects (including photovoltaic power, wind power, heat supply and energy storage) encompassing investment management, project development, project construction, operations and maintenance.

## Practice of production safety

The Group endeavours to consistently foster better performance in the safety and quality spheres, applying itself to become a leading enterprise in safety risk management and accident prevention in China. Guided by the belief of "Managing Business and Managing Safety Share Common Responsibilities, Managing Production and Operation and Managing Safety Share Common Responsibilities", the Group actively solidifies its implementation of safety responsibilities, promotes a two-pronged preventive mechanism of tiered risk management control and hidden hazard inspection and management, and explores further development of emergency capabilities in a move to safeguard and ever improve the safety performance of the Group.

The Group has laid down the *Regulations on the Supervision and Inspection of Safety, Quality and Environment*, which sets a solid foundation for the supervisory and managerial line between the business units and the frontline sections and makes possible a thorough implementation of safety management

requirements at all levels without exception. Each of the projects (including the project companies and power plants) is required to carry out safety inspection and troubleshooting on both a regular and non-scheduled basis, and a comprehensive review at least once a month. In turn, respective business unit shall evaluate the project every quarter, with the results forming part of its regular appraisals. Furthermore, the Group will direct and conduct production safety checkups for various business units on a quarterly basis, including onsite inspections of key projects. The inspection team shall report on major safety problems within five days upon completion and require relevant units for immediate actions and regular feedbacks on their progresses made.

Likewise, we undertook our annual inspection and rectification exercise of hidden hazards in production safety companywide. From June to December 2021, we conducted in-depth investigations to ensure work safety at all units of the Group and managed a total of 566 safety hazards. Besides, we continued to carry out group-level safety supervision and travel to the project sites with major risks to perform inspections. A total of more than 70 spot checks of projects were completed and more than 600 safety hazards were identified and rectified.

In the face of challenges arising from abnormal weather situations in different seasons such as heat waves, heavy rainfalls, frequent typhoons and snow disasters, the Group not only has accelerated post disaster restoration and defect elimination to ascertain production safety, but also proactively developed extreme weather response plans and formulated corresponding measures for major risks. This forms a normalised response mechanism and helps reduce or even eliminate the probability of accidents.



# PART 7: INTEGRATE SAFETY INTO DAILY OPERATIONS

## TRAIN FOR ADEQUATE QUALITY Accident emergency plans and drills

While making efforts to implement production safety, the Group has also strived to enhance the development of its emergency management capabilities with a view to effectively handling various extemporary incidents to reduce the impact of such incidents and restore production at its best possible. To standardise the emergency responses to incidents concerning production safety, the Group has in place the *Regulations on the Emergency Management of Production Safety* Incidents and related regulations and established an emergency management system and response procedures that underscore strong leadership, vertical management accountability and systematic management. At the same time, the Group requires each business unit to conduct annual or semi-annual drills as per their own accident risk characteristics to strengthen emergency management.

During the “119 Fire Protection Publicity Month”, the Safety and Quality Management Department particularly compiled the “119 Fire Protection Publicity Training Course for 2021” in combination with the national and industry trends and fire protection management data. An online fire safety training was organised on 19 November 2021 with nearly 200 terminals participating in it via the cloud system. We also coordinated with each business units to carry out onsite fire safety hazard inspections and rectifications as well as accident emergency drills.



# PART 7: INTEGRATE SAFETY INTO DAILY OPERATIONS

## Staff operation and quality training

In view of the characteristics of occupational injuries in the power and heat supply industries, we have all along attached great importance to the possible personal injuries faced by employees when performing their duties in the workplace. We are committed to improving employees’ safety literacy from the two perspectives of operation norms and vocational training. Safety and quality are the two inseparable aspects of our provision of products and services to customers.

We have also specified positions that require certifications and developed corresponding training programmes to raise employees’ safety awareness, ensuring that they have the skills needed for work safety. In 2021, responding to the impacts of COVID-19, we carried out staff education and trainings companywide via both online and offline channels pertaining to our three-tier safety management structure, particularly courses on the *Work Safety Law*, the *Fire Protection Law*, the *Law on the Prevention and Control of Occupational Diseases* as well as quality management.



Staff Fire Safety Training

# PART 8: RECOGNISE TALENT AND BUILD CORPORATE COHESION

## PART 8: RECOGNISE TALENT AND BUILD CORPORATE COHESION



### FIGHT THE COVID-19 PANDEMIC

Multiple regions in the PRC faced a string of COVID-19 outbreaks as the pandemic lingered on in 2021. In view of this, the Group spared no effort to reinforce its health and safety protection measures for employees with four aspects on vaccination, protective gears, business travel specifications and working environment. The management team ensured all the policies were channelled down to every level. We encourage our employees to get vaccinated, provide them with infection prevention supplies including masks and sanitisers, and conduct temperature checks when they enter office areas. Business travel arrangements have also been adjusted to allow remote work. For those who have to travel, PCR tests are required pre-departure and after return.

### HIRING PRACTICES

The Group strictly abides by the *Labor Law of the People's Republic of China*, *Labor Contract Law of the People's Republic of China* and their implementation measures for recruitment, and established relevant internal policies to strictly prevent human rights violations such as child labour and forced labour. To specify the contents of employment contracts in mainland China and Hong Kong, the Group follows the *Social Insurance Law of the People's Republic of China*, the *Law of the People's Republic of China on the Protection of Women's Rights and Interests*, the *Regulation on Paid Annual Leave for Employees*, the *Measures for the Determination of Work-related Injuries* as well as the *Employment Ordinance*, *Minimum Wage Ordinance* and *Employees' Compensation Ordinance* of Hong Kong. The Group has also in place the *Measures for the Employment Administration*, *Measures for the Administration of Employee Performance Appraisals and Paid Leave* and the *System of Welfare and Allowances*, specifying competency-based recruitment standards, regardless of race, belief, gender, age and marital status, etc.

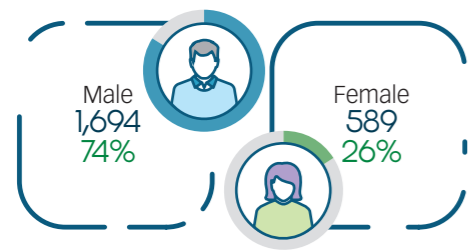
# PART 8: RECOGNISE TALENT AND BUILD CORPORATE COHESION

The Group follows a three-dimensional remuneration framework centred around contribution, work intensity and quality of work. In addition to showing our care for all employees with attractive benefit and welfare, there is also a strong competitive incentive system to facilitate business development.

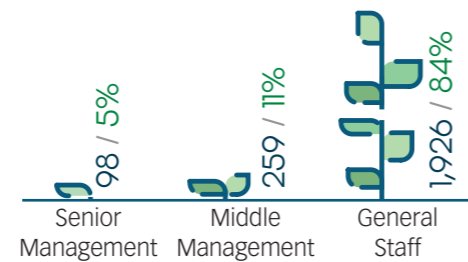
In the year of 2021, the Group made 192 hires in total at the Beijing headquarters, of which 29 were senior managers and/or management trainees, and 163 were operation and maintenance frontliners. The Group had a total of 2,283 employees as at 31 December 2021, with a employee turnover of 326 and a turnover rate of 14%.

## 2021 EMPLOYMENT OVERVIEW

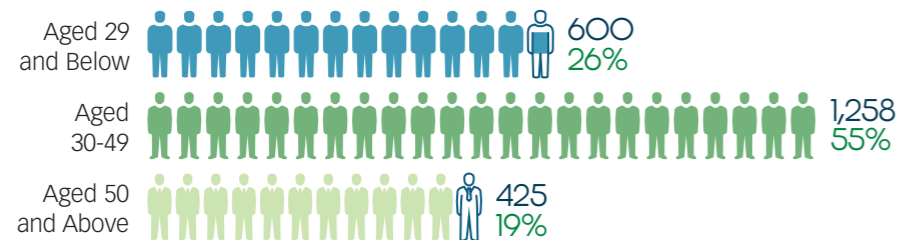
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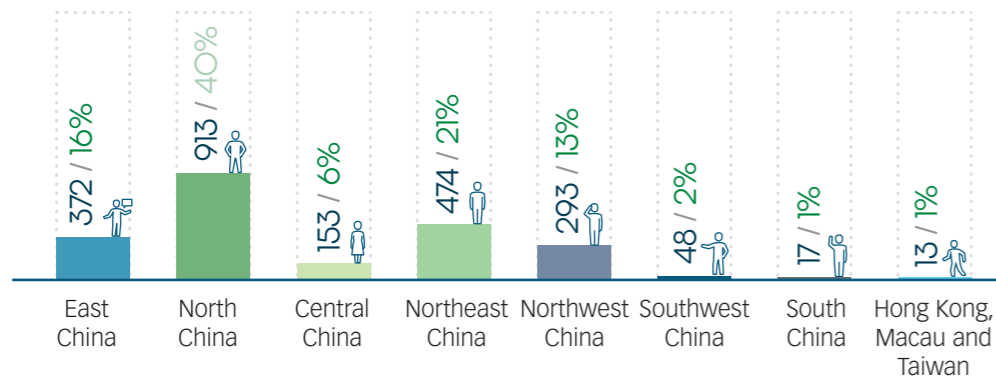
### BY EMPLOYMENT TYPE



### BY AGE

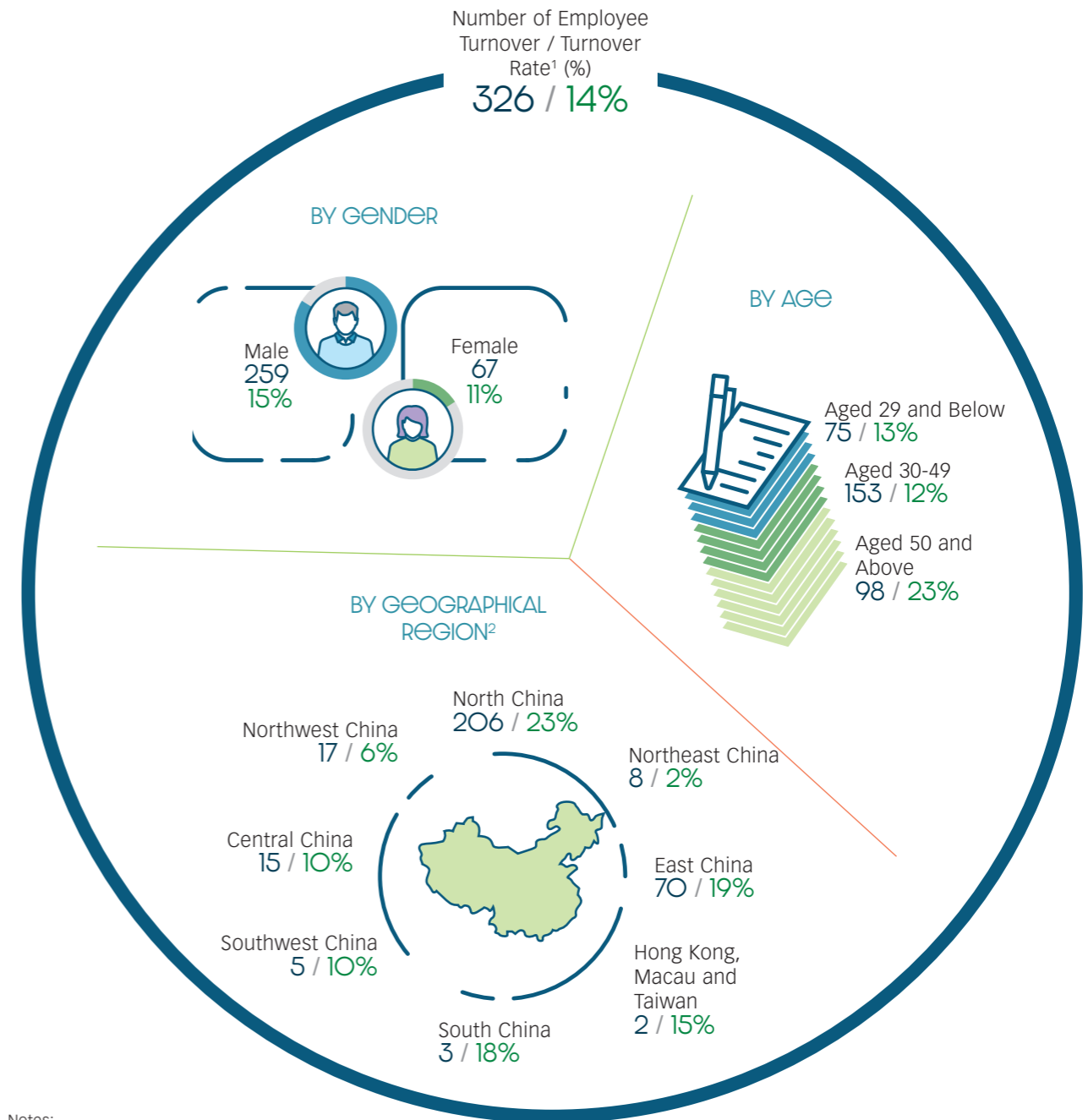


### BY GEOGRAPHICAL REGION<sup>2</sup>



# PART 8: RECOGNISE TALENT AND BUILD CORPORATE COHESION

## 2021 EMPLOYEE TURNOVER



Notes:

1. Turnover rate for each category = Turnover number in the category/Total number of employees in the category
2. East China covers Shandong, Jiangsu, Anhui, Zhejiang, Fujian, Shanghai and Jiangxi; Central China covers Hubei, Hunan and Henan; North China covers Beijing, Tianjin, Hebei, Shanxi and Inner Mongolia; Northwest China covers Ningxia, Xinjiang, Qinghai, Shaanxi and Gansu; Southwest China covers Sichuan, Yunnan, Guizhou, Tibet and Chongqing; Northeast China covers Liaoning, Jilin and Heilongjiang; South China covers Guangdong, Guangxi and Hainan.

## PART 8: RECOGNISE TALENT AND BUILD CORPORATE COHESION

### SAFEGUARD EMPLOYEES' SAFETY

The Group is mainly engaged in the power generation and clean heat supply businesses, with further encompassing centralised and distributed photovoltaic power businesses and wind power businesses. All of the power generation businesses and most of clean heat supply business of the Group are certified with the ISO 45001:2018 occupational health and safety management system certifications. Pertaining to the nature of the clean energy industry and the *Work Safety Law of the People's Republic of China* and other relevant laws and regulations, the Group has formulated the *Provisions on the Administration of Occupational Health*, the *Provisions on the Administration of Hazard identification and Risk Assessment* and the *Provisions on Labour Protection Articles*, taking into account of the aspects of risk identification, system operation, protection measures and regular trainings to ensure the safety and health

of employees in the process of participating in the production and operating activities. Furthermore, the Group has made relevant adjustments to its internal policies in accordance with the *Provisions on the Administration of Occupational Health at Workplaces* issued by the National Health Commission at the end of 2020.

When entering into employment contracts with job candidates, the Group is up-front about the nature of the power generation and clean heat supply businesses in relation to possible occupational hazards of certain positions, as well as protective and compensational measures. In addition to contributing to social insurance on behalf of the employees in accordance with the laws, the Group also provides medical and accident insurances and arranges for free annual health checks.

### Substantial increase in accident insurance coverages for frontline employees in 2021

- The coverages of two commercial insurance policies covering accidental death, disability and death caused by illness for operation and maintenance employees have increased from RMB100,000 to RMB300,000 and RMB200,000, respectively.
- The coverages of two commercial insurance policies covering newly added items of accidental death, disability, death caused by illness as well as critical illnesses for some managerial positions have increased from RMB100,000 to RMB200,000.

## PART 8: RECOGNISE TALENT AND BUILD CORPORATE COHESION

The Group conducts regular occupational health risk identification and assessment sessions based on the nature of different business units, and has compiled a list of occupational disease hazard factors especially with regard to avoiding electric shock, working in confined spaces and at height as well as injuries during construction projects, with a move to identify all hazard possibilities and develop preventive measures. We also organise promotional and educational activities on topics of occupational diseases on a regular basis to enhance employees' awareness about occupational disease prevention and health protection. The Group applies the same management policies to all dispatched labours, temporary workers and interns.

Over the past three years inclusive of 2021, the Group reported zero work-related fatalities or major injuries. However, there were two work-related injuries undergoing identification process, which led to a total loss of 155 working days in 2021.

Due to the nature of the power generation business, the Group's centralised photovoltaic and wind power plants are all located in remote areas while the wind power plants are manned round the clock by employees on work shifts. For this reason, the percentage of male employees has always been much higher than that of female employees. In 2021, the percentage of female employees, however, rose from 16% in last year to 26% in current year.

### RESPECT EMPLOYEES' RIGHTS AND INTERESTS

In September 2021, our Human Resources and Administration Centre conducted an employee satisfaction survey by way of interviews. 20% of the employees from the headquarters participated in the interviews which covered close to 100 topics such as compensation and welfare, performance incentive policy, promotion channels, professional training, corporate culture development, recruitment and information technology construction. In response to the major concerns about employees' interests reflected in the survey, including the performance review cycles and incentives, the Group quickly made necessary adjustments and enhancements accordingly. The *System for the Management of Employee Performance Appraisals* and the *Measures for the Administration of the Application of Employee Performance Appraisal Results* drawn up during the year will become effective in 2022, based on which employees' performance appraisal results will be systematically linked to salary adjustments, promotion, bonus distribution and talent echelon cultivation. The Management highly valued the survey and intended to have it institutionalised going ahead.

The Group respects and protects employees' rights and interests, as demonstrated in its confidentiality rules for personal information and privacy. Employee directory is not allowed to be shared externally. Prior consent must be obtained from the employee concerned and approval from department head or the Human Resources Department head should any personal information be shared with external parties. Employees can opt to disclose their annual health check reports to the Group at their own discretion.

# PART 8: RECOGNISE TALENT AND BUILD CORPORATE COHESION

## ENHANCE EMPLOYEE SKILLS

The Group has in place the *Training Management System* and a three-tier training architecture, namely induction training, professional and vocational training, and mid-to-senior level management leadership training. Benchmarking against trainings for management elite, the Group has developed various training models, optimised talent cultivation and employee development systems, and nurtured the echelon by heightening team cohesion. Led by the Human Resources Department of the Group, all departments have jointly developed the *Qualification System* setting out development plans, promotion pathways and standards, which has also been incorporated into the induction trainings.

In the year of 2021, the Group invested approximately RMB400,000 in employee trainings, including two elite training camps with approximately 120 participants in total, online learning platform “one book one class” activities with 40 participants; five induction trainings with approximately 270 participants in total; and specialised training on “Internet and vocational skills” for management trainees with 13 participants and approximately 530 hours of learning and assessment. We also organised 11 position rotations and part-time work involving ten departments. General staff of the Group received an average of 56 hours of training per person in 2021.

### Case study: Elite Training Camp

In January 2021, the Group invited Leo Moo Management Consulting Firm to conduct a seminar on “Benefits from Management: Human Resources Management for non-HR Managers”, diving deep into how to become a manager who manages both things and people with a series of real-life and case studies. In addition to members of the Elite Training Camp, recently promoted employees and management trainees were also invited to sit in to learn about human resources management. It is unanimously agreed that business success relies on managing things, but only with managing people can we bring out the strength of the team and thrive in the long term.

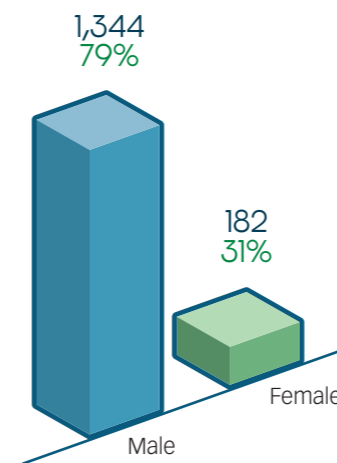


# PART 8: RECOGNISE TALENT AND BUILD CORPORATE COHESION

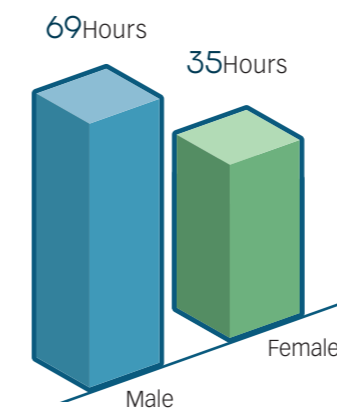
## Number of employees trained and training time recorded in 2021

### EMPLOYEE TRAINING

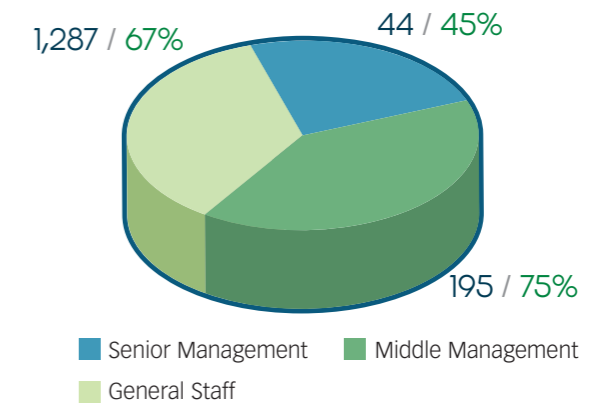
NUMBER OF EMPLOYEES TRAINED/TRAINING RATE (%) BY GENDER



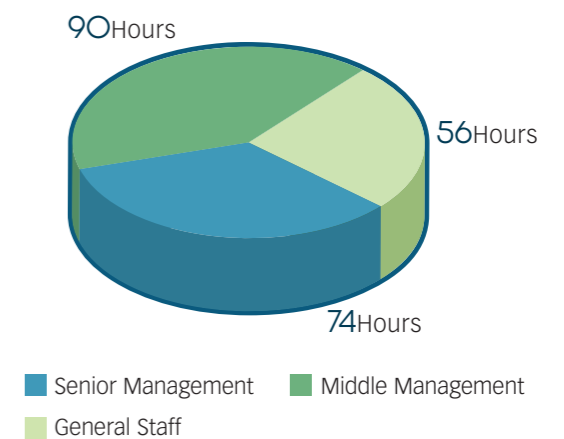
AVERAGE TRAINING TIME BY GENDER



NUMBER OF EMPLOYEES TRAINED/TRAINING RATE (%) BY LEVEL



AVERAGE TRAINING TIME BY LEVEL



# PART 8: RECOGNISE TALENT AND BUILD CORPORATE COHESION

## CONTRIBUTE TO LOCAL COMMUNITIES

Pertaining to a business nature that benefits locals and protects the environment and a purpose to serve the people, the Group donated a total of HKD12.57 million

in 2021 to the local communities where our 14 projects across six provinces are located to help in alleviating poverty.

### Case study: Fengning power plant further made donations for relieving poverty

This project, with a total installed capacity of 50 MW, is located at Fengning Manchu autonomous county, Chengde city, Hebei province. By taking on the responsibility to tackle poverty, the project created jobs and helped drive the growth of the construction materials, transportation, equipment manufacturing and service sectors locally. In 2021, the Group further donated RMB7.2 million to support poverty alleviation efforts in Fengning.

### Case study: Xuanhua power plant in full support of poverty alleviation

In addition to power transmission and allocation, our 20 MW centralised photovoltaic poverty alleviation project in Xuanhua district of Zhangjiakou city, Hebei province also connects to the nearby substation in Guo village, enabling power consumption in the vicinity and providing renewable energy to the local communities.

Ever since its construction stage, the project has helped to foster the development of the local building materials industry, create employment opportunities and improve the livelihoods of local people. In 2021, the Group donated RMB2 million to continue its assistance in local poverty alleviation.

# PART 8: RECOGNISE TALENT AND BUILD CORPORATE COHESION

November 2021	November 2021
<p>To support local efforts in combating COVID-19, 寧夏永恆能源管理有限公司 (Ningxia Yongheng Energy Management Company Limited*) donated the following supplies to the Bureau of Housing and Urban-Rural Development in Xingqing district of Yinchuan city:</p> <ul style="list-style-type: none"> <li>- Protective clothing</li> <li>- Instant cup noodles</li> <li>- Mineral water</li> <li>- Disinfectants</li> </ul>	<p>北控城市服務(鄂溫克族自治旗)有限公司 (Beijing Enterprises City Service (Ewenki Autonomous Qi) Company Limited*) made the following donations to the citizens of Manzhouli city:</p> <ul style="list-style-type: none"> <li>- Instant noodles</li> <li>- Milk</li> <li>- Mineral water</li> <li>- Medical masks</li> <li>- Alcohols</li> <li>- Hand sanitisers</li> <li>- Protective clothing</li> <li>- Disinfectants</li> </ul>

\* For identification purposes only

# APPENDIX I: ENVIRONMENT PERFORMANCE INDICATORS 2021

## RESOURCES CONSUMPTION

Electricity consumption	Unit	2021
Photovoltaic power plants	MWh	27,558
Wind power plants	MWh	15,495
Clean heat supply projects	MWh	128,261
Headquarter offices	MWh	188
Total electricity consumption	MWh	171,503
Electricity consumption intensity	MWh/Revenue (HKD million)	28.47

Consumption of other energy and resources	Unit	2021
Coal consumption of clean heat supply projects	Tonne	449,692
Coal consumption intensity of clean heat supply projects	Tonne/Revenue (HKD million)	74.66
LPG consumption	Tonne	232
LPG consumption intensity	Tonne/Revenue (HKD million)	0.04
Natural gas consumption of clean heat supply projects	10,000 Cubic Meters	4,768
Natural gas consumption intensity of clean heat supply projects	10,000 Cubic Meters/Revenue (HKD million)	0.79
Purchased hot water consumption of clean heat supply projects	Giga-Joule	5,105,482
Purchased hot water consumption intensity of clean heat supply projects	Giga-Joule/Revenue (HKD million)	847.61
Diesel consumption of clean heat supply projects	Litre	10,778
Diesel consumption intensity of clean heat supply projects	Litre/Revenue (HKD million)	1.79

# APPENDIX I: ENVIRONMENT PERFORMANCE INDICATORS 2021

Gasoline consumption by vehicles	Unit	2021
Vehicles usage in photovoltaic power plants	Litre	227,392
Vehicles usage in wind power plants	Litre	40,943
Vehicles usage in clean heat supply projects	Litre	144,843
Vehicles usage in headquarter offices	Litre	6,033

Diesel consumption by vehicles	Unit	2021
Vehicles usage in photovoltaic power plants	Litre	12,702
Vehicles usage in wind power plants	Litre	5,548
Vehicles usage in clean heat supply projects	Litre	11,832

Note: Gasoline and diesel consumptions: Photovoltaic power business owns 78 small gasoline fuelled and 9 diesel fuelled vehicles; Wind power business owns 18 small gasoline fuelled and 2 diesel fuelled vehicles; clean heat supply business owns 51 small gasoline fuelled and 7 diesel fuelled vehicles; and the headquarters owns 3 small gasoline fuelled vehicles.

Direct energy consumption	Unit	2021
Coal consumption by clean heat supply projects	MWh	3,472,624
LPG consumption by clean heat supply projects	MWh	3,220
Natural gas consumption by clean heat supply projects	MWh	515,567
Diesel consumption by clean heat supply projects	MWh	115
Gasoline consumption by vehicles	MWh	4,004
Diesel consumption by vehicles	MWh	320

Indirect energy consumption	Unit	2021
Purchased hot water of clean heat supply projects	MWh	1,418,191
Electricity consumption of the Group	MWh	171,503
Total consumption	MWh	5,585,544
Consumption intensity	MWh/Revenue (HKD million)	927.31

Note: Energy consumption Scope 1 and Scope 2 in unified units were added this year.

Water consumption	Unit	2021
Photovoltaic power plants	Tonne	22,256
Wind power plants	Tonne	4,119
Clean heat supply projects	Tonne	1,272,867
Headquarter offices	Tonne	1,034
Water consumption intensity	Tonne/Revenue (HKD million)	215.87

# APPENDIX I: ENVIRONMENT PERFORMANCE INDICATORS 2021

## EMISSIONS

### GHG Emissions (Scope 1 and Scope 2)

GHG Emissions	Unit	2021
Direct GHG emissions (Scope 1)	Tonne carbon dioxide equivalent (CO <sub>2</sub> -e)	823,077
Coal	Tonne carbon dioxide equivalent (CO <sub>2</sub> -e)	718,069
Vehicle	Tonne carbon dioxide equivalent (CO <sub>2</sub> -e)	1,220
Natural gas	Tonne carbon dioxide equivalent (CO <sub>2</sub> -e)	103,083
LPG	Tonne carbon dioxide equivalent (CO <sub>2</sub> -e)	677
Diesel	Tonne carbon dioxide equivalent (CO <sub>2</sub> -e)	28
Indirect GHG emissions (Scope 2)	Tonne carbon dioxide equivalent (CO <sub>2</sub> -e)	666,237
Purchased hot water	Tonne carbon dioxide equivalent (CO <sub>2</sub> -e)	561,603
Purchased electricity	Tonne carbon dioxide equivalent (CO <sub>2</sub> -e)	104,634
Total GHG emissions (Scope 1 and Scope 2)	Tonne carbon dioxide equivalent (CO <sub>2</sub> -e)	1,489,314
GHG emission intensity	Tonne carbon dioxide equivalent (CO <sub>2</sub> -e)/Revenue (HKD million)	247.25

Note: Purchased hot water was added to the calculation of indirect GHG emissions this year.

# APPENDIX I: ENVIRONMENT PERFORMANCE INDICATORS 2021

## Wastes

Waste category	Unit	2021
<b>Battery</b>		
Waste battery from energy storage projects	Piece	16
<b>Non-hazardous wastes</b>		
Boiler slags from clean heat supply projects	Tonne	64,860
Coal ashes from clean heat supply projects	Tonne	23,592
Office waste from photovoltaic power projects	Tonne	49
Office waste recycled by photovoltaic power projects	Tonne	43
Office waste from wind power projects	Tonne	2
Office waste recycled by wind power projects	Tonne	0.55
Office waste from clean heat supply projects	Tonne	139
Office waste recycled by clean heat supply projects	Tonne	–
Office waste from headquarter offices	Tonne	7
Office waste recycled by headquarter offices	Tonne	–
Non-hazardous waste intensity	Kilogram/Revenue (HKD million)	14.72

Note: 1. In the year of 2021, the Group reviewed the waste list based on the reporting principle of materiality. Fluorescent lamps and batteries used in offices were removed from the list while the item of retired/damaged battery units from energy storage station was added; and 2. Non-hazardous wastes include wastes generated by clean heat supply projects and office waste by business units.



# APPENDIX I: ENVIRONMENT PERFORMANCE INDICATORS 2021

Waste Water	Unit	2021
Photovoltaic power plants	Tonne	4,435
Wind power plants	Tonne	1,452
Clean heat supply projects	Tonne	75,548
Headquarter offices	Tonne	–
Waste water consumption intensity	Tonne/Revenue (HKD million)	13.52

## Air Emissions

Emissions generated by clean heat supply projects	Unit	2021
Dust	Tonne	29
Sulfur Oxides (SO <sub>x</sub> )	Tonne	155
Nitrogen Oxides (NO <sub>x</sub> )	Tonne	458

Emissions generated by vehicles	Unit	2021
Carbon Monoxide (CO)	Kilogram	7,744
Sulfur Oxides (SO <sub>x</sub> )	Kilogram	7
Nitrogen Oxides (NO <sub>x</sub> )	Kilogram	308
PM <sub>2.5</sub> particles	Kilogram	10
PM <sub>10</sub> particles	Kilogram	11

Calculation description:

- The calculation of GHG emissions is based on *How to Prepare an ESG Report Appendix 2: Reporting Guidance on Environmental KPIs* issued by the SEHK, and *Carbon Dioxide Emissions Accounting and Reporting Requirements – Heat Production and Supply Industry* (《二氧化碳排放核算和報告要求 熱力生產和供應業》(DB11/T 1784 – 2020)) issued by the Beijing Municipal Administration for Market Regulation.
- The calculation of energy consumption is based on *How to Prepare an ESG Report Appendix 2: Reporting Guidance on Environmental KPIs* issued by the SEHK, and the *Energy Statistics Manual* issued by the International Energy Agency.
- The calculation of air emissions generated by vehicles is based on *How to Prepare an ESG Report Appendix 2: Reporting Guidance on Environmental KPIs* issued by the SEHK, and the *Technical Guide for the Preparation of Air Pollutant Emission* (《道路機動車大氣污染物排放清單編製技術指南》) issued by The Ministry of Ecology and Environment of the PRC.
- In the year of 2021, diesel consumption used in clean heat supply projects was added, the emissions of diesel used in the production was included in the calculation of GHG emissions accordingly.

# APPENDIX II: LIST OF APPLICABLE POLICIES, LAWS AND REGULATIONS

Scopes	Applicable Policies, Laws and Regulations
Emissions Management	<p>The PRC:</p> <ul style="list-style-type: none"> <li>Environmental Protection Law of the People’s Republic of China</li> <li>Law of the People’s Republic of China on Environmental Impact Assessment</li> <li>Law of the People’s Republic of China on the Prevention and Control of Atmospheric Pollution</li> <li>Water Pollution Prevention and Control Law of the People’s Republic of China</li> <li>Law of the People’s Republic of China on the Prevention and Control of Environmental Noise Pollution</li> <li>Law of the People’s Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes</li> </ul>
Use of Resources	<p>The PRC:</p> <ul style="list-style-type: none"> <li>Law of the People’s Republic of China on Energy Conservation</li> <li>Renewable Energy Law of the People’s Republic of China</li> <li>Cleaner Production Promotion Law of the People’s Republic of China</li> <li>Electric Power Law of the People’s Republic of China</li> <li>Regulations on the Protection of Power Facilities</li> <li>Measures for the Administration of Electricity Conservation</li> </ul>

## APPENDIX II: LIST OF APPLICABLE POLICIES, LAWS AND REGULATIONS

Scopes	Applicable Policies, Laws and Regulations
Employment	<p>The PRC:</p> <ul style="list-style-type: none"> <li>• Labor Law of the People’s Republic of China</li> <li>• Labor Contract Law of the People’s Republic of China</li> <li>• Regulations on the Implementation of the Employment Contract Law of the People’s Republic of China</li> <li>• Trade Union Law of the People’s Republic of China</li> <li>• Social Insurance Law of the People’s Republic of China</li> <li>• Interim Regulations on the Collection and Payment of Social Insurance Premiums</li> <li>• Regulations on the Administration of Housing Accumulation Funds</li> <li>• Interim Provisions on Labour Dispatch</li> <li>• Special Rules on the Labor Protection of Female Employees</li> <li>• Provisions on the Administration of the Employment of Foreigners in China</li> </ul> <p>Hong Kong SAR, the PRC:</p> <ul style="list-style-type: none"> <li>• Employment Ordinance</li> <li>• Minimum Wage Ordinance</li> <li>• Employees’ Compensation Ordinance</li> </ul>

## APPENDIX II: LIST OF APPLICABLE POLICIES, LAWS AND REGULATIONS

Scopes	Applicable Policies, Laws and Regulations
Workplace Environment and Occupational Health Management	<p>The PRC:</p> <ul style="list-style-type: none"> <li>• Work Safety Law of the People’s Republic of China</li> <li>• Fire Protection Law of the People’s Republic of China</li> <li>• Administrative Measures for Work Safety Training</li> <li>• Provisions on the Safety Training of Production and Operation Entities</li> <li>• Regulations on Safety Technology and Supervision of Heating Boilers</li> <li>• Regulations on Safety Technology and Supervision of Steam Boilers</li> <li>• Regulations on the Reporting, Investigation and Handling of Work Safety Accidents</li> <li>• Measures for the Supervision and Administration of Power Work Safety</li> <li>• Measures for the Administration of Contingency Plans for Work Safety Accidents</li> <li>• Interim Provisions on the Investigation and Handling of Hidden Risks of Work Safety Accidents</li> <li>• The Administrative Regulations on the Work Safety of Construction Projects</li> <li>• Interim Measures for the Supervision and Administration of “Three Simultaneities” for Safety Facilities of Construction Projects</li> <li>• Regulation on Emergency Responses to Work Safety Accidents</li> <li>• Law of the People’s Republic of China on the Prevention and Control of Occupational Diseases</li> <li>• Measures for the Supervision and Administration of “Three Simultaneities” of Facilities for the Prevention and Control of Occupational Diseases of Construction Projects</li> <li>• Rules for the Administration of Periodic Detection of Occupational Hazard Factors of Employers</li> <li>• Management Rules for Labor Protection Supplies of Employers</li> </ul>

## APPENDIX II: LIST OF APPLICABLE POLICIES, LAWS AND REGULATIONS

Scopes	Applicable Policies, Laws and Regulations
Prevention of Child and Forced Labour	<p>The PRC:</p> <ul style="list-style-type: none"> <li>• Law of the People’s Republic of China on the Protection of Minors</li> <li>• Civil Code of the People’s Republic of China</li> <li>• Provisions on the Prohibition of Using Child Labor</li> </ul>
Product Responsibilities	<p>The PRC:</p> <ul style="list-style-type: none"> <li>• GBT 51074 2015 Code for Urban Heating Supply Planning</li> <li>• GBT 33833-2017 Urban Heating Supply Service</li> <li>• Measures for the Administration of Energy Efficiency Labels (Order No. 35 of the National Development and Reform Commission and the General Administration of Quality Supervision)</li> <li>• Technical Specifications for Gas-Fired Combined Cooling, Heating and Power Engineering</li> <li>• Code for Design of Heating Ventilation and Air Conditioning of Civil Buildings</li> <li>• Boiler Safety Technical Supervision Administration Regulation (TSG G0001-2012)</li> <li>• Technical specification for gas alarm and control system (CJJ/T146-2011)</li> </ul>

## APPENDIX II: LIST OF APPLICABLE POLICIES, LAWS AND REGULATIONS

Scopes	Applicable Policies, Laws and Regulations
Anti-Bribery and Corruption	<p>The PRC:</p> <ul style="list-style-type: none"> <li>• Criminal Law of the People’s Republic of China</li> <li>• Interim Provisions of the State Administration for Industry and Commerce of the People’s Republic of China on Banning Commercial Bribery</li> </ul> <p>Hong Kong SAR, the PRC:</p> <ul style="list-style-type: none"> <li>• Prevention of Bribery Ordinance</li> </ul>
Intellectual Property Rights	<p>The PRC:</p> <ul style="list-style-type: none"> <li>• Patent Law of the People’s Republic of China</li> <li>• Trademark Law of the People’s Republic of China</li> <li>• Copyright Law of the People’s Republic of China</li> </ul>

# APPENDIX III: HKEX ESG REPORTING GUIDE CONTENT INDEX

Subject Areas, Aspects, General Disclosures and KPIs	Description	Sections/Declaration
<b>Aspect A1: Emissions</b>		
General Disclosure	Relating to air and GHG emissions, discharges into water and land, and generation of hazardous and non-hazardous waste. Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	Part 5 > Focus on Building Sustainable Business Activities Appendix II
KPI A1.1	The types of emissions and respective emissions data.	Appendix I
KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) GHG emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Appendix I
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity.	Appendix I
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity.	Appendix I
KPI A1.5	Description of emission target(s) set and steps taken to achieve them.	Part 5 > Focus on Building Sustainable Business Activities Part 6 > Tighten Control over Coal Emissions
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	Part 5 > Focus on Building Sustainable Business Activities Part 6 > Tighten Control over Coal Emissions

# APPENDIX III: HKEX ESG REPORTING GUIDE CONTENT INDEX

Subject Areas, Aspects, General Disclosures and KPIs	Description	Sections/Declaration
<b>Aspect A2: Use of Resources</b>		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	Part 5 > Focus on Building Sustainable Business Activities Part 6 > Tighten Control over Coal Emissions
KPI A2.1	Direct and/or indirect energy consumption by type in total (kWh in '000s) and intensity.	Appendix I
KPI A2.2	Water consumption in total and intensity.	Appendix I
KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	Part 5 > Focus on Building Sustainable Business Activities Part 6 > Tighten Control over Coal Emissions
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	Part 5 > Focus on Building Sustainable Business Activities Part 6 > Tighten Control over Coal Emissions
KPI A2.5	Total packaging material used for finished products (in tonnes) and, where appropriate, with reference to per unit produced.	Not Applicable

# APPENDIX III: HKEX ESG REPORTING GUIDE CONTENT INDEX

Subject Areas, Aspects, General Disclosures and KPIs	Description	Sections/Declaration
<b>Aspect A3: The Environment and Natural Resources</b>		
General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources.	Part 5 > Focus on Building Sustainable Business Activities Part 6 > Tighten Control over Coal Emissions
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Part 5 > Overview of Photovoltaic and Wind Power Businesses Part 5 > Focus on Building Sustainable Business Activities Part 6 > Tighten Control over Coal Emissions
<b>Aspect A4: Climate Change</b>		
General Disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	Part 2 > Statement from the Board
KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Part 2 > Statement from the Board

# APPENDIX III: HKEX ESG REPORTING GUIDE CONTENT INDEX

Subject Areas, Aspects, General Disclosures and KPIs	Description	Sections/Declaration
<b>Aspect B1: Employment</b>		
General Disclosure	Relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare. Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	Part 8 > Hiring Practices Part 8 > Respect Employees' Rights and Interests Appendix II
KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	Part 8 > Hiring Practices
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	Part 8 > Hiring Practices
<b>Aspect B2: Health and Safety</b>		
General Disclosure	Relating to providing a safe working environment and protecting employees from occupational hazards. Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	Part 7 > Ensure Complete Policy Framework Part 8 > Safeguard Employees' Safety Appendix II
KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	Part 2 > Statement from the Board Part 8 > Safeguard Employees' Safety

# APPENDIX III: HKEX ESG REPORTING GUIDE CONTENT INDEX

Subject Areas, Aspects, General Disclosures and KPIs	Description	Sections/Declaration
KPI B2.2	Lost days due to work injury.	Part 8 > Safeguard Employees' Safety
KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	Part 7 > Ensure Complete Policy Framework Part 8 > Safeguard Employees' Safety
<b>Aspect B3: Development and Training</b>		
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	Part 8 > Enhance Employee Skills
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	Part 8 > Enhance Employee Skills
KPI B3.2	The average training hours completed per employee by gender and employee category.	Part 8 > Enhance Employee Skills

# APPENDIX III: HKEX ESG REPORTING GUIDE CONTENT INDEX

Subject Areas, Aspects, General Disclosures and KPIs	Description	Sections/Declaration
<b>Aspect B4: Labour Standards</b>		
General Disclosure	Relating to preventing child and forced labour. Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	Part 8 > Hiring Practices Appendix II
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	Part 8 > Hiring Practices
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	Part 8 > Hiring Practices
<b>Aspect B5: Supply Chain Management</b>		
General Disclosure	Policies on managing environmental and social risks of the supply chain.	Part 2 > Statement from the Board Part 5 > Cultivate Healthy Supplier Relationships
KPI B5.1	Number of suppliers by geographical region.	Part 5 > Cultivate Healthy Supplier Relationships
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	Part 5 > Cultivate Healthy Supplier Relationships
KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Part 5 > Overview of Photovoltaic and Wind Power Businesses Part 5 > Cultivate Healthy Supplier Relationships
KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Part 2 > Statement from the Board Part 5 > Cultivate Healthy Supplier Relationships

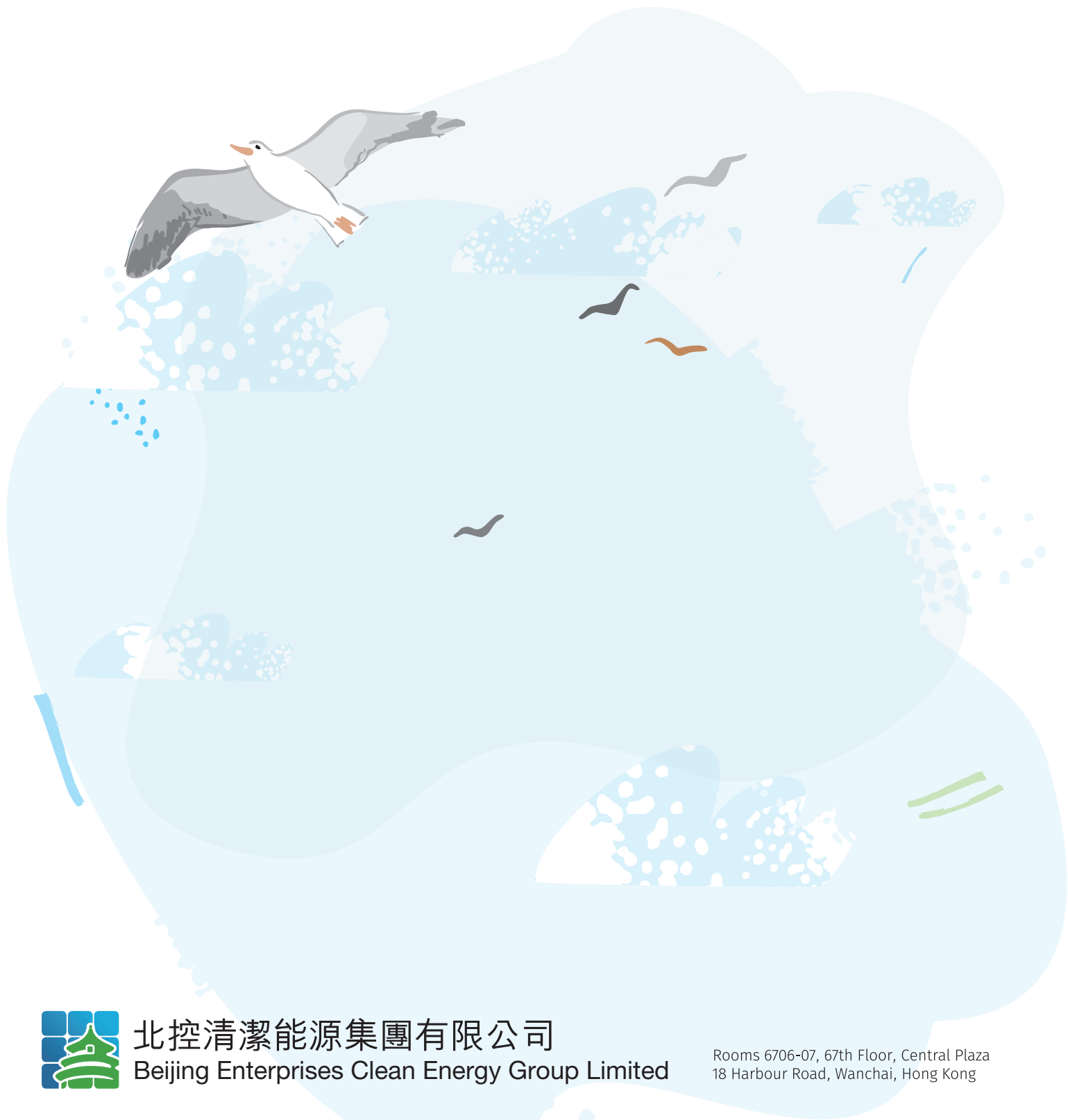
# APPENDIX III: HKEX ESG REPORTING GUIDE CONTENT INDEX

Subject Areas, Aspects, General Disclosures and KPIs	Description	Sections/Declaration
<b>Aspect B6: Product Responsibility</b>		
General Disclosure	Relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress. Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	Part 6 > Deliver User-Centric Services Appendix II
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Not Applicable
KPI B6.2	Number of products and service related complaints received and how they are dealt with.	Part 6 > Deliver User-Centric Services
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	Part 4
KPI B6.4	Description of quality assurance process and recall procedures.	Part 6 > Deliver User-Centric Services
KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	Part 4

# APPENDIX III: HKEX ESG REPORTING GUIDE CONTENT INDEX

Subject Areas, Aspects, General Disclosures and KPIs	Description	Sections/Declaration
<b>Aspect B7: Anti-corruption</b>		
General Disclosure	Relating to bribery, extortion, fraud and money laundering. Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	Part 4 Appendix II
KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Part 4
KPI B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	Part 4
KPI B7.3	Description of anti-corruption training provided to directors and staff.	Part 4
<b>Aspect B8: Community Investment</b>		
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	Part 5 > Empower Harmonious Community Development Part 8 > Contribute to Local Communities
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	Part 5 > Empower Harmonious Community Development Part 8 > Contribute to Local Communities
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	Part 8 > Contribute to Local Communities

\* For identification purposes only



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