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# **About this report**

This is the sixth non-financial report issued by Beijing Enterprises Water Group Limited. It responds to the expectations of stakeholders, reflects the Group's environmental, social and governance (hereinafter "ESG") performance, and demonstrates the concept, management, action and performance of sustainable development. This report has been reviewed and approved by the Board of Directors of the Company, and there are no false records, misleading statements or major omissions in this report.

# **Reporting period**

This reporting period is from January 1 to December 31, 2020. Information beyond this period is indicated in such sections.

# **Reporting scope**

All information and data are from Beijing Enterprise Water Group Limited, its headquarters and its subsidiaries, as cited in the Annual Report and Consolidated Financial Statements. Data outside of this scope is indicated in such sections.

# **Abbreviations**

For ease of writing and reading, this report refers to Beijing Enterprises Water Group Limited as the "the Company", and Beijing Enterprises Water Group Limited and its subsidiaries as "BEWG", "the Group" or "We".

# **Data explanation**

All information and data are from the Group's internal collection and statistics, and statistical reports provided by subsidiaries. Unless otherwise specified, "yuan" in this report is CNY.

# **Reporting guidelines**

This report is prepared with reference to the requirements of Appendix 27 *Environmental, Social and Governance Reporting Guide (hereinafter the ESG Reporting Guide)* of the *Rules Governing the Listing of Securities* on the Stock Exchange of Hong Kong Limited and the *GRI Sustainability Reporting Standards* issued by the Global Sustainability Standard Board (GSSB).

# **Confirmation and approval**

After confirmation by management, this report was reviewed and approved by the Board of Directors of the Company (hereinafter "the Board") on March 30, 2021.

# Access to this report

This report is available in English and Chinese, including printed and electronic editions. To browse or download the electronic version, please visit http://www.bewg.net. In case of any conflict or inconsistency between the Chinese and English versions, the Chinese version shall prevail; in case of any conflict or inconsistency between this report and the annual report of the Group, the annual report shall prevail.

# **Statement of the Board**

BEWG has established a business philosophy and effective sustainability governance and management mechanisms with sustainable development as the core. The Company has effectively integrated sustainability requirements into its operations and management and has created a stable value on environmental, social and governance.

In order to promote the integration of ESG into corporate governance, BEWG proceeds from "establishing an ESG governance structure and ESG system" to form an effective ESG work framework. BEWG has established a four-level ESG governance structure, which is the Board, ESG Working Group, functional departments and subordinate units. The Board is the highest decision-making body for the Company's ESG matters and assumes full responsibility for the Company's ESG strategy and reporting. The Audit Committee under the Board is responsible for implementing the various ESG resolutions of the Board, identifying and managing the Group's ESG risks and regularly communicating and reporting work progress to the Board. In order to ensure the implementation of daily ESG management work, BEWG has established an ESG Working Group. Under the authorization of the Board, the ESG Working Group is responsible for coordinating the management and implementation of various functional departments and subordinate units on relevant sustainability issues, and regularly reporting the progress of ESG work to the Audit Committee and the management. Each functional department is assigned with its respective sustainability tasks and responsible for the management and implementation of ESG issues. Each subordinate unit has designated specialized personnel to be responsible for ESG implementation and related data statistics and information collection. In 2020, the Company continued to standardize the ESG governance and management work process. Much attention was paid to the process of determining material ESG issues, and optimized the ways in which stakeholders participate in communication to identify, evaluate and manage material ESG issues. The Company attaches great importance to ESG information disclosure. The Board supervises the ESG report preparation process and reviews the annual ESG report to ensure the disclosure of information is authentic and effective.

BEWG regards sustainable development as an important part of the Company's strategy, and highly recognizes implementing the regulations and norms that is important to launch the strategy. In 2020, in response to ESG issues related to the Company's operations, BEWG formulated a series of management systems to form the Company's system library on ESG management. The Company formulated a total of 11 internal management systems including the *BEWG Management Measures for Low-Carbon Operation of Operational Projects, BEWG Water Resource Management Measures, the BEWG Code of Business Conduct, and BEWG Supplier Management Policy.* Through the consolidation and implementation of the systems, we has promoted the ESG work into our operations effectively.

This Report fully discloses the progress and effectiveness of BEWG's ESG work in 2020, and was submitted by the ESG Working Group to the Board for reviewing and approving on March 30, 2021.





The 14th Five-Year Plan period is a crucial stage for China to make ecological progress, during which China will wage a tough battle to promote both high-quality economic growth and high-standard environmental protection. It also serves as an important period of opportunity to make decisive progress in the critical battle against pollution while laying solid foundations to attain carbon neutrality and build a beautiful China. BEWG, as integrated professional water services and environmental protection services provider, always holds fast to high standard in water treatment and contributes to the construction of a beautiful China guided by a strong sense of social responsibility.

We summon up our courage to lead the tread. In 2020, BEWG continued to serve national strategies comprehensively, including the protection of lucid waters and green mountains, in-depth layout in the Beijing-Tianjin-Hebei region, Yangtze River Economic Belt, and Guangdong-Hong Kong-Macao Greater Bay Area, full response to the Belt and Road Initiative, and the protection of the Yangtze River and ecological governance of the Yellow River. While keeping in mind the social responsibilities and missions of a state-owned enterprise and environmental protection enterprise, we actively engage in a new chapter of China's ecological progress. In 2020, BEWG ranked N0.1 in the "Top 10 Influential Enterprises of Chinese Water Industry" for the tenth consecutive year and was selected into the Fortune China 500 companies for the fifth consecutive year with its place moving up year by year.

We pursue fast and stable progress in the spirit of rectitude and innovation. Adhering to the asset-light orientation, BEWG firmly advances the dual-platform structure of asset management and operation management with the ecological strategy, innovation strategy and digital strategy as the provider of strong support, contributing to asset-light transformation, sustainability strategy focuses and new market segments exploration. We always take a customer-oriented approach by constantly improving the quality of products and services for customer satisfaction. We strive to build a world-class water utility asset operation and service brand and commit ourselves to lead an industry ecosystem of mutual benefit and common development for all business partners.

We ride the winds and break the waves to chart a new path. Looking ahead, China will usher in an important period filled with strategic opportunities for development. A new development paradigm with domestic circulation as the mainstay and domestic and international circulations reinforcing each other is gaining momentum. Faced with the upgrading industry demand and changing competitive landscape, BEWG works around the clock to honor the responsibility. With resilience, perseverance and accountability, we will work with customers, employees, group companies and partners by being like-minded, in a bid to build a harmonious, inclusive and beautiful China in the new era, secure a good start for the 14th Five-Year Plan, and embrace the centenary of the founding of the Communist Party of China with outstanding achievements. The COVID-19 pandemic took a heavy toll on the global economy, business operations and people's life in 2020. Against such a backdrop, BEWG proactively contributed to the fight against the pandemic by safeguarding the health and safety of our employees, facilitating the resumption of production and work, and providing assistance. Also, pursuing green growth and improving climate governance have emerged as global priorities in the new era of development. BEWG, being an enterprise with a sense of responsibility, mission, urgency and crisis, has been devoted to promoting systematic governance, scientific management and sustainability of the ecological environment, while driving forward our development and reform through constant innovation.

Guided by the concept of safe development, BEWG kept improving our corporate performance and quality of assets while proactively participating in preventing and combating the pandemic, and achieved steady growth in 2020. Last year, BEWG generated HK\$ 25.4 billion revenue, signed projects with an average water volume of 3.8 million tonnes per day, operated 1,334 water plants and rural waste water treatment facilities with an overall designed water treatment capacity of 42.12 million tonnes per day, and treated polluted water in 7,000 m2-plus river basins as well as 1500 km-plus waterways. Despite the severe impact imposed by the pandemic on our overseas business, we have successfully entered the Sri Lankan market, and signed more projects in Portugal, Angola, Australia, New Zealand, and others.

BEWG is currently in transition to a light-asset model, and by adopting a fundamental strategy of "emphasizing both heavy and light assets", we leverage our strengths to pursue robust growth. In promoting marketoriented development, BEWG focuses on upgrading our products and services to improve our competitiveness, and strengthening our capacity of technological accumulation and integration of product innovation via reshaping our technology development system, thereby fostering new growth paths and business models. In organizational capacity-building, we focus on the upgrades of our output and delivery. We make further efforts to strengthen our operational and management platforms, so as to enhance our organizational capacity. We improve our operational and

### 2020 Sustainability Report

management systems, further integrate technology into our operations, build operation teams with high professionalism, and provide customers with excellent services through such measures as employing star rating systems to evaluate our projects, building standardized demonstration plants, pursuing technological innovation and switching to smart management modes. In 2020, over 93% of our projects received a onestar rating while over 20% received a three-star rating. We also released our digital strategy in 2020 to guide our transition from a traditional enterprise to a platform-based one.

During the 14th Five-Year Plan period and beyond, BEWG will, as usual, follow our national development strategies when establishing new business models, strengthening our advantages, further integrating into and leading in the industry, contributing to environmental protection, and creating customer value. we will assume our responsibility in protecting water, our source of life, promoting green development, and facilitating the integration of water governance and environmental protection, so as to build a better world where people live in harmony with nature.

# Get to know BEWG

# About us

BEWG is a comprehensive and leading professional water and environment service provider with our business covering industrial investment, design, construction operation, technical services and capital operation in full industrial chain. Focusing on water recycling and water-related environmental protection, BEWG is the largest provider of water and environment comprehensive service in China. We rank number one in the industry in China, in terms of total assets, total revenue and water treatment capacity.

Besides our core businesses of urban water services and water environment comprehensive renovation, we focus on following fields, including environmental sanitation and solid waste treatment, overseas business, technological services, financial services, clean energy, rural water services and industrial water services. Headquartered in Beijing, we serve more than 100 prefecture-level cities in 31 provinces and autonomous regions of China, as well as 9 countries including Malaysia, Singapore, Australia, New Zealand, Portugal, Angola, Botswana and Sri Lanka, serving with over 7 million overseas population.

Our services have covered 31 provinces and autonomous regions of China

covering







# **BEWG's business fields**

### Urban water services

We actively explore the municipal water services market through PPP<sup>1</sup> BOT<sup>2</sup> TOT<sup>3</sup>, entrusted operation, equity acquisition, joint venture and other methods. We provide comprehensive solutions including investment, construction, operation and management for projects involving water sources, water delivery, water supply, sewage, reclaimed water and pipeline networks.

### Water environment comprehensive renovation

Based on the actual needs of the people and the condition of the ecosystem, BEWG has built a source pollution control and rainwater utilization system based on a sponge system, a pollution process reduction and end treatment system that focuses on improving the quality and efficiency of plants and networks, and an ecological restoration and purification system formed by making full use of the river, lake and wetland spaces. Each of these systems were in line with the concept of improving the life experience as the core, forming a water renovation and operation system with the characteristics of BEWG. In order to comprehensively address the problems in water environment comprehensive renovation, a "8+7+9"4 framework of river renovation throughout the entire life cycle of "investment-financing-technologyconstruction-operation" was built, which covers 9 issues of 7 projects in 8 specialties.

### Rural water services

BEWG began researching sewage treatment in villages and towns in 2008, and gradually evolved from "river basin-wide improvement to drive sewage treatment in villages and towns" to the "fourth-generation rural sewage treatment technology" plus "all-in-one" model. BEWG developed construction and operation models such as "plant-pipeline network integration", "urban-rural integration", and "water supply-drainage integration" and these solutions combine piping, small-scale centralization, and household-based treatment according to local conditions. We employ intelligent operation and maintenance to enable automatic operation, unattended operation, centralized management, and rapid response.

### Industrial water services

The core team of Beijing Enterprises Industrial Environmental Protection has accumulated a lot of industrial water business experience over the years. Through EPC<sup>5</sup>,BOT, TOT, BTO<sup>6</sup>, PPP, OEM<sup>7</sup> and other service modes, the main business areas such as industrial parks, coal chemical, petrochemical, medicine and fine chemical have been developed in depth, covering circulating water systems, pretreatment systems, biochemical treatment systems, deep processing systems, water reuse systems, zero discharge systems, energy saving and consumption reduction, and industrial big data, etc.

### Environmental sanitation and hazardous waste treatment

Beijing Enterprises Urban Resources Group Limited (a company listed on the main board of the Hong Kong Stock Exchange, stock code: 3718) is a specialized company under BEWG that focuses on hazardous waste treatment and environmental sanitation services. Its environmental sanitation business is committed to providing "one-stop" services in the field of environmental sanitation including investment, research and development, consulting, design, construction, operation and so on. Its business scope covers integrated services including comprehensive sweeping and cleaning, garbage sorting, garbage collection and transportation, sanitation facility operation and maintenance, landscaping maintenance, smart sanitation, property management and so on. It has invested and operated more than 100 integrated environmental sanitation projects across the country, operated and managed more than 20 hazardous waste disposal companies in more than 10 domestic provinces (municipalities and autonomous regions).

- <sup>3</sup>Transfer-Operate-Transfer is a method used to finance projects.
- <sup>4</sup>8 specialties: water, landscape, ecology, environment, municipal, intelligence, planning, habitat.

### Overseas business

BEWG has steadily implemented the "Going Global" strategy, which centered on Malaysia and Singapore, extending to the Asia-Pacific, Europe, America, Africa and the Middle East. Relying on solid capital strength, leading technology and rich management experience, we deploy the international water market. At present, the business covers more than 30 cities in 9 countries and regions including Malaysia, Singapore, Australia, New Zealand, Portugal, Angola, Botswana, and Sri Lanka, serving more than 7 million people overseas.

### Clean energy

Beijing Enterprises Clean Energy Group Limited (a company listed on the main board of the Hong Kong Stock Exchange, stock code: 1250) is a joint venture between BEWG, CITIC Industrial Fund, and Tsinghua Qidi. By giving full play to the advantages of mixed ownership, it is committed to the development of various clean energy businesses such as solar power generation, wind power generation, hydropower generation, and clean heating. At the same time, it has made forward-looking deployment of smart micro-grid, energy storage, power distribution and sales and other businesses. Taking clean energy development and clean energy utilization as the main line, it strives to build a clean energy ecosystem with multi-energy complementation and multi-industry collaboration. By the end of 2020, its cumulative installed capacity of new energy reached 3.296GW, with projects covering more than 20 provinces and cities across the country and overseas (such as Australia).

### Technological services

Focusing on the business structure of two main sectors and multi-specialties, BEWG is building a resilient urban ecosystem based on the integration of plants, networks, wetlands, rivers, and lakes. With the fields of "water production, water purification, water regeneration, water generation, water governance, water diagnosis, water maintenance, water conservation, water circulation, and water wisdom" as its hard cores, BEWG carries out R&D, industrialization, design consulting, technology management, technology output, etc., escorting the Group's comprehensive innovation strategy and dual platforms strategy.

### **Financial services**

BEWG has built a financial service with the characteristics of BEWG by asset securitization, debt-to-equity, initiating private equity funds and other financial products to introduce financial investors, and promoting the light-assetization of stock assets. BEWG has good asset management capabilities, industrial financial service capabilities, capital operation capabilities, investment portfolio management capabilities, and liquidity management capabilities. The existing business types include asset mergers and acquisitions, equity investment, private equity funds, supply chain finance, fixed income investment, and financial consulting, providing financial products include green financial products, private equity fund products, financial leasing products, etc.

<sup>5</sup>Engineering Procurement Construction means that the Company is entrusted by the owner to contract the whole process or several stages such as design, procurement, construction, and trial operation of the construction project in accordance with the contract. Usually, the Company is responsible for the quality, safety, cost and schedule of the contracted project under the conditions of the lump sum contract. <sup>6</sup>Build-Transfer-Operate refers to that a private organization finances a water facility and is responsible for its construction; after completion, the ownership of the facility (note that physical assets are still owned by the private organization) is transferred to the government; and then the government awards the private institution a long-term contract to operate the facility, so that it can recover the investment and obtain a reasonable return by charging users, <sup>7</sup>Original Equipment Manufacturer, or "fixed-point production", commonly known as foundry (production), refers to that brand producers do not directly produce products, but use their key core technologies to design and develop new products and control sales channels.

<sup>&</sup>lt;sup>1</sup>Public-Private Partnership refers to cooperation between government capital and social capital. It is an operation mode for infrastructural projects. <sup>2</sup>Build-Operate-Transfer is a cooperation model in which the government and private institutions cooperate on the investment, construction, and operation of infrastructural projects

<sup>7-</sup>color governance: blue - water conservancy projects, flood control and drainage, water resources allocation and water system connectivity; green - sponge city, wetland construction, river landscape and waterfront space; cyan - waterfront creation and river ecosystem; gray - water plants, pumping stations, pipe networks, village and town sewage, black smelly water body management, source control and sewage interception, endogenous management; black - smart water, smart water environment; golden waterline cultural heritage, waterfront economic development; colorful - building livable, waterfront recreation, leisure space.

<sup>9</sup> concepts of practice: water security, water resources, water landscape, water ecology, water environment, water management, water culture, water economy and water life

# Honors and awards in 2020:

BEWG was included in the Fortune 500 List of China for the 5th consecutive year BEWG ESG rating was raised to BBB by the world's largest index company MSCI BEWG ranked first in the "Top Ten Influential Enterprises in the Water Sector in China", selected by the E20 Environmental Platform for the 10th consecutive year

BEWG won the "2020 China Talent Management Technology Model Award" contest jointly organized by Business School of Renmin University of China, *Harvard Business Review*, and Beisen Research of Talent Management

BEWG won the second prize of the "2020 China Construction Science and Technology Award" issued by the China Construction Science and Technology Award Committee of the Ministry of Housing and Urban-Rural Development BEWG won the title of "Most Honored Company" in the 2020 All-Asia Executive Team rankings, issued by *Institutional Investors*, for the 7th consecutive year

BEWG won the title of "Honored Company" among small and medium-sized stocks in the 2020 All-Asia Executive Team rankings, issued by *Institutional Investors*, for the 2nd consecutive year

BEWG won the title of "Excellent Member Unit of the Yangtze River Eco-Environmental Protection Industry Alliance" BEWG won the "Corporate Culture Best Practice Award" in the 2020 KNX "Star Leap Award" Human Resource Capital Management Practice Competition

# Highlights of operational performance in 2020



Total Revenue **25,400** million HKD



Total daily design capacity for new projects secured for the year



1,334





Number of sewage treatment plants and village/town sewage treatment facilities









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BEWG was selected as one of the "Top 50 Chinese Environmental Enterprises in 2020" by the Environmental Chamber of Commerce of the All-China Federation of Industry and Commerce and awarded the honorary title of "Member Enterprise for Outstanding Contributions to the Antipandemic Action of the Environmental Chamber of Commerce"

BEWG won the "Environmental Protection Enterprise of Integrity" at the "2020 Eco-Environment Industry Forum" hosted by the Ministry of Ecology and Environment and the China Environment News

BEWG College was selected into "Chinese Demonstrative Enterprise Colleges" by the "Training" magazine of Xinhua Daily Media Group, and awarded "China's Best Enterprise College" and "Best Learning Project for Chinese Enterprises - Seminar for Senior Managers in China's Environmental Industry" by the Overseas Education College of Shanghai Jiaotong University

**43**reclaimed water treatment plants



water environment comprehensive

renovation projects with newly signed contractor during the year





# **To Stakeholders**

In the past ten years, BEWG is devoted to environmental protection and remains committed to water treatment. Facing the unprecedented change in a century and the huge environment market with a value of RMB 1 trillion, BEWG stays true to its environmental protection mission to serve national strategies, contributes its efforts to the "Three Critical Battles", safeguard lucid waters and lush mountains, and work for a beautiful world. As a comprehensive professional water and environment service provider, BEWG has always actively served national strategies and contributed to the construction of a beautiful China. In 2020, we continued the "dual-platform" strategy, building an asset management platform and an operation management platform by firmly implementing the asset-light transformation. BEWG strengthens core operating capabilities, continuing to enhance the Group's overall strength and profitability for high-quality development.

# Strategic sustainability

In 2020, under the guidance of the strategic vision, BEWG continued the dual-platform strategy, building an asset management platform and an operation management platform. Combined with the concept of sustainable development, BEWG firmly implemented the asset-light strategic transformation, taking the comprehensive management of municipal water affairs and water environment as core businesses, so as to achieve high-quality development.



Strategic vision

Strategic direction Adhere to asset-light strategy and dual-platform model, and transform from asset-heavy to asset-light and finally realize asset-light operation. At present, BEWG is in the transitional period of asset-light transformation and adheres to the basic strategy of "prioritization" BEGW provides customer-oriented, market-oriented and constantly better quality of products and services. BEWG promotes digital construction, releases digital strategies, takes digital transformation as its breakthroughs.

In order to implement the asset-light strategy, BEWG has innovated in asset management methods and promoted the construction of an asset management platform. BEWG innovated by introducing the concept of "asset management" and prepared for the establishment of an asset management center to focus on industrial asset management and promote the preservation and appreciation of assets. By defining capital gain and operating gain from project, we clarify the business logic and business relationship of the asset management platform, further strengthen the full-cycle management of "investment, financing, management, and operation", by way of improving asset quality, accumulating management experience and cultivating management talents.

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# Management sustainability

In 2020, BEWG continued to improve the performance of corporate governance and sustainable management system, standardized the governance and management functions of the Board of Directors, improved the risk management capabilities, strictly complied with laws and regulations, improved anti-corruption policies and related training and promoted sustainable management.



## **Business sustainability**

In 2020, we actively promoted business standardization. We consolidated the management of each business line through policy revision and standardized management, innovated the operation management model, rolled out project star ratings, encouraged technological innovation, accelerated the upgrading of water services.

### **Production and service indicators**

Annual processing volume of water distribution





Annual processing volume of sewage and reclaimed water treatment



Total daily design capacity for new project

3,801,454

star-I More

Proportion of water plants<sup>8</sup> at onestar-level<sup>9</sup> and above



\*The proportion refers to the number of star-leveled water plants assessed acc Appraisal, out of the total amount of water plants participating in the star rating.

<sup>9</sup> The water plants are classified from one-star-level to five-star-level according to the operation quality, among which one-star-level water plants can meet the demand of standardized operation.



More than 20%



Project acceptance rate





100%

Number of new patents granted





Number of new software copyrights granted







# **Environment sustainability**

In 2020, we continued our efforts to save energy, reduce emissions, strengthen water resource management, explore effective measures for low-carbon energy conservation, actively take consumption reduction actions, coordinate biodiversity protection and enterprise economic development, minimize our environmental impact, and protect the sustainability of the

### **Environmental indicators**



# Social sustainability

In 2020, adhering to the people-oriented concept, we built a talent management system and a complete talent training mechanism, created a fair, open, harmonious and inclusive working environment for employees, effectively protected the rights and interests of employees, integrated employee care into the corporate culture. We also encourage suppliers to grow with us. We pursue the common development of supply chain.

### Employee, community and supplier indicators



<sup>10</sup> Suppliers certified by ISO 9001 and ISO14001.

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Number of certified suppliers<sup>10</sup>



Proportion of female employees



Proportion of employees participating in training programs



Safety investment





# **ESG** governance

BEWG is committed to building a sound ESG governance structure and an effective risk prevention and control system to ensure efficiency and sustainability of corporate governance.

# **Functions of the Board**

In strict accordance with Appendix 14 *Corporate Governance Code* of the *Listing Rules* of the HKEX, and other relevant laws in domestic and overseas, our well-structured corporate governance which clearly defines rights and responsibilities, forms collaborative, scientific and efficient corporate governance mechanism.

As the highest decision making body, the Board directs our development direction, determines the overall strategies and policies, supervises the performance of management and safeguards the long-term interests of the Group and its shareholders. The Audit Committee of the Board is responsible for identifying and managing the Group's ESG risks and reporting to the Board on a regular basis. (A detailed description of the functions of the Audit Committee is available at https://www1.hkexnews.hk/ listedco/listconews/sehk/2020/0416/2020041600791. pdf). To ensure the implementation of the daily ESG management, an ESG Working Group has been established by all businesses and functional departments to regularly report the progress of ESG management to the Audit Committee and the management.

### 262 B Ē ESG Working The Board of Audit Committee BEWG Group Identify material ESG issues Formulate ESG goals, policies and structures • Make recommendation on ESG Formulate work plan for goals, policies and structure of the Company ESG management, goals achievements. etc. • Monitor and evaluate the ESG management approaches, • Carry out materially evaluation on strategies and goals ESG issues Identify and evaluate the ESG Compile ESG report related risks, ensure that the • Coordinate all departments Company establishes effective and subordinate units to ESG risk management and carry out management and internal control systems implementations on relevant

- Evaluate and review the ESG performance and report to the Board
- Review ESG report

**BEWG ESG governance framework** 

 Report to the Audit Committee / management on a regular basis



Regarding to the composition of the board of directors, the role of Chairman and CEO of the Group are held by different persons to ensure that their duties and responsibilities are well separated. The Chairman leads the Board and the CEO manages the Group's businesses, by which the operation of the Board is independent from the businesses, operation, and routine management of the Group. Independent non-executive directors bring diverse experience and expertise to the Group, provide independent opinions, judgments and proposals for the Group's business strategy, performance and management, and balance the interests of the Group and its shareholders. The Group confirms that each independent non-executive director complies with the independence guidelines in Rule 3.13 of the *Listing Rules*.

Board diversity is highly valued by the Group. The *Board Member Diversity Policy* was formulated in accordance with the *Listing Rules*. All appointments of the Board shall be based on merit to ensure the Directors have the balanced skills, experience and diverse perspectives as required by the Group's businesses. When considering candidates, the Nomination Committee considers factors including but not limited to gender, age, cultural and educational background, professional experience, skills, knowledge and length of service. The Board regularly reviews and supervises the implementation of the board diversity policy.



As of the date of issuance of this Report, the Board consisted of nine executive directors, one non-executive director and five independent nonexecutive directors. One of the independent non-executive directors holds the professional and accounting qualifications as required by the *Listing Rules* of the HKEX.



**Board diversity** 



# **Risk management**

A sound risk prevention and control system is the basic guarantee for the long-term stable operation. The Board is fully responsible for assessing the nature and degree of risks that the Group may face and ensuring risk management and internal controls of the Group. The Board delegates to the Audit Committee to oversee the management design and implement the risk management and internal control system. Referring to the enterprise risk management framework formulated by the COSO<sup>11</sup> BEWG established the "Three Layers + Three Lines of Defence" structure to clarify risk management procedures such as risk identification, risk assessment and risk handing.



<sup>11</sup>Committee of Sponsoring Organizations of the Treadway Commission

To further standardize risk management, the Group formulated the *BEWG Overall Risk Management System* to identify, assess, prevent, control, handle and resolve business risks. The Group formulated internal risk control systems including the *Measures for Investment Review and Decision-making Management*, and *Audit System* to establish systematic risk management framework based on "basic business units".

We continue to strengthen internal risk control in daily operation and management. We attach great importance to investment safety and continuously improve the decision-making mechanism of key nodes such as project initiation, bidding, and review to secure our investment projects. We analyze the risks and opportunities in operation and investment caused by policy and market changes, and make quick response and timely adjustments based on the business development of the Group. We established a project review mechanism and a financial investment risk management system to ensure business and financial security. We established a full-dimensional operational risk management and control system for sewage treatment and water supply business to ensure that operational risks are controllable. Additionally, we fully implemented public opinion management measures and public relations crisis management mechanisms to ensure brand safety.

We attach importance to environmental and social risks by establishing a sustainability risk assessment system led by the Audit Committee to identify, dynamically track and update environmental and social factors in products, services and the construction and operation of water treatment plants. When investing in a project, we take the initiative to include local environmental, social and governance risks into the scope of risk identification, timely follow up changes in ESG-related laws and regulations, analyze the compliance risks and industrial opportunities, and implement risk prevention and control and emergency response plans in a targeted manner.





# **Commitment to sustainable development**

As an environmental service company, we are committed to supporting the 17 Sustainable Development Goals (SDGs), and guarantee to fulfil our corporate social responsibility by sustaining stable water supply, improving sewage treatment efficiency, and strengthening technological innovation.

We have identified the ninth most relevant SDGs and incorporate these goals into our development strategy and business operations.

Key SDGs	BEWG's actions and achievements in 2020	Chapter
3 GOOD HEALTH AND WELL-BEING	Facing the Covid-19 outbreak, we focus on resuming work and production, stabilizing supply, ensuring the safety and health of employees and donation for pandemic prevention.	Topic Two 2.3 Improving service quality 3.3 Putting people first
5 GENDER EQUALITY	We uphold equal employment, protect women's rights and interests in the workplace, and strictly prohibit sexual discrimination. In 2020, female employees accounted for 35% of the Group's employees.	3.3 Putting people first
6 CLEAN WATER AND SANITATION	Being a water company, we provide clean drinking water and high-quality sewage treatment service for society through water supply and sewage treatment businesses. In addition, we issued the <i>BEWG Measures for Water Resources</i> <i>Management</i> to scientifically control the entire process of water resources development, utilization and conservation.	2.1 Dealing with water scarcity 2.3 Improving service quality
8 DECENT WORK AND ECONOMIC GROWTH	We believe that employees are the cornerstone of the Company's everlasting growth, and adhere to the people- oriented talent concept. We build a talent management system and a talent training mechanism to continuously cultivate industry leaders and business talents. We aim to protect the rights and interests of employees, provide a fair, diverse and inclusive working site, and integrate employee care into the corporate culture. We are committed to creating cohesive working environment for employees and together with them to create a better future.	3.3 Putting people first

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Key SDGs



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We actively respond to natisupport regional development River Economic Delta, Guang Macao Greater Bay Area, Be region, and contribute to the development. We effectively p upgrade of the water industry transformation. In accordance to *Project Management System* a we digitally constructed the E cloud platform - and the "1+N treatment plant management mo

**BEWG's actions and achie** 

We take measures to mitigat by promoting clean energy energy, accelerating technologi equipment transformation for enand emission reduction, p construction and green office, a carbon development.

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We protect biodiversity throu life cycle. We have implement measures to protect the hal and plants, and promote the mankind and nature. In 2020 mankind on improving the per environment comprehensive Australian company carried out and plant yard afforestation.

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We attach great importance is and integrity and compliance *BEWG Business Code of Con* an integrity compliance superv management system, and laun and Compliance" section on t to disclose its anti-corruption and practices. In 2020, we r corruption complaints, and there litigation.

We are committed to react cooperation with all links in the invigorously supported the const Tianjin-Hebei region, the Yangt Belt, the Guangdong-Hong Ko Bay Area, and the "Belt and Roat projects establish a cooperate environment and water services profits that feature pan-central symbiosis, interdependence and

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### 2020 Sustainability Report

vements in 2020	Chapter
ional strategies to t, such as Yangtze gdong-Hong Kong- eijing-Tianjin-Hebei e "Belt and Road" promoted the smart by applying digital to the BEWG <i>Digital</i> and other systems, BECloud – a smart N" integrated water nodel.	Topic One 3.1 Innovation-driven development
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ughout a project's need six prohibition abitats of animals harmony between 0, the Group kept formance of water e renovation. Our it wildlife protection	2.2 Preserving the ecological environment
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# **Stakeholder Engagement**

# Stakeholder list and mode of communication

Stakeholders' opinions are crucial to BEWG's sustainable development. The Group pays close attention to the feedback from stakeholders and communicates with them on a regular basis.

Stakeholder	Communication channel	Expectations and requirements
Shareholders and investors	<ul> <li>General meeting of shareholders</li> <li>Periodic reporting and announcements</li> <li>Investor communication meeting</li> </ul>	<ul> <li>Continual and stable return on investments</li> <li>Product and service enhancements</li> <li>Risk management</li> <li>Action on climate</li> <li>Corporate governance</li> </ul>
L Government and regulators	<ul> <li>Disclosure of information</li> <li>Daily communication and reports</li> <li>On-site investigation</li> <li>Supervision and inspection</li> <li>Visit and reception</li> </ul>	<ul> <li>Provision of employment</li> <li>Response to the national strategy</li> <li>Product and service enhancements</li> <li>Safe production and compliance operation</li> <li>Technological innovation</li> <li>Energy saving and emissions reduction</li> </ul>
Customers	<ul> <li>Customer satisfaction survey</li> <li>Visits and communication</li> <li>Customer activities</li> </ul>	<ul> <li>Product and service enhancements</li> <li>Disclosure of information</li> <li>Win-win cooperation</li> </ul>
Semployees	<ul> <li>Labor contracts</li> <li>Asking for opinions</li> <li>Communication channels for career development</li> <li>Employee care activities</li> <li>Tailor-made training</li> <li>Anonymous communication channel</li> </ul>	<ul> <li>Guarantee of employee rights and benefits</li> <li>Occupational health and safety</li> <li>Professional training and development</li> <li>Employee care</li> <li>Employee engagement</li> </ul>
Industry	<ul> <li>Launching and participating in industrial activities</li> <li>Sharing research results</li> <li>Constructing communication platforms</li> <li>Interindustry cooperation</li> <li>Technical exchanges</li> </ul>	<ul> <li>Industry-leading development</li> <li>Technological innovation</li> <li>Product and service enhancements</li> </ul>
Suppliers and partners	<ul> <li>Public bidding</li> <li>Contracts and agreements</li> <li>Suppliers' meeting</li> <li>Suppliers' training</li> </ul>	<ul> <li>Compliance with contracts</li> <li>Mutual benefits</li> <li>Supply chain management</li> <li>Ecological cooperation</li> </ul>
Community	<ul> <li>In-person visits</li> <li>Charity activities</li> <li>Charitable donations</li> <li>Volunteer activities</li> <li>Open day event</li> </ul>	<ul> <li>Community communication</li> <li>Community service</li> <li>Community investment</li> <li>Environmental protection advertisement</li> </ul>
The public	<ul><li> Open day event</li><li> Public services</li></ul>	<ul> <li>Safe and reliable products</li> <li>Stable employment</li> <li>Environmental protection advertisement</li> </ul>
Research and academic institutions	<ul> <li>Industry-university-research integration</li> <li>Talent cultivation</li> </ul>	<ul><li>Talent cultivation</li><li>Industry-leading development</li><li>Technological innovation</li></ul>

# Stakeholder communication progress

In 2020, BEWG continued to maintain daily communication with stakeholders and accumulated feedback and suggestions from external stakeholders on ESG issues. At the same time, for the preparation of the report, we had 20 interviews with various stakeholders to understand their concerns and expectations, so as to adjust the result of materiality analysis.

# **Materiality Analysis**

BEWG assesses material ESG issues on a regular basis, and develops a materiality matrix to determine the extent and boundaries of the disclosure of each issue. In 2020, BEWG sorted out and analyzed the issues of concern of the Company and in the industry included in mainstream ESG ratings of the capital market, and based on the communication with various stakeholders and the discussion and analysis of the management of BEWG, we reviewed the existing matrix and made no major changes to it.

**BEWG ESG Materiality Matrix 2020** 



# **Topic one:**

Supporting the national strategies as a responsible stateowned enterprise

Committed to its original intention of water treatment, BEWG focuses itself on environmental protection with an emphasis in water treatment. BEWG comprehensively serves national strategies, and is bent on protecting the lucid waters and lush mountains. We contribute to the development of the Yangtze River Delta, the Guangdong-Hong Kong-Macao Greater Bay Area, the Beijing-Tianjin-Hebei region, and the Belt and Road Initiative (BRI) with water services.

## Protecting the mother river

Leading by the principle of "well-coordinated environmental protection and avoid excessive development", BEWG actively participated in the "Yangtze River protection" to share weal and woe with the green development of the Yangtze River. We also steadily cooperated with the China Three Gorges Corporation, and increased resource input in various business types such as water environment comprehensive renovation, rural sewage treatment and reclaimed water, etc.



### Case: BEWG was selected into first Yangtze River Protection Index in China

On July 28, 2020, the "CSI Yangtze River Protection Index" compiled by China Three Gorges Corporation and China Securities Index Co., Ltd. was officially released, and BEWG was among the first batch of selected companies. This index is the first Yangtze River protection index in China, which can help listed companies participating in the "Yangtze River protection" to introduce incremental funds and attract more social capital to invest in. Being included in the index fully reflected the recognition of BEWG by China Three Gorges Corporation and the capital market.

BEWG focuses on the ecological and environmental protection of the Yangtze and Yellow river basins. Relying on the development pattern of "one axis, two wings, three poles, and multiple points" of the Yangtze River Economic Belt and based on central cities such as Chongqing, Chengdu, Changsha and Wuhan, we give full play to the multi-point supporting role of prefecture-level cities beyond urban agglomeration.

## Highlights of the Yangtze River protection by BEWG:



## Chongging City

BEWG-led consortium won the bid for the comprehensive environmental improvement project of the Changsheng River and its tributaries in Nan'an District of Chongqing City. Through the construction of "six major engineering systems", we aim to build a river network with quality and sufficient water, a biologically diverse and structurally rich ecosystem, and a functional drainage system, to ensure a virtuous cvcle of urban water resources and help Chongging develop into a beautiful city that is "livable, befitting business and travel".



Changsheng River project





per day.



Sutuoyuan Sewage Treatment Plant

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## Luhe District, Nanjing City

## Changsha City, Hunan Province

BEWG's Ganshengyuan and Sutuovuan sewage treatment PPP project in Changsha City, Hunan Province include two sewage treatment plants and supporting facilities. It is a modern water resource utilization complex integrating sewage treatment, water technology exhibition and science education base. Among them, the Ganshengyuan sewage treatment plant and supporting engineering works adopt a semiburied design with a total capacity of 300,000 tons per day. Its construction includes the plant area, pump station, wetland, supporting pipe network and reclaimed water pipe network. Sutuoyuan sewage treatment plant has a total capacity of 400,000 tons





In 2020, with the cooperation of the Yangtze Ecology and Environment Co., Ltd, we implemented a PPP project with full coverage of rural sewage treatment facilities in Luhe District, Nanjing City. The project involves nine streets and towns, 2,513 natural villages with 120,000 households, with capability to serve over 480,000 people with a fixed sewage volume of over 20,000 tons per day. The project focuses on the difficulties of rural sewage treatment and adopts the "rural sewage treatment steward" solution to coordinate rural sewage treatment. The integrated pollution control equipment ensures the quality of effluent water. The rural sewage pipe network construction platform attained smart management. After treatment, the effluent discharge reaches Class 1 Standard B of Jiangsu Province, setting a benchmark for the protection of the Yangtze River and the construction of beautiful countryside



Rural sewage treatment plant in Luhe District

### Highlights of the Yellow River protection by BEWG:



### Yinchuan City, Ningxia

The Yinchuan First Reclaimed Water Plant project integrates sewage treatment, reclaimed water utilization, and science education. It is the first garden-style reclaimed water plant under construction in Ningxia. The project is operated in the BOT mode with a processing scale of 300,000 tons per day, the effluent quality reaching the surface water category quasi-IV, and the reclaimed water utilization rate increased from 14% to 30%. The project can meet the needs of population growth and economic and social development in Xingqing District, Yinchuan City in the next 30 years. The project can serve a population of over 800,000 people, and provide the city with sufficient landscape water, urban miscellaneous water and industrial water. Through water recycling, the project will greatly improve the quality of water discharged into the Yellow River. After completion, the Yinchuan First Reclaimed Water Plant will become a demonstration base for ecological innovation and management of water resources in Northwest China.

### Luoyang City, Henan Province

BEWG launched an urban-level project in Luovang. an important node city in the Yellow River Basin. In the early stage, we aimed to build "the first river of Chinese civilization", planning a diversified urban waterfront ecological shoreline that runs more than 30 kilometers through Luoyang urban area. The first phase of the project focused on the management of the history and culture section of Luohe River and the Chanhe River with a total length of 10.7 kilometers. Through overall planning and implementation of water diversion, water supply, sewage treatment, water environment comprehensive renovation and other systematic works, the project implements the strategy of "Yellow River Basin ecological protection and high-quality development". Thus, receiving the golden standard as a livable city regarding water in the central plains and becoming the benchmark for a city new economic growth.



Rendering of the Yinchuan First Reclaimed Water Plant



Comprehensive renovation project of Luohe River

## Supporting regional coordinated development

Under the guidance of the country's regional coordinated development strategies such as the construction of the Guangdong-Hong Kong-Macao Greater Bay Area, the coordinated development of Beijing-Tianjin-Hebei, and the integrated development of the Yangtze River Delta, we aim to serve world-class urban agglomerations, and have achieved the transformation of regional layout from "point" to "area". We have given full play to our corporate responsibility and professional service capabilities, continuously deepening our efforts to improve the living environment, assisting the rural revitalization strategy, and promoting the construction of the beautiful countryside.



### Serving Guangdong-Hong Kong-Macao Greater Bay Area development

We have explored a unique path of technology-driven intelligent operation, and enhanced the sustainability of the coordinated development of industries in the urban agglomeration of the Guangdong-Hong Kong-Macao Greater Bay Area.

Case: Water environment comprehensive renovation project in Pengjiang District, Jiangmen City

BEWG used the EPCO model to advance the treatment of black and odorous water bodies in the Tiansha and Duruan river basins where water quality problems were prominent in the Pengjiang District. After treatment, the black and odorous water treatment (Phase I) project in Pengjiang District has completed 370 sewage discharge and interception points, channel-tank dredging and diversion of four kilometers. 119 kilometers of new sewage pipe network, and 20 integrated sewage lift pump stations, as well as the treatment of internal sources for nine watercourses, amounting to 18 kilometers of river dredged with a dredging volume of about 90,000 cubic meters.

In 2020, the second phase of the comprehensive improvement of water environment in Pengijang District, Jiangmen City officially started. The second phase mainly includes six sub-projects - black and odorous water treatment, rural sewage collection and treatment, flood control and drainage and water diversion (including water supply to every rural household), drainage guality and efficiency improvement in key areas, green road and water ecosystem construction, and smart water service. After the completion of the project, it will provide a strong guarantee for the Pengjiang District to build a water-based ecological civilization pattern of "water safety, water environment, water ecology, water resources, and water culture", and create a superior ecosystem for Jiangmen City to build an industry-city integration demonstration zone.



## Case: Guangzhou Zengcheng Yonghe Sewage Treatment Plant

In 2020, the fourth phase of Zengcheng Yonghe Sewage Treatment Plant was put into use. This high-standard and high-specification "garden-style" sewage treatment plant has increased the sewage treatment capacity of Zengcheng by 50,000 tons per day, effectively realizing the capacity expansion of urban sewage treatment. The project was assessed as a highquality project and ranked BEWG as the first place in the joint acceptance inspection and was awarded as the "Ecologically Favorable Benchmark Sewage Plant of Historical Leap over Two Centenary Years" in 2021.



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Water environment comprehensive renovation project in Pengjiang District

Zengcheng Yonghe Sewage Treatment Plant

## Supporting Beijing-Tianjin-Hebei region development

By fully tapping its own resources and geographical advantages, BEWG accelerates the ecological "coordination" of the Beijing-Tianjin-Hebei region to fundamentally increase the water efficiency and improve the regional water environment.



Beijing Daoxiang Lake Reclaimed Water Plant is the first all-underground reclaimed water plant in northern China. It covers an area of four hectares and has the first-stage treatment capacity of 80,000 tons per day. The effluent standard meets Beijing Standard B. The allunderground design not only saves more than 70% of land resources, but also effectively transforms the "not in my backyards" effect into benefiting neighboring effect. The ground space serves as a water landscape park, which further improves the living environment quality and land value for surrounding residents.



Beijing Daoxiang Lake Reclaimed Water Plant

The Daoxiang Lake Modern Water Plant Upgrade Project aims to build a star-rated modern plant, highlighting modern industrial aesthetics, and to perfectly combine the plant with the Group's VI image and 6S standard system. The plant strives to build a multi-functional intelligent exhibition hall, improves the ventilation and deodorization systems of the plant area, and creates a good operating environment. Relying on the scientific research base, it has demonstrated the level of a national laboratory or R&D center by establishing a new wayfinding system, building a smart water service centralized control center and a safety training center, and achieving a comprehensive upgrade of interior and exterior. Committed to the concept of industrial aesthetics, the plant has been built into a modern one integrating "soundness in functional, technical, material, and formal terms".

## Case: The water service PPP stock project in Sanhe

Sanhe City is an important hub linking Beijing, Tianjin, and Hebei, and situated as an important position in the integration of Beijing-Tianjin-Hebei and the Bohai Rim Economic Circle. Our water service PPP stock project in Sanhe includes four sewage treatment plants with a total treatment capacity of 240,000 cubic meters per day. The effluent quality complies with the B standard of Water Pollutant Discharge Standard for Urban Sewage Treatment Plants of Beijing. This project is an important strategic layout of BEWG around Beijing. It also serves as an important platform for expanding BEWG's presence in the three counties bordering Beijing and for supporting surrounding areas.



Sanhe Sewage Treatment Plant

## Promoting the integrated construction of the Yangtze River Delta

As a flagship environmental protection company, BEWG has proactively deployed in the Yangtze River Delta region to make the engine for innovation and entrepreneurship, supported the integrated and high-quality development of the Yangtze River Delta and enhance the guality and connotation of the "beautiful countryside"



The rural sewage treatment project in Yixing City covers the Taihu Lake Grade I conservation area and water source protection area in Yixing City with the capability to serve 600.000 people of 200,000 households in 2,960 villages.

This project is not only the largest distributed pollution control project in China, but its complexity is also unprecedented. Through overall packaging, industrial coordination, and stock revitalization, BEWG has deployed an in-depth and all-round cooperation with the government, and explored a model of wastewater treatment in villages and towns which providing useful guidance for the supply-side reform of the industry.

Yixing Urban Sewage Treatment Plant has a designed capacity of 100,000 tons per day, total long-term capacity of 150,000 tons per day. It mainly accepts 40% of industrial sewage and 60% of domestic sewage from Yicheng Town and Yixing Economic Development Zone. With the effluent guality meets the Class I Standard A, the project was selected into the preliminary list of "Historical Leaps over Two Centenary Years" benchmark sewage treatment plants in 2020.



Rural sewage treatment station

# **Contributing to the Belt and Road Initiative**



Case: Sewage treatment plant project in Duilung Deging Industrial Park, Tibet Autonomous Region

As the country's ecological security barrier, Tibet's ecological environment construction is the prerequisite and foundation for development. On the snowy plateau of 3,780 meters, the BOT sewage treatment plant project of BEWG in Duilong Deging Industrial Park of the Tibet Autonomous Region has successfully registered. This is the highestaltitude sewage treatment project of BEWG. In order to protect the last pure land in the world, BEWG organized talents and pooled technology to "sow" its "first seed" in the water treatment field in Tibet, putting its environmental protection banner on the Qinghai-Tibet Plateau.



Bird's eye view of the sewage treatment plant in Duilung Deqing Industrial Park

BEWG actively expands overseas markets, participates in the "Belt and Road" initiative, follows the "going global" strategy, and shows the world the "smart" water industry in China through quality project.

# Case: Pantai II Sewage Treatment Plant in Kuala Lumpur, Malaysia

In 2011, the Ministry of Energy, Green Technology and Water of Malaysia awarded BEWG the construction project of the Pantai II Sewage Treatment Plant in Kuala Lumpur, Malaysia. The project is not only an important cooperation between the two countries in the field of infrastructure, but also the first sewage treatment plant built by a Chinese company in Malaysia using its proprietary technology.

The project adopts the plan of building an underground sewage plant on the same site as the previous oxidation pond, and an ecological park with recreational and sports facilities on the ground. The plant applies energysaving technologies such as biogas power generation, solar energy, sewage source heat pump, effluent reuse, waterscape lighting belts, etc., to provide advanced solutions for conflicts between urban development and sewage governance and other environmental issues. Pantai II Sewage Treatment Plant, with a 320,000-ton per day capacity to serve a population equivalent to 1.43 million, is the third largest underground sewage treatment plant in the world and the largest underground sewage treatment plant in Malaysia. It was awarded as the "First Place Prize of Excellent Municipal Public Engineering Design" of the 2019 Excellent Engineering Survey and Design Award by the China Survey and Design Association.



Underground sewage treatment plant in Pantai, Malaysia

# **Topic two:** joining forces to

fight COVID-19

At the beginning of 2020, COVID-19 broke out worldwide and caused a severe situation for pandemic prevention and control. In the face of the pandemic, BEWG quickly launched the pandemic prevention and control work, actively cooperated with the national pandemic prevention policies, and carried out scientific prevention and control measures. The Group went all out to fight COVID-19 and tided over difficulties with the whole society.

BEWG established a leading group for pandemic prevention and control, and successively issued a series of measures and emergency plans. We set up a special working group for pandemic statistics, and launched the "zero report" and "daily report" systems. BEWG carried out pandemic prevention and control work in accordance with the pandemic prevention requirements in different periods, focusing on resumption of work and production, stabilizing supply, ensuring the safety and health of employees, and providing pandemic prevention assistance, so as to fulfill the social responsibility of a listed company.

## Resuming operations to stabilize water supply

Stable water supply and sewage treatment are important parts of pandemic prevention and control, as well as important guarantee for people's livelihood. Since the outbreak of the pandemic, BEWG has actively resumed work and production to ensure the safe and stable operation of urban water systems, to protect safety and quality of drinking water.

During the Chinese New Year, under adverse external conditions such as shortage of prevention and control materials and tight logistics, the Group purchased pandemic prevention emergency supplies through online and offline channels to prepare for the resumption of work and production. After resuming work, the water plants in major regions strengthened the inspection and maintenance of the drainage pipe network facilities to ensure the smoothness of the municipal pipe network system, strictly controlled the influent and effluent indicators to ensure water safety in key places including residential communities, designated treatment points and centralized isolation areas.



Case: Regions of BEWG strived to ensure safety and quality of water and did well in preventing the pandemic

From the front line of the "fight against the pandemic" to nationwide. BEWG actively resumed work and production to ensure quality and safety of water.



Hubei Province was the hardest-hit area in the early stage of the pandemic, and it belongs to the Central Region. In the face of the pandemic, the Central Region promptly initiated emergency supplies of disinfectants and protective masks to ensure the supply. In order to ensure that the water quality was stable and up to standard, the Central Region strengthened the frequency of personnel inspections and management of operating procedures, and required staff to strictly wear masks during sampling, laboratory testing, and inspections.

The Eastern Region increased the frequency of influent and effluent inspections, timely adjusted the process according to the inspection results. We strictly controlled the quality indicators of water to ensure that the pathogenic microorganism indicators meet the national standards.



In order to reduce the risk of infection among the people, the Western Region innovatively launched "no face-to-face" office services. We set up multiple online payment channels such as 96015, WeChat platform, online banking, etc. If users failed to pay on time during the pandemic, the company would not cut water supply or charge overdue fine.

The Southern Region carried out remote inspections through technical means such as cameras and upper computers. We strengthened the disinfection management of sewage treatment to ensure the disinfection effect.



The Northern Region strengthened process monitoring, actively contacted local government authorities to coordinate the deployment of production of pharmaeuticals and protective materials, so as to meet the supply needs of various project companies.



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Detection of water quality indicators



Innovative remote service mode



Strengthened disinfection of water plants

### Case: Kunshan Jianbang Environmental Investment Co., Ltd. in the Eastern Region strived to ensure that the wastewater from key hospitals met the standards

Kunshan Jianbang Environmental Investment Co., Ltd. actively assisted the local area in carrying out pandemic prevention and control of pandemic. We launched emergency plans for wastewater reception from designated hospitals, and set up the standing book for them. While treating all influent to reach discharge standards, we timely gave feedbacks about the situation to local ecological and environmental protection regulators.

At the same time, we comprehensively strengthened operation and supervision management, strictly controlled the disinfection process and effluent monitoring indicators. We could adopt such measures as adding disinfectant or ozone and ultraviolet disinfection based on the actual situation to achieve stable effluent compliance, which demonstrated the spirit of enterprise's responsibility during the special periods.



Strict control of effluent monitoring indicators

## Caring for our people and tiding over difficulties

After the outbreak of COVID-19 pandemic, BEWG carried out deployment work in a timely manner to ensure the safety and health of employees. Before the Chinese New Year holiday in 2020, the Group analyzed various types of information and issued warm reminders and prevention guidelines to employees. We compiled the Safety Knowledge Handbook for COVID-19 Pandemic Prevention and Control, Warm Tips for Covid-19 Prevention and other prevention guidelines to popularize knowledge on pandemic prevention, improve the risk control awareness of employees and help them to build a strong psychological line of defence.



At the same time, the Group carried out health tracking of employees and strictly implemented employee morning check, lunch check, registration and reporting about absence due to illness. If any abnormal situations occur, we will report and deal with it in a timely manner. We implemented in routine management of pandemic prevention and control by phase, stocked sufficient equipment, disinfectants and thermometers. We strictly disinfected office spaces, canteens, and vehicles on a daily basis, and distributed employees protective equipment such as masks and disposable gloves to provide them a healthy and safe working environment.



Posting reminder signs for protection

# Contributing to pandemic prevention and control

On the basis of self-prevention, BEWG fully supported the government and society in the prevention and control of the pandemic in terms of people, finances, materials, and intelligence. During the most critical period pandemic, BEWG donated masks, disinfectant, drinking water, disinfection equipment and other pandemic emergency supplies to local government agencies and charity organizations in many cities.

### Case: Yongzhou Xiangjiating Water Purification Co., Ltd. lauched the donation activity to fight the pandemic

On February 17, 2020, Yongzhou Xiangjiating Water Purification Co., Ltd. organized a donation activity to fight the pandemic, which received a quick response from the management. The company set up a donation box in the conference room. All in-service employees made donations in successive groups, and employees who worked at home used WeChat and other electronic payment means to make donations.

In this donation, all employees made their own contribution to winning the battle against the epidemic, consciously took social responsibilities in the fight against the pandemic, and dedicated love with actions.



Charity donation site

Office disinfection



### Case: Western Region supported the construction of "Huoshenshan" Hospital in Ningxia

On February 18, 2020, the first reclaimed water plant project in Yinchuan City received an emergency notification from the government, requesting the project department to send a team to participate in the construction of the "Huoshenshan" in Ningxia Hui Autonomous Region, i.e. the infectious disease prevention and control building of the Fourth People's Hospital.

BEWG and Western Region attached great importance to it. We immediately mobilized capable forces from the first reclaimed water plant project in Yinchuan City to form an emergency team to assist Ningxia "Huoshenshan" Hospital in Ningxia. We cooperated with other units on the site to achieve main construction and installation of doors and windows of the building in an efficient and high-quality fashion. 15 capable personnels who stayed up for 36 hours to assist the construction of Ningxia "Huoshenshan" Hospital and contributed BEWG strength to resolutely win the battle against the pandemic.



Assisting the construction of "Huoshenshan" Hospital in Ningxia

At the same time, the employees of the Group actively joined the community anti-pandemic frontline. They participated in community pandemic prevention volunteer activities, including pandemic prevention and control knowledge promotion, community entrance and exit checks, environmental disinfection, etc. Their actions helped community pandemic prevention control and demonstrated the responsibility of BEWG.

### Case: Guiyang BEWG Co., Ltd. organized party member volunteers to participate in community pandemic prevention and control

Guiyang BEWG Co., Ltd actively responded to the requirements of the relevant departments of Guiyang for pandemic prevention and control, and mobilized employees to set up a volunteer team. On February 10, 2020, the volunteer team walked into the Huaguoyuan Sub-district Office to carry out pandemic prevention and control together with the office staff, including pandemic knowledge popularization, suspicious personnel screening and investigation, and on-site assistance in key buildings. We showed the BEWG spirit of "responsibility, value and sharing" with practical actions.



Employees volunteered to support community pandemic prevention and control

During the pandemic period, BEWG's overseas projects also actively contributed to the fight against the pandemic by cooperating with local governments. BEWG Hong Kong Kai Fat project of the Group actively donated anti-pandemic materials such as masks and disinfectants to local communities. Besides, we visited the Lok Sin Tong Support Service Centre for Ethnic Minorities and the disabled children's center, distributed anti-pandemic materials and donated stationery to local children.





Community activities of BEWG Hong Kong Kai Fat project



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Visit to Lok Sin Tong by BEWG Hong Kong Kai Fat project





# **Addressing water scarcity**



BEWG actively responds to the national water resources management layout and policy requirements, continuously reinforces internal water resources management and strengthens technological innovation to improve water-saving technologies. Regarding the response to water scarcity as our highest mission, we proceed with improving water resources environment to contribute to the construction of a beautiful China.

In response to the *Water Pollution Prevention Action Plan* issued by the State Council, we have formulated and issued the *Measures for Water Resources of BEWG*<sup>12</sup> in accordance with the *Opinions of the State Council on Implementing the Strictest Water Resources Management System*, the *Water Law of the People's Republic of China* and other relevant laws and regulations. The management measures provide unified management of all water-related projects within the scope of the Group, to scientifically control the entire process of water resources development, utilization, and protection. In order to strengthen the effective implementation of the Measures, we have established a leading group for water resources management, responsible for leading and promoting the implementation of water resources management related work. The Group's functional departments have formed a water resources management team responsible for formulating and implementing related systems, setting and tracking related targets, applying and promoting water-saving measures, and cultivating and promoting employees' awareness of water conservation. We incorporate the completion of water resources management work into the scope of performance appraisal of relevant managers, and commend or reward employees who have made outstanding achievements in water resources management.

# Strengthening water sources management

Facing with water stress, we strengthen water resources management from the source by formulating the *Management System for Water Source Areas* to protect the water sources areas and the surrounding environment. On the basis of abiding by the Group's policies, all project companies and overseas businesses developed their own water source protection policies management, according to local conditions.

Before the project is planned and constructed, we entrust a qualified third-party organization to evaluate the water stability and sustainability, to identify and analyze the risks of water shortages, floods, and pollution. For projects involving direct water intake from rivers, lakes or underground, we organize design units to carry out water resources demonstration work, scientifically evaluate the water resources conditions where the project is located, analyze the scale of water demand, water resources allocation, and the potential impact of the project on the use of water in other industries, water resources and water function zones, and intake water in strict accordance with the water withdrawal permit.

At the beginning of operation phase, we carry out targeted water resources protection work for water source protection areas and water function areas at all levels according to the classification of surface water function zones, in order to ensure water quality and water ecosystem safety at all levels of water function zones, and maintain the water functions and ecological services. For projects involving groundwater intake, we strictly follow the banned and restricted ranges for groundwater extraction approved and announced by local governments to monitor groundwater sources and grasp the changing trends of water level, water volume, and water quality. We have developed response plans for environmental emergencies in water source areas and prepared backup water source areas to guarantee supply in the event of environmental emergencies. BEWG proactively explores the opportunities of applying various unconventional water source projects such as sewage recycling, rain-flood resource utilization and seawater desalination. Drawing on international leading technologies and refined operation and management, we have built NEWater treatment plants and launched our own NEWater brand "AQENT®", to provide high-quality reclaimed water that exceeds the requirements of the *Reuse of Urban Recycling Water – Water Quality Standard for Urban Miscellaneous Water Consumption* and the *Reuse of Urban Recycling Water – Water Quality Standard for Scenic Environment Use.* In this way, we offer customers high-quality water for industrial water, landscape water and drinking water. We carry out rain and flood resource utilization through direct, indirect and integrated use of rainwater. We use rainwater as a supplementary water source for urban groundwater resources. We took steps to innovate and upgrade seawater desalination. We deployed an eco-friendly circular industry chain – integrating water, electricity and salt-based chemical processes – so seawater can be used as a supplemental water source to alleviate stress in water-scarce regions.

# Case: Reclaimed water project in Shouguang Binhai (Yangkou) Economic Development Zone, Weifang City

The reclaimed water project in the Shouguang Binhai (Yangkou) Economic Development Zone, Weifang City, recycles the tailwater discharged from the sewage treatment plant with environmental technology. Since it was put into operation in year 2014, the project has provided production water for enterprises in Bohai Industrial Park, High-tech Industrial Park, and Advanced Manufacturing Park in Yangkou Town, and high-quality water for the green land irrigation of Yangkou Town.

With a capacity of 50,000 cubic meters per day, the first phase of the project reuses 18 million cubic meters of recycled water every year, saving 18.25 million cubic meters of water resources, which is equivalent to 15 Daming Lakes - a historical site in Jinan, Shandong - based on its water storage capacity as 1.2 million cubic meters.



Reclaimed water project in Shouguang Binhai Economic Development Zone, Weifang City

<sup>12</sup> Public disclosure URL: http://www.bewg.net/uploadfile/2020/1020/20201020105627449.pdf

### Case: Zaozhuang South-to-North Water Diversion Project

The designed total water supply capacity of the Zaozhuang South-to-North Water Diversion Project is 110,000 cubic meters per day. In 2020, its average water supply reached 58,400 cubic meters per day. The project addressed the difficult access to water of enterprises in Zaozhuang City by replacing groundwater to secure people's livelihood, and providing sustainable water supply for the landscape construction of the Heiyu Reservoir to surround the city with water and the development of Xuecheng District. Besides, the regional landscape of Hezhuang Reservoir echoes with Linshan Park and Xizhong Lake, connects with the urban forest park to form a landscape belt, providing important support for the ecological water environment of Zaozhuang.



Zaozhuang South-to-North Water Diversion Project

We are committed to building sponge cities with actions. We have effectively intercepted and collected surface runoff, enabled more infiltrated water into the local area of cities, and facilitated regional water conservation by building a variety of sponge facilities across major comprehensive treatment projects for the river basin. In water environment comprehensive renovation projects, we develop joint scheduling of water quality and quantity by coupling of river network model and pipe network model, and simulating the multi-scenario scheduling scheme. By conducting the joint scheduling, we systematically solve the problems of low ecological basic flow of urban inland river system, unstable water quality, to maintain the balance of water quality, water volume, and water ecology of target water areas and to ensure the efficient use of water resources.

### Case: Water comprehensive treatment project in Yuhangtang River Basin

The water comprehensive treatment project in Yuhangtang River Basin is comprised of four sub-projects involving sewage treatment plant, catchment management, river improvement, and park greening, integrating traditional water services, recreational landscape construction, and comprehensive water system improvement.

Using intelligent operation and maintenance control of the river water environment, the project established online monitoring facilities and intelligent management and control systems, and made integrated use of Internet of Things, big data, Geographic Information System (GIS), Building Information Modelling (BIM), Augmented Reality (AR), model analysis and other technologies to achieve digital management such as the real-time monitoring of water guality and water volume and risk warning of the Yuhangtang River Basin, intelligent grid operation and maintenance system for river patrol. Relying on our smart water management expertise, the water comprehensive treatment project in Yuhangtang River Basin won the title of "Provincial Beautiful Rivers and Lakes".



Yuhangtang river project

# Innovating in water-saving technology

BEWG innovates and explores diverse methods to save water, conducts R&D to improve existing technologies, develops smart water supply system, forecasts water demand accurately, reduces pipeline leakage, and utilizes water resources rationally to improve water efficiency and ease water scarcity pressure.

For the purpose of ensuring water safety and quality, BEWG optimizes the production process and improves the utilization rate of water resources to improve management efficiency in all links from the source. In production and operation, we strictly control our self-supply water consumption. We developed the star-level water treatment plan assessment standard, which sets higher requirements for water efficiency than the national Standard for the Design of Outdoor Water Supply Engineering. According to our own standard, the proportion of self-supply water for plants that engage in process water reclamation should be no higher than one percent. The proportion of self-supply water for plants that does not engage in process water reclamation should be no higher than three percent. In addition, all new plants are equipped with water reclamation and reuse systems. We also encourage older plants to add water reclamation and reuse systems. We use reclaimed water first in production and operation, and recycle water for reuse through water recycling technologies.

### Water consumption by BEWG from 2019 to 2020<sup>13</sup>

Indicator	Unit	2020	2019		
Water Business					
Reclaimed water consumption	Ton	34,349,434	28,736,677		
Fresh water consumption <sup>(1)</sup>	Ton	64,509,153	2,688,615		
	Overseas Wa	ater Business			
Fresh water consumption	Ton	372	609		
	Solid Wast	e Business			
Fresh water consumption	Ton	533,707	165,036		
	Office B	suildings			
Fresh water consumption	Ton	782,068	647,726		
	Total of Main Bus	siness Segments			
Fresh water consumption <sup>(1)</sup>	Ton	65,043,233	2,854,260		
Fresh water density <sup>(1)</sup>	Ton per million HKD	2,565	124		

Note: (1) The indicator data changed greatly compared with 2019 due to the unified calibration of indicator collection and statistical methods in 2020

<sup>13</sup>Water consumption refers only to the consumption of sewage treatment business.



The huge urban water supply pipeline network is important to water supply. Water leaks create massive waste and affect our costs. Reducing leaks and pipeline damage are among our most important tasks. When designing pipelines, we follow the relevant national and industry standards and regulations, and have established a modern pipeline leakage detection system. During construction, we inspect the pipeline networks for leaks and damage, we strictly control the quality of pipeline network and include flowing, dripping, and leaking of water in quality assessment. we inspect the pipeline networks for leaks and damage, implement macro-control of pipeline network operation conditions and microscopic survey of pipeline damage and leaks, and regularly replace and repair aged pipelines. We rely on a smart water supply platform to build a smart leak and damage control platform, using GIS, hydraulic model, database technology and other information analysis tools to conduct real-time assessment of the operation and maintenance, leaks and damage of the water supply pipe network with the help of such technologies as District Metered Area (DMA) management, online monitoring, and data analysis, in order to effectively reduce the waste of water resources caused by pipeline damage and leaks.

In 2020, BEWG has six subsidiaries with the pipeline damage and leak rate below 10% and 9 subsidiaries with the rate between 10% to 20%.



### Case: Using intelligent means to detect leaks of aged pipelines



Leak detection with satellite remote sensing covered **1** square kilometers of water supply pipelines in Pengzhou

In 2020, the Pengzhou project of BEWG carried out leak detection with satellite remote sensing for the pipeline network for the first time. Using mid-infrared window-based satellite scanning to obtain remote sensing images, interference factor correction, algorithm analysis and other technical means, we found suspected leak information of the pipeline network system. The work covered 714 square kilometers of water supply pipelines in Pengzhou, and a total of 81 hidden leaks were detected.



BEWG has six

subsidiaries with the

pipeline damage

and leak rate below

10%

With the water supply network as the link, we have established an intelligent water supply system through technical means such as Internet of Things perception, cloud computing, geographic information system, hydraulic water quality model, etc., by which the collection and monitoring of real-time operation data of water plants come true. On that basis we built a scientific scheduling system, which under the premise of ensuring the safety of residential water and pipe network, make each water plant operate at the optimal water supply and then the pumping station equipment operate under the optimal working combination, thereby improving the working efficiency of the pumping station and addressing the problem of uneven water supply.



# Preserving the ecological environment



BEWG always regards the protection and improvement of the ecological environment as our responsibility. Facing with the urgent climate change situation, the Group takes active actions to explore effective measures for low carbon and energy conservation. At the same time, we take into account the overall planning of biodiversity conservation and corporate development. Aiming at the goal of achieving the protection and sustainable use of biodiversity resources, we promote the construction of ecological civilization and the harmony between mankind and nature.

# **Promoting low-carbon management**

Under the guidance of the United Nations Framework Convention on Climate Change, the Chinese government has actively carried out actions to address climate change and promoted the full and effective implementation of The Paris Agreement. In 2020, Chinese President Xi Jinping officially announced at the United Nations General Assembly that China would increase national determined contribution, strive to reach the peak of carbon emissions by 2030 and carbon neutrality<sup>14</sup> by 2060. At the same time, the Ministry of Ecology and Environment issued a document to implement the Administrative Measures for Trading of Carbon Emission Rights (for Trial Implementation) in 2021 to organize the construction of a national carbon emission trading system. BEWG actively responded to national policies, seized potential market opportunities and set out to establish a climate change risk management system. We actively carried out climate risk and opportunity identification and built up the Group's ability to adapt to and mitigate the impact of climate change on business operations. In addition, we plan to establish a carbon emission reduction target that meets our own actual conditions, and gradually improve the carbon emission management system, increase cooperation with the upstream and downstream of the industrial chain, and improve the quality of data and information in carbon emission disclosure.

As a leader in the water industry, the Group deeply understands the relationship between our business and the national emission reduction target. We were stepping up in-depth research on related topics, and committed to leading the industry's new trend of carbon emission reduction and low-carbon transformation, so as to undertake more responsibility for carbon reduction. In this context, BEWG adheres to the concept of "green and low-carbon", actively responds to the national green development strategy. We strictly abide by the Energy Conservation Law of the People's Republic of China and other laws and regulations, and have issued the Low-Carbon Operations Management of BEWG<sup>15</sup> and other internal systems to improve the low-carbon management and operation of the project.

The Group insists on refined and intelligent energy management. Relying on water treatment automatic controls and the Equipment Management Quality Evaluation, the Group has built an economic operation monitoring and energy efficiency evaluation system for the main energy-consuming equipment of the water plant to monitor the energy use in real time. The system can analyze energy consumption indicators and parameters in combination with process operation data, and help on duty staff reasonably control process operation parameters and identify high-energyconsuming equipment in order to reduce energy consumption. In 2020, the Group incorporated energy-saving and consumption-reduction indicators into the star-rating evaluation system, and formulated an energy-saving and consumption-reduction evaluation system that met our needs.

<sup>&</sup>lt;sup>14</sup>Carbon neutrality refers to when "zero carbon dioxide emissions" is achieved by enterprises, groups or individuals within a certain period of time. They achieve this when their calculated amount of greenhouse gas emissions produced directly or indirectly is offset by afforestation, energy saving and emission reduction, etc. <sup>15</sup>Public disclosure URL: http://www.bewg.net/uploadfile/2020/1020/20201020105703631.pdf

### Case: Energy efficiency management system piloted in Dalingshan Lianma Water Treatment Plant

In 2020, the Group piloted energy efficiency management system in Dalinshan Lianma Water Treatment Plant in Guangdong. Through the management system, the Group achieved full coverage of smart meters and online flow meters for major process equipment, as well as real-time control of the power consumption of the entire plant. Moreover, the SCADA system can automatically collect all kinds of energy consumption data and automatically generate energy consumption composition analysis. Additional functions such as an early warning system when consumption exceeds the standard amount were implemented. These functions can make the main process equipment of the whole plant operates in the energy-efficient range.





the average efficiency of the

conveying system by



The installed capacity of new energy projects totaled

3.296 MW



The new energy projects



of on-grid electricity throughout the year



Indicator	Unit	2020	2019
	Water Busines	S	
Greenhouse gas emissions – Scope 1 <sup>16</sup>	Ton of carbon dioxide equivalent	2,834	2,978
Greenhouse gas emissions – Scope 2 <sup>17</sup>	Ton of carbon dioxide equivalent	957,920	1,149,527
Total greenhouse gas emissions	Ton of carbon dioxide equivalent	960,754	1,152,505
	Overseas Water Bus	siness	
Greenhouse gas emissions – Scope 1	Ton of carbon dioxide equivalent	21	19
Greenhouse gas emissions – Scope 2	Ton of carbon dioxide equivalent	88,085	86,534
Total greenhouse gas emissions	Ton of carbon dioxide equivalent	88,106	86,554
	Solid Waste Busine	ss <sup>(2)</sup>	
Greenhouse gas emissions – Scope 1	Ton of carbon dioxide equivalent	3,334	1,177
Greenhouse gas emissions – Scope 2	Ton of carbon dioxide equivalent	15,207	404
Total greenhouse gas emissions	Ton of carbon dioxide equivalent	18,542	1,581
	Total of Main Business	Segments	
Total greenhouse gas emissions <sup>18</sup>	Ton of carbon dioxide equivalent	1,067,401	1,240,639
Greenhouse gas emissions intensity	Ton of carbon dioxide equivalent per million HKD	42	44
otes: 1) Scope 1 emissions were calculated aporting for Other Industrial Enterprise, uefied petroleum gas. Scope 2 emission ower Grids in China and Guidelines of En d Governance Reporting Guide Index of f 2) As a result of the unified calibration eatly compared with 2019.	by converting the consumpt his were calculated according vironmental Performance Indic the HKEX.	ions of direct energy suc to the 2017 Baseline Em cators Reporting included i	ch as gasoline, diesel, a ission Factors for Regio in the Environmental, Sc

<sup>&</sup>lt;sup>16</sup>Greenhouse gas emissions–Scope 1 refers to those generated in production and operation from direct energy, such as coal, gasoline, diesel, natural gas, propane and methane

continuously explore technologies for reducing emissions and improving efficiency. We set up incentive mechanisms to encourage energy-saving technical transformation of equipment and facilities. In 2020, the Group invested 25.48 million yuan to upgrade 311 low-efficiency pumps and fan equipment. We calculated that the actual annualized income was 11.85 million yuan after passing the energy-saving effect verification. The comprehensive investment payback period was 26 months. Each water plant increased the average efficiency of the conveying system by 60% and the average efficiency of the aeration system by 64%, both increase as compared to the same period of 2019.

In order to optimize the energy consumption structure, the Group vigorously promotes the use of clean energy and renewable energy in water projects, such as using solar energy and water-source heat pumps to replace coal and electricity consumption, in order to reduce the proportion of traditional fossil energy consumption. In 2020, BEWG consumed 23,665,390 kWh of renewable energy in substitution.

At the same time, BEWG actively promoted the development of the new energy industry. Beijing Enterprises Clean Energy Group Limited, a subsidiary of the Group, continuously explores photovoltaic power generation, wind power generation, clean heating and other clean energy projects. These projects contribute to the low-carbon reform of the national energy structure, and help to cope with global climate change and reduce greenhouse gas emissions., In 2020, the installed capacity of new energy projects of the Group was totalling 3,296 MW, of which the capacity of grid-connected solar power generation projects was totalling 2,858 MW, wind power generation projects was totalling 438 MW, and the capacity of our clean heating business was 29.04 million square meters.

In addition, some of BEWG's overseas operation projects tried to establish a carbon footprint assessment system to monitor and manage carbon emissions. Portuguese project company has established carbon footprint assessments. It used cleaner production technology to reduce carbon emissions, and assessed the carbon dioxide emissions of main projects. It refined the energy consumption and greenhouse gas emissions of each project, thereby monitoring and evaluating the energy efficiency of the project.



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<sup>&</sup>lt;sup>17</sup>Greenhouse gas emissions - Scope 2 refers to those generated in production and operation from indirect energy, such as externally purchased electricity and steam. <sup>18</sup>Only the greenhouse gases produced in the production process were included, not the greenhouse gases produced in office buildings

### Energy consumption of main business sectors in 2019-2020

Indicator	Unit	2020	2019	
Water Business				
Electricity	KWh	1,407,141,904	1,267,856,817	
Renewable energy substitution	KWh	23,639,137	25,942,173	
Gasoline	Ton	384	460	
Diesel	Ton	355	451	
Natural gas <sup>(1)</sup>	Cubic meter	153,170	82,118	
Steam for heating (purchased externally)	GJ	714	137	
Liquefied petroleum gas	Ton	74	103	

### **Overseas Business**

Electricity	KWh	129,402,978	137,356,187
Gasoline	Ton	5.17	4.66
Diesel	Ton	1.68	1.68

### Solid Waste Business

Electricity (1)	KWh	22,340,770	483,126
Gasoline	Ton	6	42
Diesel	Ton	292	336

### **Total of Main Business Segments**

Comprehensive energy consumption <sup>(2)</sup>	Ton of standard coal	194,943	174,767
Comprehensive energy density	Ton of standard coal per million HKD	8	6

### Notes:

(1) As a result of the unified correction of indicator collection calibration and statistical methods in 2020, the indicator data changed greatly compared with 2019

(2) Comprehensive energy consumption was calculated according to General Principles for Calculation of Comprehensive Energy Consumption (GB-T25892020) by converting the consumptions of gasoline, diesel, natural gas, electricity, and the heat purchased.

# **Protecting biodiversity**

BEWG actively implements the Environmental Impact Assessment Law of the People's Republic of China, and under the guidance of the China Biodiversity Conservation Strategy and Action Plan (2011-2030), has formulated the Biodiversity Protection Management Measures of BEWG<sup>19</sup>. We implemented six prohibitive measures to protect animal and plant habitats, and actively carried out biodiversity protection and ecological restoration work. At the same time, the Group actively cooperates with local government requirements when operating overseas by strictly implementing local biodiversity conservation policies, so as to establish a responsible multinational corporate image.

In order to achieve good ecological and social benefits, and to implement the concept of biodiversity protection, the Group has established a management and control mechanism throughout the life cycle of the project. We have taken some protecting measures in terms of improving the policy and management system, technical plan phase, construction and implementation phase, operation and maintenance phase, etc.



In the early stage of the project, we will carry out ecological basic research, evaluate the environmental impact, organize an expert team to formulate corresponding protection and restoration guidance plans, and establish a special management working group to supervise and implement the desired effects of each stage. At the same time, we will conduct targeted publicity and education on biodiversity to employees, so as to improve employees' awareness of protection and establish an effective mechanism for the company and the society to jointly participate in biodiversity protection.

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During the construction phase of the project, we will carry out regular monitoring in accordance with the guidance plan, strictly implement the environmental supervision system, adopt targeted protection measures, and do a good job in keeping protection records and timely restoration. The construction organization will focus its efforts on prevention and control of actions that affect the surrounding area of the site, such as light pollution, noise pollution, environmental pollution, traffic impacts and so on.

During the operation and maintenance phase of the project, we will combine the intelligent water service system to release regional ecological information in real time, conduct real-time monitoring of local ecological indicators, special animal and plant information, and develop risk identification and emergency handling mechanisms. At the same time, we will carry out ecological restoration and maintenance of the areas affected during the construction process. We will focus on the protection and monitoring of ecological conservation areas delineated within the scope of project operations.

<sup>19</sup>Public disclosure URL: http://www.bewg.net/uploadfile/2020/1020/20201020105644653.pdf



To protect the ecological environment of water sources and avoid disturbance to wild animals and plants, BEWG has formulated the Water Source Areas Management System, which explicitly prohibits employees from fishing, cast-net fishing, poison fishing, electrofishing and blast fishing and from the hunting animals under national protection regulations, such as wild swan, egret and wild duck. We also ask employees to conduct regular inspections.

In addition, we continuously strengthen the water environment comprehensive renovation, constantly innovate the concept of water ecology management, and carry out regional or river basin comprehensive renovation projects. This ensures that the overall restoration of the water ecological environment system is realized. Furthermore, we promote the sustainable use of biological resources, and curb the serious loss of biological resources.

### Case: The ecological restoration effect of Xinfenghe project in Daxing District is remarkable

In 2020, the Xinfenghe project, carried out by BEWG in Daxing District, Beijing, eliminated black and odorous water bodies in the entire river basin. The project greatly improved the water environment and quality of the river basin from the inferior Category V before treatment to surface water Category IV, which is a significant effect of water ecological restoration.

The macrobenthic animals in the Xinfenghe Basin have recovered well, the species and number of birds gradually increased, and the biodiversity of the aquatic ecosystem increased significantly. At this stage, the comprehensive index of aquatic ecological health increased 330% compared to before the treatment. At present, the construction works of Xinfenghe, Laofenghe, Nanyuan Irrigation Canal and Xinxifeng Canal have been completed and opened to the public.

This project is the first PPP project for water environment comprehensive renovation in Daxing District. Using advanced green technology and design concepts, it has achieved good ecological benefits, such as greatly improving the effect and efficiency of water environment comprehensive renovation and effectively improving the ecological civilization and environmental protection in Daxing District, Beijing.



Xinfenghe after ecological restoration



# Improving service quality



BEWG is well aware of the importance of safe drinking water to safeguard people's health and well-being. To this end, we have upgraded our "product capabilities" and "service capabilities", built standardized management system on water supply engineering construction, operations and technologies. We have carried out research on water energy-saving and consumption-reducing operation technologies, optimized operation technologies, and intelligently empowered water environment operations, in order to fully guarantee the quality of water supply and sewage treatment. In 2020, the headquarter of BEWG has passed ISO certifications.

# Focusing on product quality

BEWG actively responds to the national Three-year Action Plan for the Upgrading and Efficiency Improvement of Sewage Treatment and Guiding Opinions on Promoting the Utilization of Sewage Resources, and has internally formulated the "Cangjie Plan" to upgrade "product capabilities" and "service capabilities", creating the core competence of the asset-light company. Through the establishment of operation standards, the empowerment of operating technologies, the evaluation of star performance and the improvement of the efficiency of smart water services, we have strengthened our own operation and management capabilities in all-round ways, striving to provide customers with standardized and innovative products with BEWG characteristics and to create national demonstration water environment projects and model water treatment plants.

## Establishing systematic standards

BEWG issued the its 2019 guidelines on corporate technical standards and collaborative operation in 2020. Through the review of the standard systems, the Group achieved its goal of "standardization, empowerment, consensus, making complex things simple". Targeting at "plants, networks, rivers and lakes", the Group strived to integrate the technical specifications throughout the life cycle and included them into the intelligent operation system, thereby forming a BEWG's water environment standard system uniquely and leading the development of water environment governance industry.

In addition, BEWG released a series of standard systems such as the Technical System White Paper, Guidelines for Collaborative Operation of Water Environment Technical Standards, Guidelines for Collaborative Operation of Urban Water Treatment Projects, Guidelines for Municipal Wastewater Treatment Plant Classification, Evaluation and Implementation, and so on to strengthen product delivery quality and build technical hard-core competitiveness. Among others, the Guidelines for Municipal Wastewater Treatment Plant Classification, Evaluation and Implementation is the industry's first water treatment plant classification, which commercializes municipal wastewater treatment plants, creating high-quality products with BEWG characteristics from the source.

## Standardization of technical research

BEWG has established a Technical Committee, which is responsible for the overall planning of the group's technology strategy formulation, technology decision-making and technology industrialization, promoting the Company's technological development. In 2020, the Technical Committee organized its members to form an expert group for making technical judgments on major technical issues and major projects and conducting research and review on technology identification and introduction. The expert group successively organized the special review of more than 10 corporate guidelines and standard documents such as the *Urban Waterworks Construction Technical Manual*, and more than 10 technical review meetings such as the "Yixing Urban Sewage Treatment Plant Phase I and II Upgrading and Reconstruction Project". The Technical Committee puts forward design optimization ideas for common and key issues found in the frontline of operations, and provides technical support for the Company to create high-quality engineering projects and innovative products. In addition, the Group's technical department jointly compiled the *Technology Development Report*, focused on development fields and special technologies, providing technical support for the Company to clarify the technology development strategy.

## **Upgrading construction delivery**

In order to further improve product quality, BEWG has upgraded the construction quality delivery standards, created excellent projects, and formed an evaluation system of "quality evaluation and joint acceptance" for construction projects. In 2020, the acceptance rate of Group's projects was 100% and the excellence rate has improved a lot compared to the rate of the last year. BEWG has created and 6 outstanding construction projects including Fuzhou Gutai, Yuhangtanghe and Nanjing Luhe. BEWG is also committed to creating high-quality products and strengthening window construction. We have now built comprehensive water environment product experience bases such as Jiangmen and Xinfenghe, as well as benchmark water plant projects such as Taziba, Daoxiang Lake, and Qufu. The Heshan Shaping River project was commended by the State Council of the People's Republic of China for its contribution to protecting of rivers and lakes in Jiangmen City: the Fuzhou Project. Beijing Daxing Xinfenghe Project, Panzhihua Project, were commended by the government and covered by authoritative mainstream media for many times; Xinfenhe and Liangshuihe were both awarded the "2020 Beautiful Rivers and Lakes of Beijing"; special reports on the Southern Region boarded the "Study the Great Nation" platform (xuexi.cn) for 4 times; Yuhang project won the "Excellent Garden Project" in Zhejiang Province in 2020; the Yinchuan First Reclaimed Water Plant project won the gold medal of the 2020 "Zhijian Cup" in China Intelligent Construction Application Contest.

In July 2020, in order to implement the "Historical Leap over Two Centenary Years", upgrade the sewage treatment industry with model sewage treatment plants, and lead the high-quality transformation of the industry, the E20 environmental platform, 16 industry leaders jointly prepared to launch the "Historical Leap over Two Centenaries" Sewage Treatment Benchmark Alliance. The Alliance selected the first preliminary list of future-oriented "Historical Leap over Two Centenary Years" benchmark sewage treatment plants from the five dimensions of sewage treatment: "refinement", "intelligence", "resource utilization", "ecological protection" and "community contribution". BEWG's Mianyang Tazi Dam Sewage Treatment Plant, Yixing Urban Sewage Treatment Plant, Kunshan North District Sewage Treatment Plant, Xintang Yonghe Sewage Treatment Plant (Phase IV) were listed.

In 2020, the acceptance rate of Group's projects was

100%

# Star-rating operation evaluation and demonstration plants of standardized management

Drawing on the management concept of star-rated hotels, BEWG has started building star-rated water plants and comprehensively evaluated the subordinated water plants from the four dimensions of personnel capacity, operation process, operation quality, and economic benefits. Through assessment and inspection, the Group has conducted comprehensive training, assistance, and improvement, assisting in solving operational management problems, systematically improving operational management levels, and creating national "demonstration water plant" and forging an excellent operating brand of BEWG. As of the end of December 2020, more than 93% of municipal water operation projects had been qualified for the level of one-star or above, and more than 20% projects had reached the level of three-star-level or above, and 78 three-star-level and above demonstration projects were selected at last.

In 2020, BEWG started the work for demonstration plants of standardized management, promoting the construction of sewage demonstration plants and shaping standardized operation models. Through building a batch of demonstration plants with advanced and standardized management concepts, BEWG has continuously consolidated an outstanding operation foundation by outputting a complete set of reproducible and extendable standardized management models and typical experience. With reference to Japan's research and academic experience, the Group has operated 9 projects including the ones in Changsha Ganshengyuan and Liaoning Anshan as pilot projects, which were built a new wastewater operation model with clear work content, clear operation procedures, and quantified target performance. BEWG has also set up a demonstration plant construction team to compile the basic content, requirements, standards and standardization system files required for the construction of the demonstration plant, and gradually improved the standard system construction. At the same time, we regularly organized the Group's demonstration plant, and assisted the regions to maintain and improve the quality of the demonstration plant construction, comprehensively promoting the standardization of the Group's operation management.

## Upgrading and renovation works

BEWG actively implements the strategy of innovation, pools scientific and technological strength to promote the upgrading and transformation of sewage treatment plants, realize high-quality sewage reuse, and meet the continuously increasing discharge standards in the region. The upgrading and transformation are carried out based on current projects to give full play to the potential of existing treatment systems, reducing the load and dosage of the follow-up advanced treatment section, and improving product quality while maximizing environmental benefits. In 2020, BEWG operated a total of 679 sewage treatment plants (including township sewage treatment facilities) in China. Among them, 349 projects had effluent standards of Grade A and above, with a processing water volume of approximately 11.42 million tons per day, accounting for 80% of the total, an increase of 11% as compared to 2019.

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In 2020, BEWG operated a total of

# 679

sewage treatment plants (including township sewage treatment facilities) in China

# **Enhancing Customer service**

BEWG always adheres to the principle of "service first, customer first", requiring the service hotline of water supply companies to be opened 24 hours a day, increasing the responding rate to customer questions on water usage from such platforms as mayor's hotline, social media, urban construction platform, and promptly accepting customer inquiries, complaints and service needs, thereby enhancing customer experience and satisfaction.

## Satisfaction survey

In 2020, BEWG adjusted its customer satisfaction guestionnaires and management methods based on the China Customer Satisfaction Index (CCSI), and adopted multi-dimensional and multi-level evaluation indicators to understand customers objectively and truthfully, which provides a scientific basis for decision-making to improve the quality of products and services. As of the end of December 2020, the proportion of very satisfied and satisfied customers reached 84%.

Based on the results of the satisfaction survey, BEWG works out improvement actions in a timely manner with focusing on improving service capabilities, meeting customers' needs, conveying the connotation of corporate services, and improving the capital retention of customer relationship.



## **Emergency response**

In the face of sudden flood disasters, BEWG went all out to deal with the flood situation. We formulated flood prevention emergency plans, comprehensively investigated hidden safety hazards, and implemented multiple measures for emergency flood prevention, such as increasing the frequency of daily water quality monitoring to ensure that the water guality was stable and up to the standard. Our staff on duty at all positions earnestly performed duties, strengthened inspections, and ensured the safe and stable operation of water supply facilities.

In 2020, the Group responded to the country's call for "stabilizing production and securing supply" by actively participating in the national battle against the pandemic. During the entire period of the pandemic, the Group did a good job in meeting sewage standards and ensuring water supply safety and stability.

# Case: BEWG actively supported flood control in Qinhuangdao

In 2020, before the flood season in Qinhuangdao, BEWG made full use of the online flood control management system - "Qinhuangdao "plant-pipeline network integration" management system" to arrange for personnel, vehicles, and materials in advance, and organized all flood control personnel into a flood control state. During the entire flood period, the staff of the dispatching command center of the Group used the flood control management system. Based on the water-logging point information, key information and plans of flood control provided by big data analysis of the system background, they paid close attention to the rain gauges, liquid levels, surveillance cameras and other smart sensor equipment installed in each urban area. Combined with the real-time rainfall intensity of each district, the liquid level of the pumping station outlet, realtime video of key parts, they fully controlled the progress of flood prevention in real time and guided the flood prevention and drainage work in urban areas. After the flood prevention work was completed, the dispatch command center used the flood prevention management system to carry out complete archiving and process backtracking on the digital results of flood development, measures and result statistics. Utilizing digital tools and summing up experience, they continuously optimized flood prevention plans and completed the loop of flood prevention management.

Throughout the flood control cycle, BEWG realized the following goals: all overpasses in all districts were safe and unobstructed without stagnant water; the sewage manhole covered of all key road sections were inspected to ensure safe passage; all sewage and sludge treatment plants achieved safe and stable operation and compliance treatment, so that the Group successfully completed the flood prevention and drainage task in Qinhuangdao.



Dispatch command center

# Cybersecurity and privacy protection

BEWG strictly abides by the Consumer Rights Protection Law of the People's Republic of China. E-commerce Law of the People's Republic of China, Guidelines for the Protection of Internet Personal Information Security, and Cyber Security Law of the People's Republic of China, and has internally formulated the BEWG Information Security Management System and BEWG Digital Information Security Management Regulations, and BEWG Plant-level Industrial Control Network Security Specifications, which are from the four aspects of network security, data security, system security, and employee security clarify the personnel organization, process, standards and specifications related to information security management to ensure all-round protection of the Group's data privacy and security. The Group has also established an Information Security Management Committee with the Group's leaders as the core, which is responsible for overseeing the implementation of internal information security policies. At the end of 2020, the smart water platform had passed third-party software testing (CMA and CNAS certifications).

The Group conducts unified identification and hierarchical management of customer sensitive information, and has established a complete security management system and process to effectively protect customer privacy. In order to ensure the security of network information, the Group implements the least-privileged approach to user authentication in application systems based on each employee's job duties and work needs, minimizes employees' contact with important private information, and conducts security division and boundary protection on the office network to ensure that the data is controlled and protected when transferring between systems of different levels.

The Group regularly conducts relevant security knowledge training for employees through online and on-site training. The online training coverage rate has reached 100%, aiming to cultivate employees' information security knowledge and risk awareness. At the same time, all employees are required to sign a confidentiality agreement to know and abide by the Group's confidentiality regulations.



The online training coverage rate has reached

100%



# Improving business integrity



BEWG attaches great importance to business reputation and takes business ethics as the bottom line of corporate behavior. Internally, we strengthen the management of integrity and compliance and create an upright and clean corporate atmosphere. Externally, we maintain long-term cooperation with suppliers based on mutual trust to build responsible supply chains.

# Upholding business ethics

BEWG has always required itself and its employees to pay close attention to anti-bribery and anti-corruption. anti-unfair competition and other fields in accordance with the highest standard of business principles. We have established a centralized, unified, comprehensive, authoritative and efficient integrity and compliance supervision and reporting management system. Through training and awareness promotion, we create a culture of integrity and maintain the corporate image of integrity.

In order to enhance employees' awareness of business ethics, the Group has developed Code of Business Conduct of BEWG<sup>20</sup>, which strictly prohibits employee from soliciting bribes or accepting bribes, including extorting or providing any benefits from/for customers, suppliers, legislators/law enforcement agencies or other persons related to our business, or from acting as a third-party agent to do it. BEWG helps employees to act in line with professional ethics when facing conflicts of interests, and perform their duties in a fair and upright manner. At the same time, we have established an Ethics and Compliance Leading Group to supervise, inspect and deal with issues concerning the compliance of professional ethics by personnel at all levels and the performance of their duties in accordance with regulations and disciplines. In 2020, the Group's Discipline Inspection and Supervision Commission offered integrity and compliance OKR<sup>21</sup> incentives for the centers of the Group's headquarters, regions, business units, and key units directly under the Group, which clarified the target and direction of the integrity and compliance work and promoted the coordination of the upper and lower levels of the Group.

## Case: BEWG's OKR incentive mechanism for integrity and compliance

The integrity and compliance OKR is an important part of the work by the Group's Discipline Inspection and Supervision Commission to comprehensively establish the Group's integrity and compliance incentive mechanism and explore the disciplinary inspection and supervision of mixed-ownership enterprises. Starting from serving the Group's strategy, the mechanism integrates capital market requirements into the Group's integrity and compliance evaluation with an overall objective, including no major corruption lawsuits, a new "pro-integrity" government-business relationship, a benign mechanism of cooperation with suppliers, ecological partners, customers, advocation of integrity, compliance, and observance of law.





<sup>&</sup>lt;sup>20</sup> Public disclosure URL: http://www.bewg.net/uploadfile/2020/1020/20201020105537427.pdf <sup>21</sup> Objective and Key Results

## Anti-corruption and anti-bribery

We adhere strictly to comply with law and regulations such as the Criminal Law of the People's Republic of China, the Supervision Law of the People's Republic of China, the Company Law of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China. Reference to the United Nations Convention against Corruption, the Partnering Against Corruption Initiative (PACI) by the World Economic Forum and the Anti-Bribery Business Guidance by Transparency International and the regulations related to business ethics in overseas operations, we have formed the Antibribery and Anti-Corruption System<sup>22</sup> and Overseas Anti-corruption System<sup>23</sup> covering all employees to strictly prohibit access to illegitimate benefits via any form of bribery and standardize anti-corruption and supervision work. At the same time, the Group has joined the China Enterprise Anti-Fraud Alliance. In the future, we will work with other enterprises in innovative ways to share benefits and promote our anti-fraud work. This supports healthy development and contributes to a clean workplace.

The Group's Discipline Inspection and Supervision Commission, as the specialized authority for discipline inspection and supervision, implements the anti-corruption requirements of the Board, performs the responsibility of supervision and discipline execution, and continuously deepens the anti-corruption work. Currently, the Commission comprises of five members, including one secretary and one deputy secretary, both of whom are senior executives of the Group. The key members of the Board concurrently serve as members of the party committee, supervising and guiding anti-corruption related work. Some of the Group's companies have formal discipline inspection committees, and the Group's party branch has discipline inspection commissioners. Each year, all functional departments and regions sign an Integrity Commitment that defines and guides their anticorruption responsibilities and work.

In 2020, the Group received no major corruption complaints, and had no major corruption lawsuits in trial or closed.



## Reporting mechanism and whistleblower protection

BEWG has set up a Discipline Inspection and Supervision Department to strengthen our anti-corruption supervision, prevention and education, ensure the accessibility of whistleblowing channels, and standardize the handling of clues concerning corruption, bribery and violation of business ethics.

In order to strengthen the confidentiality of reports and accusations, safeguard the lawful rights and interests of the whistleblowers, and ensure the development of disciplinary inspection and supervision work, BEWG has formulated and issued the Confidentiality System for Whistleblowing and Accusation<sup>24</sup>, Whistleblower Protection System<sup>25</sup>, and False Accusation Investigation and Punishment System<sup>26</sup> in accordance with the Criminal Law of the People's Republic of China, the Working Rules for Disciplinary Inspection and Supervision Agencies to Handle Reports and Accusations, and the Regulations of the Supreme People's Procuratorate on the Protection of Citizens' Reporting Rights and other relevant laws and regulations. The Group encourages units or individuals in real names in accordance with law to report any violations of rules, disciplines and laws by the Group's employees so as to protect the legitimate rights and interests of informants.



In 2020, the Group received no maior corruption complaints, and had no maior corruption lawsuits in trial or closed

We set up special settings for all employees of the Group on the network office platform and mobile apps with the "Integrity and Compliance" column installing including whistleblowing methods, punishment announcements, warning cases and "Qingfeng" viewpoint so ao to unblock the hotline, email, newsletter and address of the Discipline Inspection and Supervision Commission, and public reporting channels on the official website of Beijing Enterprises Water Group opens for all employees. We strictly handle all clues in strict accordance with laws and regulations, coordinate with internal audits, external audits or third-party agencies as necessary to conduct due diligence in a timely manner, and promptly announce the punishment for violation of laws and regulations.

When handling clues, we endeavor to protect the whistleblower and the information provided, strictly implement confidentiality measures even if it is proved to be incorrect or lacking a factual basis. Discrimination against whistleblowers, and retaliatory action, are severely punished, in accordance with the law and regulations. We resolutely deal with the acts of false accusation and framing and the disclosure of the whistleblower and reported information in accordance with regulations, disciplines and laws. The persons and cases suspected of violations of laws and crimes are transferred to state agencies for accountability in accordance with the law

## **Business ethics training**

We actively promote a culture of integrity by promoting business ethics awareness of "don't dare to, are unable to and have no desire to commit acts of corruption", and the culture of integrity to all employees in diversified forms such as science popularization, publicity, education, etc.

In the "Integrity and Compliance" column, we select cases of violations of discipline and law to conduct regular publicity and education. We take multiple measures to enhance the awareness of compliance and observance of law of all employees, such as special supervision and inspections against the "four evil winds"<sup>27</sup> before important holidays and issuing an integrity proposal to all members of the Group. In addition, we constantly strengthen the construction of our own supervision team, and organize discipline inspection, supervision and internal audit personnel to participate in various anti-corruption special training such as "reporting and complaint filing standards", "case investigation", "conversational skills" and so on. In 2020, BEWG carried out a research project of Exploration on Strengthening the Supervision of Mixed Ownership Enterprises and the Construction of a Clean Culture to explore ways to prevent risks and corruption, conduct supervision, and form a clean culture. At the same time, we promoted the "Integrity and Dedication from the Heart" series of activities within the Group, which delivered the integrity culture class to the grassroots, gave integrity culture lectures at the regional headquarters, and held the integrity culture oath-taking ceremonies. In addition, we carried out the "BEWG Clean Wind" micro-film exhibition and broadcasting month, which covered the five regions and key units of the Group, with more than 10,000 employees participating.

In 2020 board members received two anti-corruption training and their average training time was eight hours; while rankand-file employees received 66 anticorruption training sessions with an average training time of 9.5 hours per participant.

Board members received 2 anti-corruption training Average training time of the Board members Í was R hours

### 2020 Sustainability Report



Rank-and-file employees received **66** anti-corruption training

with and average training time of **9 5** hours per narticinant



<sup>&</sup>lt;sup>22</sup>Public disclosure URL: http://www.bewg.net/uploadfile/en/fanhuilu.pdf 23 Public disclosure URL: http://www.bewg.net/uploadfile/en/fanhuilu.pdf

<sup>&</sup>lt;sup>24</sup> Public disclosure URL: http://www.bewg.net/uploadfile/en/ijaniu.pdf

<sup>&</sup>lt;sup>25</sup> Public disclosure URL: http://www.bewg.net/uploadfile/en/baohu.pdf

<sup>&</sup>lt;sup>26</sup> Public disclosure URL: http://www.bewg.net/uploadfile/en/wugao.pdf

<sup>27</sup> formalism, bureaucracy, hedonism and extravagance

# Enhancing supply chain management

We always adhere to the principle of fairness and openness in purchasing materials and services, conduct whole-process management of suppliers by formulating clear rules and regulations, to constantly improve the supplier management system. At the same time, we grow with suppliers by organizing suppliers sharing and training sessions, and exploring new channels and platforms for supplier communication.

## Supplier management

We are committed to building a sustainable supply chain, and extending our own sustainability requirements to business partners so as to continuously improve supply chain management system. In accordance with internal rules and regulations such as the BEWG Purchasing Management System, Supplier Management Policies of BEWG<sup>28</sup>, we clarify the responsibilities of each department. Proceeding with the entire process of supplier access, assessment and correction, we implement hierarchical management over suppliers to minimize supply chain risks, and clarify the Group's expectations of suppliers' ESG performance from the perspective of sustainable development. For engineering service suppliers during the construction period. we have formulated the BEWG Standardized Operation Guidelines for Interaction Interface with Construction Suppliers (for Trial Implementation). For engineering service suppliers, we have specifications on how to screen, evaluate, and interact with them.



A review team is composed of professionals to conduct gualification review of suppliers. The review includes basic information, performance, quality level, service reputation and other aspects of the supplier. Suppliers who pass the gualification review become candidates for BEWG supplier;

The review team organizes on-site inspections for manufacturers within the catalog of reserve suppliers, and scores and evaluates the overall situation, production configuration, technological advancement, system certification, environmental protection measures and other dimensions of the supplier to form a qualified supplier list;

Suppliers are required to have EIA qualifications, and provide quality management system certification, environmental management system certification, occupational health and safety management system certification and other gualification certifications.

The management will lead the team to conduct on-site assessment of suppliers, and conduct on-site investigation and scoring of the management of the supplier's factory area according to the on-site investigation list;

Develop different evaluation standards and methods for different types of qualified suppliers, including regular "daily cooperation performance evaluation" on a monthly, quarterly and annually basis, and irregular "event performance evaluation" for unexpected or accidental quality, service, safety and other emergencies.

If a supplier violates the regulations, one-vote negation cancels their qualification.;

Establish a supplier blacklist to include suppliers with major violations of regulations and disciplines, corruption, bribery, and major safety incidents, and order them to implement rectification immediately;

According to the severity of the supplier's problems, the supplier blacklist is divided into frozen and permanent black sub-lists, and the permanent blacklisted suppliers are publicized on the bulletin board of the Group's official website for bidding and procurement.

The ethical behavior of suppliers is important. We sign the Integrity Agreement with all suppliers during the signing of contracts, and strengthen supplier anti-corruption awareness training and publicity in daily communication with suppliers. Corruption is forbidden in interaction with suppliers. If corruption is discovered, it is publicly announced in the "Integrity and Compliance" section of our website. We provide channels to collect information about violations of laws, by ways of telephone, mail or site visits. The Department of Discipline Supervision and Investigation supervises an audit of the Group.

We integrate the ESG concept into supply chain management, identify suppliers with high sustainability risks, and conduct annual ESG risk assessments for key suppliers and suppliers with high sustainability risks. We require suppliers to carry out environmental protection in the production and manufacturing process of their products, and comply with all relevant laws and regulations. We encourage suppliers to use high-quality environmentally friendly raw materials to reduce environmental pollution. Suppliers must care for the safety and well-being of their employees. Being neglected of ESG, creating undesirable social or environmental impacts, suppliers will be punished according to our supplier management system and to the scale of the impact, and may result in a warning, downgrading, termination of cooperation or blacklisting.

We require suppliers who are critical to the Group to comply with the Code of Conduct stated in the BEWG Supplier Management Policy on issues such as labor rights, health and work safety, environmental protection, combating corruption, etc., and implement the regulations in the supply chain.

### Main content of BEWG Code of Conduct for suppliers



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<sup>&</sup>lt;sup>28</sup> Public disclosure URL: http://www.bewg.net/uploadfile/2020/1020/20201020105719128.pdf



BEWG actively develops the digitalization of supply chain management. Guided by business needs we have built a digital supply chain service platform using digital technology and innovative models to link high-quality resources across the industry. We also established four core capabilities of supply chain value addition, supply chain finance, data value, and industry incubation at the three levels of "new genes, new systems, and new ecology". The platform provides suppliers with functions such as one-click order placement, regular settlement, two-way evaluation, which reduces the work process such as inquiries and approvals in traditional procurement, and effectively improves procurement efficiency.

In 2020, we had 20 new suppliers. As of the end of December 31, 2020, we had 1,257 domestic suppliers. As of December 31, 2020, we had 324 qualified suppliers, and all suppliers had obtained ISO 9001 and ISO 14001 certifications.

As of the end of December 31, 2020, we had



### Procurement from critical suppliers in 2020

Indicators	Number	Percentage of procurement costs
Total tier-1 suppliers <sup>(1)</sup>	1,257	100%
Critical tier-1 suppliers	92	7%
Critical non-tier 1 suppliers	0	0

### Notes:

(1) Suppliers that directly supply goods, materials or services (including intellectual property (IP) / patents) to the company.

# Supplier communication

We attach importance to communication and cooperation with suppliers. We reduced information barriers and absorbed innovative suggestions through regular exchanges and technology sharing. We endeavor to achieve ecological collaboration of all sectors in the entire industry value-chain and make joint efforts to build an environmentally-friendly water services ecosystem, and promote the common development of the Group and suppliers and the coordinated development of the industry.



On November 18, 2020, we held the "First Supplier Conference" of BEWG in Beijing with more than 100 representatives of suppliers and financial institutions from the mainland China and abroad participated. The executives such as Mr. Zhou Min, Chief Executive Officer of BEWG, Mr. Yang Guang, Senior Vice President, Mr. Yu Liguo, Senior Vice President, Ms. Wang Zhupin, Vice President, the management and relevant business leaders attended the conference.

With the theme of "Lean Innovation and Shared Eco-prosperity", the conference aimed to lay a foundation for BEWG's innovative supply chain management model and promote the sound development of the industry through the supplier conference platform. The conference interpreted the transformation and development strategy of BEWG and the new concept of supply chain management, and officially released our digital supply chain service platform.

In addition, based on the actual application results of more than 1,000 water plants, we conducted comprehensive and multi-level rigorous evaluation and selection in multiple dimensions such as product quality, use cost throughout the life cycle, and user satisfaction, awarded eight "BEWG 2020 Outstanding Suppliers (Equipment and Materials)", at the conference.

Case: Working with suppliers in product development

In 2020, BEWG used a single product as a pilot to have multiple communications with centralized procurement suppliers, make product development suggestions and provide users feedback to suppliers, to achieve the standardization of product specifications and series. This practice reduced the workload and production costs on the investment, design and production, improved the production efficiency and quality of us and suppliers, and helped suppliers build product capabilities above the industry level and enhance their industry competitiveness.

By promoting product standardization with suppliers, we decreased the dosing system procurement from more than 60 types before centralized procurement to six types, raised the sharing rate of common parts of various specifications to 80%, and made a total of 62 performance improvements, resulting in electricity savings of 5% to 8%, further pharmaceutical savings of 3% to 5%, floor space savings of 20% to 30%, and higher operational reliability by 15%.



The First Supplier Conference of BEWG

# **Sustainability** performance

BEWG promises to reassure the government, satisfy the public, earn profits, benefit its employees, and succeed with its partners. Taking digital transformation as a breakthrough, we promote smart operation of the water industry, attach great importance to the cultivation of innovation capabilities, and take innovation






## **Innovation-driven development**

BEWG promotes smart water service and builds a smart enterprise by business digitization. Through digitization transformation, we promote the upgrade of production lines, and continuously explore the industry-university-research collaborative innovation model and galvanize internal innovation awareness. An internal innovation mechanism has been established to cultivate talents in the water industry and lead the high-quality development of the industry ecosystem.

## **Digital transformation**

The year 2020 marked the beginning of BEWG digitalization. The Group drew an overall blueprint for its digital applications based on the business capability architecture that supports the implementation of its strategy. We also made comprehensive evaluation in multiple dimensions including business maturity, demand urgency, data relevance, and so on, and formulated a digital construction action plan that was compatible with the Group's strategy and management characteristics. A management digitalization working group was established to advance the top-level design of digital transformation systematically. Guided by the digital strategy, we completed the top-level planning and design of business capability structure, application structure, data structure, data model, technical structure, released the BEWG Digital Strategy Guidelines 1.0, and launched the first digitalization program focusing on human resources to realize the digital management of human resources by both online and digital means.

## Smart water service

In recent years, BEWG has deeply engaged in the smart water industry and smart water environment to promote the standardized and efficient development of the industry in accordance with the BEWG Digital Project Management System and other systems. Driven by the dual engine of "business + intelligence", we have realized the in-depth integration of smart water construction and business operations, comprehensively improved operational capabilities, and empowered our asset-light transformation and high-quality development.

### Case: BEWG Water Environment Smart Operation Management System

BEWG's water environment smart operation management system aims at achieving performance targets. It integrates multiple technologies in the field of water environment such as GIS<sup>29</sup>, BIM<sup>30</sup>, AR<sup>31</sup>, Internet of Things, and model simulation, as well as the plant-network-river integrated joint scheduling algorithms in an innovative fashion. The system comprises seven sub-systems, including real-time monitoring and early warning of water guality and guantity, grid-based fine operation and maintenance, safety emergency joint handling, dynamic evaluation of project performance, and so on. It provides systematic, refined and scientific management tools for river basin water environment management, comprehensively improves capabilities in water environment operation, maintenance and management, and eventually forms a "government + enterprise + public" joint governance mechanism.



<sup>30</sup> Building Information Modeling. Building Information Modeling uses various relevant information and data of construction projects as the basis to establish the building model and simulates the real information of the building with digital information.

<sup>31</sup> Augmented Reality. Augmented Reality, also known as mixed reality, uses computer technology to apply virtual information to the real world, so that the real environment and virtual objects are superimposed on the same screen or space in real time

Case: The river chief system-based smart management and control platform in Heshan City. Guangdong Province helps the Six-in-One management of urban water system

BEWG built a river chief system integrated management which controlled platform for 256 third-level river chiefs governing 45 river courses in Heshan City, which features integrated management and control of the whole river basin, the joint cooperation of the whole region and the resource sharing of the whole city. The platform combines the construction of smart cities to build a river chief system-based big data center and data sharing mechanism. Based on the BIM platform, it achieves full coverage from pollution sources to pipeline networks, from water supply and drainage plants to rivers, from cities to rural areas, from governments, enterprises to the public. By virtue of this platform, Heshan City took the lead in realizing "integration of water supply and drainage, integration of water service and water environment, integration of plants, networks and rivers, integration of urban and rural areas, intelligent environmental management, and environmental protection education on regular basis", and was rated a model prefecture in Guangdong Province for the full implementation of the "River Chief System".





In 2020, BEWG's smart water service covered 22 conglomerations, involving 77 water plants, more than 400 pumping stations, more than 600 sewage treatment stations in villages and towns, more than 1,320 kilometers of pipeline network, 170 water plants uploading real-time data to the cloud, and 130 water plants uploading real-time video to the cloud.



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#### Case: "1+N" integrated management model for water plants Daling mountain

The "1+N" integrated water plant management is based on smart water service to create an operation management platform, which unblocks data and processes, integrates management, technology and various ecological resources, and efficiently improves the operation and management capabilities of water facilities in various business formats. Water plant integrated operation is a model innovation that combines technology and management, and is mainly suitable for multi-plant clusters at relatively concentrated geographical locations. BEWG has improved the automation and informatization level within the plant through technical means, and realized the improvement of operation management by relying on the advantages of technology and human resources concentration after the formation of clusters.



"1+N" integrated management model for water plants in Daling mountain

### Case: BECloud is the first specialized Internet of things (IoT) and big data platform in the water industry

In 2017, BEWG established a smart water cloud platform-BECloud. BECloud provides technical support for the joint participation of companies in the water industry ecosystem, scientific research institutions, professional suppliers of smart water services, and individual developers to realize the co-construction and sharing of smart water services and promote the digital transformation of the industry.

Using BECloud, water enterprises can access to various assets such as water plants and pipe networks, realizing the virtual modeling of assets, quick data display and analysis, and intelligent operation. Water industry suppliers and individual developers use the development tools on the cloud to realize the development of smart applications quickly and external sharing through the cloud market. Scientific research institutions and universities use the digital assets and data on the cloud for teaching and scientific research. In 2020, the Alliance of Industrial Internet rated the cloud-based smart water management platform as an outstanding case.

In response to the country's new infrastructure policy, BEWG actively carries out technical communications with operators to promote 5G+ industry applications. We joined upon invitation the China Unicom 5G Application Innovation Alliance as a member unit to explore jointly the implementation of 5G-based industrial Internet. 5G technology can help the water industry to operate more flexibly and efficiently, while improving safety and reducing maintenance costs.



BEWG joined "China Unicom 5G Applications Innovation Alliance"

## Product upgrade

BEWG vigorously implements innovation strategy and strives to enhance its independent innovation capabilities. The Group actively contributes to the industry by leading the water industry to upgrade and achieve win-win cooperation. In 2020, BEWG established a product center to sort out systematically product categories. Eight product sequences were formed including water source management and protection, water supply and high-quality drinking water, pipe network (rain and sewage) systems, municipal sewage recycling and resource utilization, rural water and environment integration, river basin environmental governance and development, sludge treatment and disposal, risk management and smart decision support. They cover all aspects of the social and natural cycles of water, providing comprehensive environmental protection and water recycling service.

### **Restructuring the Product Development System**

BEWG has restructured its product research and development system. The Company restructured the technologyoriented "technology R&D and introduction" platform and the project-oriented "solution" front-office and "product development" middle-office systems focusing on strengthening the Group's technology accumulation and product integration and innovation capabilities.

The Group strives to explore new paths for technology research and development, focusing on the frontiers of water and environmental protection technology development in the mainland China and abroad, with the goal of identifying, capturing and commercializing advanced technologies and building a platform-based technology development system. We established a variety of technology acquisition modes such as commissioned research, cooperative research, independent research, and introduction and translation. We created an open and shared technology verification and incubation platform, built multiple production verification platforms such as those in Baishamen, Hainan, Shandong Qufu and Jinan, and made major breakthroughs in a number of cutting-edge technologies such as the sludge doublerecirculation AOA process and aerobic granular sludge.

## **Technology leadership**

### Innovation and R&D

BEWG maintains its annual investment in scientific and technological innovation. Relying on independent R&D, we have mastered a batch of key core technologies and original achievements with independent intellectual property rights, and continuously promoted the iterative upgrading of industrial technology.



The sludge double-recirculation Ammonia-Oxidizing Archaea (AOA) process is a cutting-edge technology project jointly carried out by BEWG, Beijing University of Technology, and the academician Peng Yongzhen and his team of the Chinese Academy of Engineering. It has made groundbreaking progress, which is the construction of the pilot platform for the first 100-ton class continuous flow AOA process in China. This technology can improve the quality and efficiency of the conventional process. Compared with the conventional AAO process, this technology reduces greatly the hydraulic retention time, saves a large amount of land space and infrastructure investment, significantly improves water quality, saves energy, and reduces sludge. Moreover, the sludge double-recirculation AOA process has good technical compatibility, making it easy to upgrade and renovate, thus indicating broad prospects for industrial application.

#### Case: Aerobic granular sludge technology application R&D

The aerobic granular sludge process is a cutting-edge technology based on independent research and development by BEWG and cooperation with domestic universities. In 2020, BEWG has built a 1,000-ton scale in Jinan. Shandong Province that is operating well. We have obtained the regulation strategy and process parameters for the start-up of granular sludge cultivation and long-term stable operation of the process, and have mastered to a large extent the key technology of aerobic granular sludge suitable for low carbon to nitrogen ratio municipal wastewater in China. The aerobic granular sludge process can greatly save floor space and equipment investment, and has broad application space in the field of municipal sewage and industrial wastewater treatment.



Aerobic granular sludge technology application

### Case: Patented technology - LEAC<sup>™</sup> low-carbon high-efficiency aeration control technology R&D

In order to improve the quality and efficiency of water plant operation. BEWG has vigorously promoted the construction of smart water service, formed LEAC<sup>™</sup> low-carbon and high-efficiency aeration control technology, and obtained the patent "a biochemical aerobic control system based on synchronous nitrification and denitrification mechanism". This patented technology uses data simulation analysis to evaluate the process parameters and equipment status of the sewage treatment plant, establishes a model between "COD, ammonia nitrogen and nitrate nitrogen" and biochemical oxygen demand, and uses time (space) dissolved oxygen regulation as a control strategy. The control technology can save the power consumption of the whole plant by 10% to 15% while it can meet the emission standards stably.

#### Case: Innovation and R&D of integrated sewage treatment equipment to help upgrade comprehensive solutions to sewage treatment in villages and towns

In 2020, BEWG analyzed and compared with the key technologies of sewage treatment in villages and towns in the mainland China and abroad, and independently developed an integrated sewage treatment device based on the conventional Membrane Bio-Reactor (MBR) process. After exploring the process operating parameters, we have achieved stable operation of the device. The device does not require on-site pouring and processing of structures, and the construction period is short, making it convenient for mass production and promotion, thereby having certain value for reproduction and reference.

This innovation also studied the feasibility of removing the total phosphorus in the sewage by sideway to ensure the separation of biological sludge and chemical sludge in the system, which effectively improved the performance of sludge and was directly used in on-site projects, realizing the application of research results. In the context of high discharge standards for rural sewage treatment and high market demand, the above-mentioned technological innovations cannot only provide design parameters and theoretical support for newly built sewage treatment projects in villages and towns, but also provide reference for the optimized operation of existing projects.

### **Intellectual Property Protection**

BEWG strictly abides by the Patent Law of the People's Republic of China and the Anti-Unfair Competition Law of the People's Republic of China to avoid infringing any copyrights or intellectual property rights of other companies and individuals during operations. We also actively protect the Company's intellectual property rights by internally formulating the BEWG Intellectual Property Management System, which systematically stipulates responsibilities of relevant departments, application and approval, transfer and translation, management and use, confidentiality, rewards and punishments of various intellectual property rights. Through the control of key steps such as "patentpending searches ", "avoiding intellectual property infringements ", and "intime patent applications", as well as the intellectual property training activities covering all employees, the Group fully ensures its intellectual property management work to be managed orderly and controllable.

The Group continuously increases intellectual property rewards by issuing the Notice on Declaration for Achievements and Rewards of Intellectual Property and Standard Compilation. The scope of rewards includes patents, software copyrights, trademarks, and national, industry and local standards. which further motivates all employees' passion for innovation and sense of responsibility for science and technology. After declaration by each unit, review by the jury, and approval by the Group's Target Budget Committee, BEWG rewarded a total of 29 intellectual property rights authorized and external standards issued in 2020 that fell within the scope of rewards.

In 2020, the Group successively applied for 79 national invention, utility model and appearance patents, 86 software copyrights and 3 technology trademarks; obtained 135 authorized patents, 86 software copyrights and 1 technology trademark. As of the end of December 2020, the Group had accumulatively obtained 553 authorized patents and 167 software copyrights, which effectively protected the Company's technological innovation achievements and enhanced the Company's intellectual property advantages.



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8



soft copyrights

technology trademarks

3

authorized patents

135

soft copyrights

86

technology trademark



### Industry-University-Research Cooperation

BEWG strengthens the industry-university-research collaborative innovation by signing strategic cooperation agreements with companies, universities, research institutes and other parties to promote the transformation of scientific and technological achievements in the water industry, explore the long-term mechanism of enterprise-school cooperation using the industry-university-research model, and jointly cultivate talents for the water industry.

Over the years, the Group has actively responded to national policies and continued to deepen school-enterprise cooperation. We have successively established strategic relations for the integration of industry and education with 33 "academics-oriented" universities, such as Tsinghua University, Harbin Institute of Technology, Guilin University of Technology, South China University of Technology, Nanjing University, Qingdao University of Technology, and Xi'an University of Architecture and Technology, as well as 43 "application-oriented" colleges and universities, such as Shandong Water Polytechnic and Changsha Environmental Protection College, in order to provide a high-quality talent pool for the development of the Group.

In 2020, BEWG implemented the school-enterprise cooperation program in an all-round way, such as building five industrial colleges in the "East, West, South, North and Central" of the country and building a school-enterprise community. On November 20, 2020, the Group signed a strategic cooperation agreement with 13 universities, including Changsha University of Science and Technology and Northeast Petroleum University. The cooperation was intended to develop more advanced technologies and cultivate more talents, either specialized or practical, and ultimately achieve the long-term goal of "school-



Signing ceremony of school-enterprise strategic cooperation

enterprise cooperation, talent training, integration of industry and education, sharing and win-win results".

BEWG, in conjunction with Beijing University of Technology and other cooperative units, applied for the National Engineering Laboratory of "Urban Sewage Advanced Treatment and Resource Utilization Technology". This laboratory is among the first batch of national engineering laboratories in the field of environmental protection approved by the National Development and Reform Commission. Integrating "production, learning, research, and use", six experimental research and development platforms were set up regarding the advanced treatment and recycling of urban sewage to promote the transformation of scientific research results in the ecological environment and lead the high-quality development of the environmental protection industry.

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BEWG also actively carries out "1+X" certification pilot work, in which "1" is a diploma certificate and "X" refers to the number of professional skill level certificates. The "1+X" certification helps to integrate education standards and enterprise standards, and provides an effective carrier for the integration of industry and education and school-enterprise cooperation. BEWG will take the promoting certification pilot as an opportunity to work with vocational colleges and application-oriented universities and colleges. We strive to combine specialty knowledge with practical experience in the first line of the industry, empower the college curriculum system, specialty construction, teacher training, and talents employment, thereby assuring to be provided high-quality talent guarantee for transformation and upgrading and highquality development of the industry.

In addition, BEWG and the academician Peng Yongzhen of the Chinese Academy of Engineering jointly established an academician expert workstation, aiming to promote the establishment of a long-term scientific and technological cooperation mechanism between the Group and academicians and other top experts in the industry. It will serve the strategic development and technological innovation of BEWG in the water environment business, establish a longterm mechanism for independent innovation, and enhance the innovation and competitiveness of the Company. BEWG set up a post-doctoral research station to carry out a large amount of research and development work, continuously improve scientific and technological innovation capabilities, and cultivate high-end research and development talents. The research areas include municipal water affairs, water environment comprehensive renovation, industrial water, seawater desalination, environmental sanitation and solid waste, and so on. We have gradually obtained scientific and technological achievements and converted them for application.

#### Case: BEWG has built a new pattern of technological innovation platform

Focusing on its innovation strategy, BEWG has established such platforms as the National Engineering Laboratory for "Urban Wastewater Advanced Treatment and Resource Utilization Technology", an academician expert workstation, and Tsinghua University - BEWG Joint Research Institute for Environmental Industry (hereinafter referred to as "Tsinghua-BEWG Institute"). On that basis, we prepared for the construction of "productive testing and certification platform, technology application and promotion platform, and technology industrialization incubation platform" to form a scientific and technological innovation platform pattern of "six centers, three stations, and three platforms", and the productive verification platform has been initially built. With the help of the above-mentioned platform, BEWG carries out industry-university-research cooperation and the transformation of scientific and technological achievements based on its technological application needs and technological development directions.

Relying on the National Engineering Laboratory and the academician expert workstation, BEWG continuously carries out in-depth R&D and transformation of the cutting-edge AOA process technology in cooperation with the academician Peng Yongzhen of the Chinese Academy of Engineering. Under the framework of Tsinghua-BEWG Institute, the Group continues its cooperation with Tsinghua University in terms of technology research and development in the fields of energy conservation and consumption reduction, NEWater, energy efficiency of urban drainage system, rapid pipeline inspection via video and so on, as well as the training class for senior managers in China's environmental industry.



Academician expert workstation seminar on cooperative projects



Education Alliance (CEEIEA)

On November 21, 2020, the 3rd conference of the China Ecological Environmental Industry and Education Alliance (CEEIEA), sponsored by CEEIEA and co-organized by BEWG and other companies, was successfully held in Qingdao. The theme of the conference was "Integration of Industry and Education: Cooperation, Ecosystem, Innovation and Win-win Outcome". Nearly 100 corporate executives from the ecological environment industry and experts and scholars from nearly 30 colleges and universities gathered to discuss the integration of industry and education in the field of ecological environment, which promoted the cultivation of professional and technical talents in the field of ecological environment.

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#### Case: BEWG hosted the third conference of China Ecological Environmental Industry and



The third conference of China Ecological Environmental Industry and Education Alliance (CEEIEA)



In addition, in order to motivate employees' innovation ability continuously, BEWG gives priority to recommend internal innovative talents to participate in the selection and evaluation activities for advanced individuals and socioprofessional titles. At the same time, BEWG strengthens the training and development of versatile scientific and technological talents. In order to unleash fully the enthusiasm of R&D talents for innovation, employees performance and job promotion is by reference to their scientific and technological contributions.

### Leading the Development of the Industry

BEWG leads the common progress of the industry by actively carrying out cooperation and exchanges with partners in the ecosystem, joining industry associations, writing authoritative textbooks, national and industry standards.

The Group promotes the development of industry standardization by successively participating in the formulation of 36 national standards, industry standards, group standards, local standards and corporate standards. In 2020, BEWG participated in the formulation or release of national standards such as "Water Reuse Management Guidelines: Water Quality Management of Reclaimed Water Plants" and "Water Reuse Evaluation Guidelines: Reclaimed Water Treatment Technologies and Processes". industry standards such as Rural Domestic Sewage Purification Equipment, group standards such as Guidelines for the Compilation of Technical Programs for Urban Water Pollution Control and Water Environment Comprehensive Remediation Engineering, Specifications for Manufacturing, Installation and Acceptance of Hydraulic Gate Systems, Technical Manual for Compiling Technical Programs for Urban Black and Odorous Water Remediation. In-situ Modification Technology for MBR Expansion and Upgrading of Urban Sewage Plants, Urban Sewage High Standard Treatment Technical Guidelines, Technical Guidelines for Underground and Semi-underground Sewage Treatment Plant Engineering, and Technical Specifications for Urban Water Ecological Health Assessment, and local standards such as Technical Specifications for Urban Landscape Lake Water Ecological Restoration, Operation and Maintenance, Technical Regulations for Environmental Dredging and Sediment Treatment and Disposal of Urban Rivers and Lakes, and Design Regulations for Ecological Restoration of Urban Rivers and Lakes.

Case: BEWG took the lead in establishing the Smart Water Professional Committee of China Urban Water Association to promote the rapid development of smart water industry

On January 13, 2020, with the approval of the China Urban Water Association (CUWA), the CUWA Smart Water Professional Committee led by BEWG was officially established. CUWA Smart Water Professional Committee is mainly responsible for industry guidance, industry exchanges and services in the field of smart water services. Mr. Liu Weiyan, vice president of BEWG, serves as the director of the Committee, and Mr. Wei Youshuang of BEWG Digital Research Institute serves as the secretary-general of the Committee.

In May 2020, CUWA Smart Water Professional Committee took the lead in applying for two scientific and technological projects of the Ministry of Housing and Urban-Rural Development successfully: "Research on the Construction of Smart Water Standard System" and "Research on Intelligent Control Technology for the Whole Process of Reclaimed Water Plants".

On December 17, 2020, the smart water standard system project kick-off meeting cum expert seminar was successfully held in Beijing. Experts jointly discussed the framework of the smart water service standard system and recent key compilation standards, and clarified the framework of the smart water service system, contributing to the standardization of smart water services.



Group photo of the "CUWA Smart Water Professional Committee"

BEWG joined hands with CUWA Smart Water Professional Committee to participate in the preparation of the "Guidelines for Urban Water Industry Development by 2035", in which we were mainly responsible for the preparation of the content for the smart water sector. Up to now, all revisions of the draft have been completed, and they are planned to be released at the CUWA annual meeting.



## Management innovation

BEWG has initially formed a "2+2" innovation system comprising vocational skills competitions and innovation and entrepreneurship competitions for college students, as well as skills competitions and the "Beidou Award" innovation competition for its employees, BEWG will hold innovation competitions. These competitions will improve the innovation mechanism of the Group, stimulate the innovation vitality of employees and college students, create high-quality products and services for customers, and inject momentum for sustainable development of the BEWG brand.

#### Case: BEWG launched the second "Beidou Award" innovation competition to encourage active innovations among all employees

After the launch of the second "Beidou Award" innovation selection of BEWG. 560 applications from the headquarters to the front line were received, an increase of 35% compared with previous year.

The second "Beidou Award" innovation competition of BEWG was divided into three groups; production innovation. technological innovation and management innovation. Among others, the technological innovation competition received 67 gualified projects in terms of main business of the Group, related to equipment innovation, process innovation. design innovation and control innovation. 10 projects were awarded, including smart water services, energy saving and consumption reduction, water renovation, water supply management, and odor control.

In addition, this year's competition summarized the previous applications of innovative achievements, and set up the "Achievement Application Award". This increased the application and promotion of the outstanding achievements of the first "Beidou Award" award-winning projects. The "seven-stage" biochemical combination process project has been applied to the expansion project of Liuginghe Second Sewage Treatment Plant in Lanshan District, Linyi City, the first and second phases of upgrading and the third phase of expansion of Danyang Wote Sewage Treatment Plant. The "intelligence-based integral solution for water supply network damage and leakage " has been applied to the Nanning Dashatian Smart Water Project. The application not only improves the technology and operation level of projects, but also greatly saves investment and operation costs.





BEWG Group's 2nd "Beidou Award" Innovation Competition

Case: The BEWG Water Cup of the 3rd China Internet Plus Ecological Environment Innovation and Entrepreneurship Competition

The BEWG Water Cup of the 3rd China Internet Plus Ecological Environment Innovation and Entrepreneurship Competition with the theme of "Smart Environment, Innovative World" finals competition opened in Harbin on December 5, 2020. The Competition was held to create an atmosphere of "promoting learning, teaching and innovation through competition" and encourage colleges and universities to accelerate the transfer and transform of scientific and technological achievements and the cultivation of innovative and entrepreneurial talents.



In order to facilitate the application of these achievements and drive innovative and entrepreneurial projects, a project signing meeting was also held along with the Competition. BEWG reached investment intentions with 12 projects. BEWG will provide the project team with special scientific research funds, open scientific research and incubation platforms, market-oriented platforms and other resources.

## **Ecological alliance**

BEWG actively contributes to the industry ecosystem by strengthening joint innovation with customers and promoting win-win cooperation in multiple fields. In projects such as Heshan, Sanhe, and Nanyang, the Group carried out indepth cooperation with the government to achieve regional development goals through professional services and create industry gold standard. In addition, the Group steadily moved forward with strategic investment, helping Beijing Enterprises Urban Resources Group Limited and Greentech Environmental Co.,Ltd. make their debut in the capital market; broadened financing channels and optimized debt maturity structure; advanced equity financing via insured creditors' rights scheme, introduced Ping An Asset Management, and increased its equity assets; explored stock fund products and completed the signing of Sino-Italian Fund FOF contract. We successfully issued the 2020 perpetual medium-term panda notes series 1 with a coupon rate of 4%. This is the first approved and successfully issued Panda Perpetual medium term note in the Chinese inter-bank market and the only medium term note in the domestic market that integrates multiple attributes such as "panda", "subordinated", and "perpetual". In 2020, BEWG had a total of 23 ecological corporate partners, with whom we built an ecological cooperation model in the fields of smart water services, financial services, technological services, environmental sanitation, solid waste, and clean energy to realize value sharing. Among them, we established a joint venture with GreenTech Environmental Co., Ltd. to launch in-depth cooperation in seawater desalination.



The launching ceremony of the 3rd "The BEWG Water Cup" China "Internet +" Ecological Environment Innovation and Entrepreneurship Competition



## Putting sustainability into action

BEWG is committed to providing clean water and a healthy environment for the society. While continuously improving economic benefits, we also seek a path of green development. We constantly optimize the environmental management system, strengthen the control of pollutant emissions, and implement green construction and green operation models that save energy and reduce consumption, striving to improve the efficiency of resource use, reduce environmental pollution and help build a better ecosystem.

## **Reinforcing environmental management**

Based on laws and regulations, for instance, the *Environmental Protection Law of the People's Republic of China* and the requirements of its operation sites and also based on its own needs, BEWG has formulated internal management systems, including the *Practice and Measures of Key Control Nodes in Traditional Water Construction Projects*, the *Design of Urban Wastewater Treatment Engineering*, the *Environmental Yardstick Assessment System* and the *Environmental Factor Identification, Evaluation and Control Procedures.* We continuously improve the environmental management system and actively organize ISO 14001:2015 system upgrading training and its certification audit.

The Group requires each project company to realize the whole-process from environmental risk management and control of investment to the design, construction, and operation. Each company should fully consider the scope, degree and frequency of the environmental impact, and adopt corresponding safeguards and measures to maximize environmental benefits and achieve environmental goals of "saving energy, reducing consumption, reducing pollution, and increasing efficiency". Everyone needs to do a good job disclosing information and needs to accept the supervision by all stakeholders and the general public.

BEWG implements the whole-process environmental management



BEWG also attaches great importance to the environmental compliance of overseas operations. We strictly abide by local laws and regulations, and form corresponding environmental management systems. In order to control the impact of production and operation activities on environment, our project company in Portugal developed an environmental yardstick assessment system and set up a three-level environmental assessment mechanism based on a scoring system of environmental risk and control measures.

## **Tightening emissions management**

On the basis of complying with the environmental protection laws and regulations including the *Environmental Protection Law of the People's Republic of China*, the *People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste*, the *Law of The People's Republic of China on the Prevention and Control of Water Pollution*, the *Law of The People's Republic of China on the Prevention and Control of Water Pollution*, the *Law of The People's Republic of China on the Prevention and Control of Water Pollution*, the *Law of The People's Republic of China on the Prevention and Control of People's Republic of China on the Prevention and Control of People's Republic of China on the Prevention and Control of People's People's Republic of China, the Notice on Strengthening the Prevention and Control of Sludge Pollution from Urban Sewage Treatment Plants, the Solid Waste Prevention and Control Law, as well as local regulations of various places of business*, BEWG has formulated internal systems including *BEWG Management Manual on Quality, Environment, and Occupational Health and Safety, Quality, Environment, and Occupational Health and Safety Procedure Documents, and Practices and Measures for Key Control Nodes in Traditional Water Construction and Measures for Water Resources Management of BEWG*, etc. We strictly manage emissions of wastewater, exhaust gas, sound, and solid waste, while adopting innovative technologies for emission and waste reduction to reduce environmental pollution and damage.

### **Green construction**

The Group always adheres to the concept of green construction. In conjunction with China Railway Fourth Bureau Group Co., Ltd., we compiled the *Guiding Manual for Safe and Civilized Construction of Urban Water Projects*. A construction project emission reduction team was established to strictly control the discharge of various pollutants that cause air pollution, water pollution, noise pollution, light pollution and solid waste pollution.

### **Green operation**

During the operation, BEWG adheres to a green and clean management model, conducting whole-cycle management of exhaust gas, wastewater, hazardous and non-hazardous wastes involved in operations. The main emissions fall into three categories:



production is mainly composed of dissolved substances in natural water, and water purifying agents added during the purification process.

Waste gas, sludge and treated sewage are generated by water treatment plants. The waste gas mainly comes from the sulphury dioxide (SO<sub>x</sub>) and nitrogen oxides (NO<sub>x</sub>) generated in the process of biological wastewater treatment. The sludge mainly consists of silt and garbage. The sewage includes pollutants such as COD, ammonia nitrogen and suspended solids.

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Office waste, kitchen waste, h a z a r d o u s waste a n d wastewater are generated by everyday work. Hazardous waste mainly includes ink cartridges and light bulbs and tubes. Wastewater is mainly domestic wastewater used by employees.



The large amount of sludge was generated during the operation of sewage treatment plants. the Group first stores sludge in accordance with the standards of the Technical Specifications for Sludge Treatment and Disposal of Urban Sewage Treatment Plants and then periodically transported it out after certain dehydration, or transfers it to a qualified third-party organization for professional disposal. At the same time, we actively take various measures to treat and recycle sludge, promoting reduction, harmless disposal and resourceful utilization of sludge.

#### Case: Qinhuangdao municipal PPP project on sewage sludge treatment promoted resourceful utilization of sludge

The First, Second, and Third sewage treatment plants, in the Qinhuangdao City sewage sludge treatment PPP project, use reclaimed water from sewage treatment as a heat source for the water source heat pump system. This provides heating and cooling guarantees for the office buildings and production and living areas of the plants, which effectively saves energy and reduces pollutant emissions.

In addition, the Beidaihe New Area's sludge treatment plant adopts a hierarchical/phase-separated anaerobic digestion process to deeply dehydrate the biogas residue produced and turns it into nutrient soil that can be used for landscaping, agriculture, and soil improvement. Thereby realizing "reduced, stabilized, harmless" treatment and "resourceful" recycling of sludge





Sewage treatment plants of Qinhuangdao municipal PPP project on sewage sludge treatment

BEWG's sewage business is based on municipal sewage and produces less exhaust gas during the treatment process. At present, in the design and construction phases of new municipal sewage treatment plants, BEWG strictly follows the relevant national laws and regulations and local government requirements for supporting exhaust gas collection and processing systems. For some sewage plants that were constructed earlier, their exhaust gas collection and treatment systems have been improved during the construction of the second phase of the project. According to their geographic locations, the remaining sewage treatment plants, especially those close to commercial and residential areas, have by and large improved their exhaust gas collection and treatment systems to enhance the harmony between the sewage plant and the surrounding environment.

In addition, BEWG attaches great importance to hazardous waste management and strictly regulates the production, collection, storage, transfer and disposal of hazardous waste. Hazardous waste liquids need to be stored in a separate room in the factory area. The storage room is required to be anti-seepage, rainproof, anti-corrosion, anti-leakage, equipped with ventilation, and managed by two people each holding a key to one of the dual locks. Before transferring hazardous waste, the responsible department shall submit application to the environmental protection regulators. After approval, we shall take actions in accordance with the relevant provisions of the Management Measures for the Transfer of Hazardous Wastes.



In 2020, the Group was neither subject to serious pollution incidents nor complaints or fines due to serious pollution or violations of environmental regulations.

#### Emission types and emissions of BEWG in 2019-2020

Emission Type	Unit	2020	2019
	Water B	usiness	
Hazardous solid waste	Ton	205	221
Hazardous solid waste density	Ton/million HKD	0.008	0.008
Non-hazardous solid waste	Ton	2,033,760	2,068,193
Non-hazardous solid waste density	Ton/million HKD	80	73
	Overseas	s Business	
Non-hazardous solid waste	Ton	17,517	14,050
Non-hazardous solid waste density	kg/million HKD	691	498
	Solid E	Business	
Total wastewater discharge	Ton	3,297	3,685
Non-hazardous solid waste (1)	Ton	427	10,213
Non-hazardous solid waste density	kg/million HKD	17	362
Sulfur dioxide emission	Ton	21	31
NOx emission	Ton	194	171
Soot emission	Ton	4.27	9.05
	Office I	Buildings	•
Hazardous solid waste	Ton	10.18	9.22
Hazardous solid waste density	kg/million HKD	0.4	0.33
Non-hazardous solid waste	Ton	1,959	2,035
Non-hazardous solid waste density	kg/million HKD	77	72

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As a result of the unified correction of indicator collection calibration and statistical methods in 2020, the indicator data changed greatly compared with 2019.

# Optimizing energy and resources utilization

BEWG strictly abides by the *Energy Conservation Law of the People's Republic of China* and other laws and regulations. We have formulated policy documents such as *Control Procedures of Project Operation, Control Procedures of Performance Monitoring and Chemical Agent Management Measures,* adopting scientific and efficient modes for energy and resource management and developing energy-saving technical transformation methods to continuously improve the efficiency of resource use.

For the consumption of special chemicals and materials, BEWG has formulated corresponding management methods and supply standards, and implemented fine management throughout the entire process. The Group incorporates the relevant system requirements into the evaluation standards of star-rated water treatment plants, and supervises the implementation during the star-rating self-inspection, business area inspection, regional inspection, review and acceptance by the Group. In order to reduce the consumption of chemicals and materials, we set up metering facilities during the dosing process to control dissolved oxygen, and adopt a multi-point water inlet method to optimize the operation of high-efficiency sedimentation tanks, thus to give full play to the process potential and improve the utilization efficiency of chemicals.



#### Consumption of chemical agents of BEWG in 2019-2020

Indicator	Unit	2020	2019
Carbon source consumption	Ton	77,680	57,702
Consumption of De- phosphorizing agents	Ton	205,717 <sup>(1)</sup>	21,137

Notes: (1) As a result of the unified correction of indicator collection calibration and statistical methods in 2020, the indicator data changed greatly compared with 2019.

BEWG promotes green office and actively explores various energy-saving and consumption-reducing measures to reduce the consumption of energy and materials. In our daily office work, we regularly carry out cultural promotion of energy-saving awareness, and post water-saving and power-saving tips in offices, meeting rooms, elevators, and toilets to enhance the awareness of energy-saving and emission reduction of all employees. We encourage employees to take public transportation such as gas or electric buses to commute, use energy-saving and low-consumption office appliances, and implement digital transformation and a paperless office model. In 2020, the Group vigorously promoted the use of online video conferencing and office automation systems, holding a total of 830 video conferences, 4,700 web conferences, and 55 live streaming conferences and training sessions. At the same time, we carried out air-conditioning energy-saving management, adjusted the water supply temperature of the heating and cooling system of the headquarters building in different quarters, and installed VRV air-conditioning equipment on the meeting floor of the office building to achieve energy saving and consumption reduction, so that the building's electricity bill reduced by 12% compared with the previous year.

### Energy and resources consumption of office buildings in BEWG in 2019-2020

Indicator	Unit	2020	2019
Power consumption	kWh	41,222,506	36,303,155
Consumption of renewable energy	kWh	26,253	334,153
Gasoline consumption	Ton	1,452	1,261
Diesel consumption	Ton	75	184
Natural gas consumption	M <sup>3</sup>	122,005	61,533
Outsourced steam heating	GJ	7,669	1,653
Freshwater consumption	Ton	844,233	647,726

#### 2020 Sustainability Report

## Putting people first



BEWG regards employees as the cornerstone of the Company's everlasting growth, and always adheres to the people-oriented talent concept. We strive to build a talent management system and a sound talent training mechanism, continuously cultivate industry leaders and business talents, create a fair, open, harmonious, and inclusive working environment for employees, effectively protect the rights and interests of employees, and integrate employee care into the corporate culture, committed to creating a cohesive spiritual home for employees and working hand in hand with employees to create a better future.

## Standardizing employment management

BEWG strictly abides by the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China, the Employment Promotion Law of the People's Republic of China, the Law of the People's Republic of China on the Protection of Minors and other relevant laws and regulations and the Statement of Employee Rights and Benefits of BEWG<sup>32</sup> formulated by BEWG to protect the basic rights and interests of employees and regulate labor and employment management. We prohibit and resist any form of child labor and forced labor, treat employees of different genders, ages, ethnicities and cultural backgrounds fairly, and provide equal job opportunities for all employees. BEWG actively protects the rights and interests of women in the workplace and strictly eliminates gender discrimination. In 2020, the Group's female employees accounted for 35% of the total.

BEWG adheres to the principles of openness, fairness and impartiality in recruitment. We have improved the Recruitment Management Mechanism and formulated the Internal Recruitment Channel Management Methods to standardize the concepts, principles, and execution procedures of internal recruitment and competitive recruitment, and clearly define the qualification requirements of candidates, committed to standardizing the internal recruitment and competitive employment and ensuring equal employment. In 2020, BEWG had no labor complaints.

BEWG has business operations in many places around the world. We strictly abide by the local laws and regulations of the countries where we operate to promote employment diversification, localization and equal opportunities. In 2020, BEWG had a total of 18,694 full-time employees in mainland China operations, 20 employees in Hong Kong, Macao and Taiwan, and 1,049 employees in overseas project companies. The local employment rate was 76%.BEWG respects labor human rights and abides by relevant laws and regulations in the places where it operates. We support the Universal Declaration of Human Rights, UN Declaration of Human Rights. United Nations Declaration on the Elimination of All Forms of Racial Discrimination, ILO Declaration on Fundamental Principles and Rights at Work and Its Follow-Up, Convention on Minimum Age for Admission to Employment, the Employment Policy Convention, Discrimination (Employment and Occupation) Convention, the Convention on Equal Remuneration for Work of Equal Value for Men and Women Workers and other international standards and norms related to human rights, as well as The BEWG Employee Rights Policy formulated within the Group. We fully respects the basic rights and interests of employees and is intended to provide better rights and interests for employees. In addition, BEWG encourages employees to protect their rights and interests and supports employees to join independent trade unions or collective bargaining agreements.

In 2020, the Group's female employees accounted for

35%



The number of full-time employees in mainland China operations of BEWG was

18,694



Employees by type of employment (Unit: Person)







9.1%

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#### Employees turnover rate by age (Unit: Person)



<sup>&</sup>lt;sup>32</sup>Public disclosure URL: http://www.bewg.net/uploadfile/2020/1020/20201020105605708.pdf



## Nurturing talents

BEWG is committed to improving the level of human resources management, and is planning a "Three-Pillar Transformation" of human resources and to establish a Platform Organization - Human Resources Shared Service Center.



BEWG attaches great importance to the career planning of employees by continuously optimizing the remuneration distribution, improving and deepening the talent training mechanism, providing special training for employees of different types and levels, improving the organizational setting for talents, and strengthening the construction of talent teams, so as to ensure sufficiency, reasonable echelon and optimal structure of talents.

BEWG adopts a comprehensive remuneration management approach, which relying on a scientific job evaluation mechanism and a market salary data research mechanism conducts reasonable salary adjustments and optimization of incentive mechanisms every year to maintain the matching of incentive policies and talent strategies. In 2020, BEWG fulfilled the management requirements and talent needs of the Company's asset-light strategy for talent iteration and adopted more dynamic promotion and incentive policies. For instance, we formulated promotion plans for highperformance employees under the age of 35, initiated the "Selection Of Young Outstanding Employees", paid attention to the growth trajectory of talents at all levels, for the first time to carry out public reports of senior executives and top leaders to promote the selection of core talents and the improvement of their capabilities. At the same time, potential talents and management trainees were also evaluated by means of job reporting, so as to provide employees at all levels space and platforms for development and growth.





Debriefing of BEWG executives and top leaders

### Case: BEWG held the 2020 review meeting for the selection of young outstanding employees

In December 2020, BEWG held an annual review meeting for the selection and debriefing of young outstanding employees. 11 young high-performing employees comprehensively, objectively and profoundly reported on the three aspects of work performance review, future work planning, and competence improvement plan, and expounded the expansion of responsibilities and key work plans to be undertaken by them independently in the future for target positions, which fully honed young employees' briefing and leading capabilities and accelerated their growth.

BEWG attaches great importance to the training and development of employees. Upholding the concept of "teaching students in accordance with their aptitude" and relying on BEWG School, we have built a training and development platform to provide employees with diversified training activities. In 2020, in order to further strengthen the in-depth integration of enterprise "production, training and research" and talent "introduction, cultivation and retention", BEWG continued to improve the vocational skills training model and content, comprehensively strengthened the construction of knowledge-based, skilled and innovative talent teams. and offered diversified training courses for different types of employees, with 100% training coverage of all employees.

#### **BEWG** diversified training programs in 2020

Senior Manager Class (Batch 10 & 11) National Waterworks Director Class R (Batch 7) Water Supply Enterprise Management Management Personnel Advanced Class (Batch 3) Project Manager Training Camp (Batch 2) Knowledge and Know-how P The state Examination<sup>34</sup> Front-line Production Worker Skill Level employees Evaluation Exam

<sup>34</sup>Knowledge and Know-how Examination is designed for specific positions and employees who should understand, know, master, and apply basic knowledge and skill sets. The Examination is a basic KPI to assess whether or not employees are capable in their roles.

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Training coverage of all employees was





#### Case: BEWG launched the China Environment Industry Senior Manager Class

In August 2020, the seminar for senior managers of China's environmental industry (10th and 11th sessions) started. A total of 119 trainees - key business personnel from the Group headquarters, regions, directly managed companies, and 35 ecological enterprises - participated in the training.

The seminar for senior managers of China's environmental industry is known as the "Whampoa Military Academy" of the environmental protection industry, and is recognized as a very influential training brand by the environmental protection industry. The Whampoa Class training focuses on the competence of entrepreneurs in the environmental protection industry and the frontier issues of the industry and innovation in practical fields to help students expand their international horizons and enhance their career vision.



The opening scene of the China Environment Industry Senior Manager Class (Whampoa Class)



#### Case: BEWG held a Water Plant "New Dynamic Initiative" Training Camp

In October 2020, BEWG held a "New Dynamic Initiative" training camp for water plants. 46 reserve personnel from the five regions of the Group and first-line water treatment plant operations participated in and successfully completed the training. The training camp for the "New Power Plan" of water treatment plants is a talent training program intended to build a new production and operation team on the front line. Focusing on high-potential talents in environmental protection from colleges and universities, it used high-standard screening, customized training, and targeted job training to cultivate versatile talents who understand management, technology, and operation. The training camp helped the Group implement the dual platforms strategy, consolidate talent training, and accelerate employee growth.





BEWG held the Water Plant "New Dynamic Initiative" Training Camp



In 2020, BEWG carried out the second Knowledge and Know-how Examination, covering nearly 10,000 front-line operators. The content of the exam focused on the basic knowledge of corporate culture, safety, sewage, water supply, equipment, testing and environmental inspection that operators should master. It is a comprehensive review of the knowledge of front-line operators. 9,765 front-line employees completed the exam, and the exam pass rate reached 97%. The exam helped front-line operators deepen the learning and mastery of operating procedures and safety production specifications, stimulated their enthusiasm for learning essential knowledge and skills, and promoted the construction of a learning organization.



BEWG organized the 2020 Knowledge and Know-how Examination



In 2020, BEWG launched the first Production Worker Skill Level Evaluation Exam for first-line production workers, covering eight specialties including sewage treatment workers, electricians, mechanical maintenance workers, automatic control instrument workers, laboratory technicians and inspectors, water meter verifiers, water quality inspectors and water supply plumbers. A total of more than 4,000 candidates took the online exam to help them obtain the full qualifications of primary skills. In addition, the examination was organically combined with the Group's senior electrician level evaluation and the "Evergreen Cup" Electrical Maintenance Competition. 20 senior electricians of the Group stood out, which effectively stimulated the learning enthusiasm of the first-line production workers, helped improve their theoretical learning ability and skills.





The Production Worker Skill Level Evaluation Exam for the first-line workers of BEWG







## Addressing safety operations

BEWG firmly adheres to the concept of safety development and red line awareness. Through such measures as continuous improvement of safety system construction, potential hazard investigation and emergency drills, and promotion of safety culture construction, we comprehensively promote safety management to ensure the stable and continuous production and operation and protect the occupational health and safety of employees.

## Health and safety

## **δoSafe Production**

BEWG strictly follows the Safe Production Law of the People's Republic of China, the Occupational Disease Prevention and Treatment Law of the People's Republic of China and other laws and regulations and abides by the BEWG Management Regulations to Implement the "Three Simultaneous" Precautions for Occupational Diseases, namely the BEWG Responsibility System for Safety in Production, the BEWG Regulations on Hazard and Risk Assessment, and the BEWG Regulations on Occupational Health and other safety management systems to carry out safe production. In 2020, BEWG revised the BEWG Management Regulations for Operations in Confined Space, BEWG Management Regulations for Dangerous and Harmful Factor Evaluation and other safety management regulations to further clarify the Group's safety management work, standardize safe operation procedures, and ensure safe production. In the meantime, we actively promoted system certification. In 2020, the headquarters of BEWG has obtained the ISO system certification.

BEWG conducts systematic management of safety production by establishing safety production committees at the headquarters and each first-level business unit. As the highest decision-making body, the Group's safety production committee is responsible for comprehensive supervision, research, and approval of major safety production issues within the Group. Various functional departments are responsible for specialized management of various entities responsible for safety production to implement safety production work.

In terms of safety supervision and management, BEWG revised the BEWG Management Regulations for Safety Production Inspection, requiring layer-by-layer supervision and guidance of various safety inspections. We collect and analyze the monthly safety reports of each first-level unit on a regular basis every month, and issue a quarterly analysis report on the Group's production safety situation, summarize and analyze the Group's production safety accidents, inspection and training conditions, safety investment data and other information within the quarter, so as to provide scientific basis for improving the overall safety management of the Group. In 2020, BEWG completed a total of 38 comprehensive or special safety inspections of operation and construction projects covering the five regions, Nanjing Municipal Design and Research Institute and Huaian Research Institute of Water Investigation and Design, and other business formats. There were 109,916 routine safety inspections, 5.476 specific inspections, 4.069 comprehensive inspections and 2.162 external inspections in our regions and project companies.



In 2020, BEWG completed comprehensive or special safety inspections of operation and construction projects for

**38** times



Specific inspections

5.476 times

4.069 times



Group leaders on a production safety inspection tour to BEWG Qinghe Beiyuan Water Co., Ltd.

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Routine safety inspections in our regions and project companies





Group leaders on an inspection tour to Jingkai Sewage Treatment Plant of BCEG Environment Development Co., Ltd.

<sup>&</sup>lt;sup>35</sup>Full-time employees in mainland China only



In order to strengthen emergency management, BEWG has formulated the *BEWG Comprehensive Emergency Plan for Emergencies, BEWG Special Emergency Plan for Public Health Emergencies, BEWG Emergency Response Plan for Production Safety Incidents*, and other emergency response plans to unify and standardized the Group's emergency management, clarify emergency response procedures for hierarchical management and control of accidents, ensure orderly management and control in accordance with laws and regulations, and comprehensively improve the emergency response speed and handling capabilities in the production and operation process.

In terms of hazardous materials storage and safety management of special operations, BEWG has formulated the *BEWG* Management Regulations for Dangerous Materials Safety, BEWG Management Regulations for Major Hazardous Sources, BEWG Safety Management Regulations for Dangerous Operations in Operational Projects, BEWG Management Regulations for Operation Safety in Confined Space, among other related systems to fulfill safety production responsibilities by clarifying the safe use of hazardous materials and operational norms of special operations.



## Cccupational Health

BEWG follows the *BEWG Occupational Health Management Regulations* to clarify the overall requirements and responsibilities of employees' occupational health management. In 2020, BEWG revised the *BEWG Safety Education and Training Management Regulations, BEWG Quality, Environment, Occupational Health and Safety Management Manual*, and other related systems to further clarify the occupational health and safety management of employees and provide employees with standardized safety operating procedures. The safety responsibility letter was signed with employees to guarantee the health and safety of employees in all aspects.

In order to ensure the compliance management and adequate supply of labor protection supplies for employees, BEWG has formulated the *BEWG Regulations on Labour Protection Articles Management*, which clarifies the Group's management requirements for provision, purchase, distribution, use, maintenance, replacement and scrapping of labor protection supplies. By setting up a reference table for the provision of labor protection equipment, we provide employees with labor protection equipment with suitable protective functions and effects. BEWG continuously increases investment in labor protection, safety facility maintenance, and special equipment testing to ensure the occupational health and safety of employees by improving the level of hardware facilities. In 2020, BEWG invested a total of 21,875,628 yuan in safe production, of which the investment in labor protection supplies and equipment maintenance totaled 11,615,316 yuan.



In 2020, BEWG invested in safe production were

21,875,628 Yuan

Labor protection supplies and equipment maintenance were

11,615,316 Yuan

In terms of occupational health in special occupations, BEWG establishes occupational health files and worker health surveillance files for employees, organizes regular occupational disease physical examinations for employees in positions with potential occupational disease hazards, and requires new recruits in such positions to receive prescribed health education and training, thereby guaranteeing the occupational health of employees in special occupations in an all-round way.

In 2020, there was one accident<sup>36</sup> and one death within the Group. According to the *Lost Workdays Standard for Injury Accidents* (GB\_T15499\_1995), we lost a total of 6,000 working days.

## {ŷ} Safety Culture

BEWG attaches great importance to the construction of safety culture. By strengthening safety training and launching safety themed activities such as "Ankang Award" "Safety Month" and "Safety Knowledge Quiz", we enhance the safety awareness of all employees, enhance their ability to prevent and handle safety accidents, and create a good safety production atmosphere.

In 2020, the Group's safety education and training volume totaled 115,384 person-times, including 9,500 person-times of safety personnel training, 94,111 person-times of general personnel training, 1,050 person-times of induction training, 1,095 person-times of special operation personnel training, and 1,039 person-times of "Four New" (new process, new equipment, new material, and new operation) safety education, and 8,589 person-times of safety education for outsourced operators.



<sup>36</sup>During the reporting period, in the process of repairing leaking pipelines by BEWG Dongguan Weitong Sewage Treatment Co., Ltd., the blocking airbag burst suddenly, causing the blocking of the connection pipe of the distribution tank to fail, resulting in the drowning and death of one repairer. After the accident, the Group immediately established an emergency command center in accordance with the BEWG Emergency Response Plan for Production Safety Incidents, and the relevant person in charge rushed to the scene of the accident to guide rescue work and investigate the accident in accordance with the BEWG Management Regulations for Reporting, Investigating and Handling Production Safety Incident. The Group convened a special meeting of the Work Safety Committee in a timely manner to report the accident, and required all units to draw inferences from the problems exposed in the accident, comprehensively and thoroughly investigate hidden dangers, strengthen process management, establish and improve the approval mechanism for dangerous operations, and carry out accident warning education activities, so as to enhance the safety awareness of all employees.



In 2020, the Group's safety education and training volume totaled



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#### Case: BEWG's second "Ankang Award" competition

In September 2020, BEWG held the second "Ankang Award" competition. This competition expanded the scope of participants, refined the content of the competition, and set up three events of "safety knowledge assessment for project company leaders""safety knowledge contest for safety managers, and "confined space operation of emergency response personnel and emergency rescue drill". Through targeted assessments and competitions, employees' enthusiasm for participation and learning was stimulated, and their safety awareness and skills was effectively improved.



BEWG's second "Ankang Award" competition site

Case: BEWG "Safety Production Month" activities

In June 2020, BEWG launched the "Safety Production Month" with the theme of "eliminating the hidden dangers of accidents and strengthening the safety line of defense". This event carried out at three levels of the Group, first-level business units, and project companies, The Group's units at all levels carried out a series of colorful and distinctive activities such as warning publicity, education and training, hidden danger investigation and rectification, emergency drills, etc., making full use of new methods such as network interaction and online experience to widely disseminate safety knowledge and firmly establish the concept of safe development, thereby improving the safety production level of the Group.



BEWG "Safety Production Month" kick-off meeting



Fire drill

**Case: BEWG launched "Safety Production** Lecture Hall" online

In June 2020, BEWG launched the "Safety Production Lecture Hall" online. The event hired multiple safety experts to teach safety production related knowledge. After completing the online learning, employees needed to participate in the online safety training test, and a total of 15,410 people passed the assessment. Through the training mode of study + examination, employees enriched their safety production knowledge and improved their safety awareness.

The construction of safety culture of BEWG covers all business operation areas. Overseas branches and subsidiaries in various regions also actively carry out safety training and related safety drills, insisting on propagating the concept of safe production to every employee.

### **Contractor safety management**

While paying attention to production safety and employee health, BEWG emphasizes the safety of contractors. BEWG follows relevant systems such as the Supplier Management Policies of BEWG<sup>37</sup>, BEWG Occupational Hygiene Management Regulations, and BEWG Related Party Safety Management System to conduct safety management on suppliers. BEWG requires contractors or suppliers to have safety production qualifications, signs special safety production management agreements with outsourced contractors and leasers to clarify their respective safety production management responsibilities, conducts patrol inspections and unscheduled inspections during the operation process, and promptly supervises and corrects the hidden safety hazards identified.

BEWG requires contractors to receive safety education and training, and all on-site personnel must pass an assessment and hold a certificate after training. BEWG issues labor protection supplies to on-site construction personnel on time, requires construction personnel to wear safety protection devices for construction, and installs safety signs, lightning protection devices and other safety equipment on the construction site. In addition, BEWG has established an on-site fire protection responsibility system and a protection mechanism for electricity and natural disasters, which stipulates that production and living rooms shall meet the safety clearance required by the fire protection regulations, so as to fully protect the construction safety and personal safety of contractors.

<sup>37</sup>Public disclosure URL:http://www.bewg.net/uploadfile/2020/1020/20201020105719128.pdf

#### 2020 Sustainability Report



Australia TRILITY's monthly special equipment operation safety training



Hong Kong Kai Fat marine incident emergency response training



Indicator	Unit	2018	2019	2020
Number of deaths from production safety accidents in the past three years	Person	0	0	1
Indicator		Unit	20	020
Employees' work injury cases in 202	D	Piece		1
Employee injury rate in 2020		%	0.0	0006
Number of lost working days due to work in 2020		Day	6	000
Injury rate per million working hours <sup>38</sup> in 2020		NA	C	.03
Rate of work-related accidents per thousand people <sup>39</sup> in 2020		NA	C	.06

## **Employee care**

In accordance with the Headquarters Employee Welfare System, BEWG provides employees with decent welfare benefits. On the basis of paying statutory social insurance, we add supplementary commercial medical insurance and supplementary pension annuities for employees, and provide various subsidies covering transportation, catering, communication, heating, and heatstroke prevention and cooling, etc. Among them, female employees are entitled to maternity leave, maternity examination leave and related reimbursement policies for childbirth expenses and maternity examination expenses in accordance with the law. We organize activities for female employees on March 8th International Women' Day, and provide holiday gifts and condolences. In addition, BEWG regularly organizes physical examinations for employees to monitor their physical health.

BEWG insists on enriching the spare time of employees to meet their higher spiritual needs by organizing various cultural and sports activities in accordance with the Administrative Measures for the Organization and Implementation of Corporate Cultural Activities of the Group. In 2020, BEWG innovated and upgraded the activity venues and training course settings, created a multifunctional sports fitness area and a yoga area, promoted the organization of activities on a regular basis, and added a customized course of "Fitness for All". Nearly 50 activities were organized throughout the year, with more than 200 participants, enhancing the physical fitness of employees and injecting vitality into the development of the Group.



BEWG "Fitness for All" exercise

### Case: BEWG "Sharing Meeting"

In 2020, with the "BEWG Sharing Meeting" as a platform, BEWG adopted a mode of combining online and offline to set up interesting games, physical display, and quizzes with prizes, so as to provide employees with a platform for exchange, learning and self-demonstration. The themes include business development, industry policy research, global macroeconomic situation, operation technology management, digital development history, emergency rescue, to expand employees' knowledge and improve their competence and capabilities.



BEWG Sharing Meeting: the past and present of digitalization

BEWG encourages employees to express their requirements and protect their rights and interests. We set up trade unions in the headquarters and subsidiaries. In addition, BEWG organizes employee exchange meetings, such as the monthly executive luncheon, to strengthen communication between executives and employees at all levels, encourage all employees to express their ideas, and listen to their inner voices.



In December 2020, 10 management trainee representatives from BEWG participated in the monthly executive luncheon. More than ten executives of the Group including Group President Mr. Zhou Min discussed with the management trainees such topics as future development, ways to rapid growth, front-line rotation, and so on. Two trainees shared their reading experience of The Perspective of the Country, digital currency and blockchain topics. The in-depth exchanges with the Group's executives deepened the management trainees' understanding of the requirements for them and helped them achieve rapid and leap-forward development. Through communication and exchanges with senior executives of the Group, the management trainees realized the Group's hopes for them and the responsibilities on their shoulders, and thus were more inspired to achieve rapid growth.

<sup>&</sup>lt;sup>38</sup>Work injury incident rate per million working hours = number of work injury cases \* 1,000,000/actual total working hours <sup>39</sup>Rate of work-related accidents per thousand people = 1,000 \* number of work-related injury cases / total number of employees

## Contributing to society

BEWG always keeps in mind its corporate citizenship status by paying consistent attention to and supporting the development of the communities and the wider regions where it operates. We actively participate in public services such as environmental protection education and social assistance, fulfill our corporate social responsibilities and contribute to the healthy development of the society.



## **Promoting environmental education**

Taking advantage of its strengths in environmental protection industry, BEWG actively cooperates with local communities to carry out water and environment protection knowledge popularization, education, and environmental protection activities through community publicity, enterprise tour, cooperative schooling, etc. to help local residents improve awareness in water conservation and environmental protection, promote public participation in ecological and environmental protection, and contribute to the local construction of ecological civilization.

#### Case: BEWG builds Jiangmen Pengjiang Smart Water Exhibition Center

In 2020, BEWG focused on displaying the advanced concepts and technologies of water treatment in Pengjiang and building a high-tech, high-quality environmental protection and water-saving science exhibition center. The Pengjiang Smart Water Exhibition Center contains two parts: an exhibition hall and an exhibition park. The exhibition park covers four functional areas: ecological water purification area, smart water treatment area, environmental education and science popularization area, and smart interactive area; the exhibition hall includes water treatment and environmental protection education pavilion, comprehensive water treatment pavilion, and water governance exchange platform. The exhibition hall is composed of a variety of high-tech interactive facilities and equipment in the mainland China and abroad, such as smart water curtains, water-based board games, and water diversion interactive walls. It is expected that after the completion, the exhibition center will serve as a demonstration center of water-themed environmental protection education base in Pengjiang District, Jiangmen City and provide an environmental protection education venue of nearly 1,000 square meters for teenagers and children in the city and its surrounding areas. In the future, environmental protection education will be promoted to the general public through various methods such as the establishment of Open Days for Environmental Protection, regular environmental protection activities, and WeChat public account operation, etc., thereby contributing to the construction of ecological civilization in Pengjiang District, Jiangmen City.



BEWG Jiangmen · Pengjiang Smart Water Exhibition Center

environmental education base

In 2020, under the "dual platforms" strategic layout, relying on the BECloud industry cloud platform, BEWG established the Mianyang Taziba (short for Taziba project) sewage treatment plant in Sichuan Province and a provincial digital management center. The Taziba project has always been committed to practising and disseminating ecological civilization, training professionals for the industry, and actively promoting public participation in ecological and environmental protection. It is among the first batch of environmental education bases in Sichuan Province. Through the establishment of Public Open Days and various forms of environmental protection activities, it offers environmental science publicity and education to the public and participates in the construction of ecological civilization in Sichuan Province, with more than 20,000 visitors cumulatively.



Command Center of Taziba Sewage Treatment Project in Mianyang, Sichuan Province

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#### Case: Taziba sewage treatment project in Mianyang, Sichuan Province creates an





#### Case: BEWG launched environmental protection education of "Cloud Travel to Water Treatment Plants"

On World Environment Day in 2020, BEWG launched the "Cloud Travel to Water Treatment Plants" online in many places, bringing unique environmental protection education to students.

Cloud itinerary 1:  $(\mathbf{O})$ 

### Taivuan BEWG Water Purification Co., Ltd. in Shanxi Province

Taiyuan BEWG Water Purification Co., Ltd., in conjunction with several institutions, filmed an online video of a visit to its sewage treatment plant, and sent the "cloud visit" video to the school paired with each institution for popular science education.



Taivuan BEWG Water Purification Co., Ltd. sent environmental protection materials to a school

#### Cloud itinerary 2: (0)Yuxi BEWG Water Purification Co., Ltd. in Yunnan Province

Yuxi BEWG Water Purification Co., Ltd. and Hongta District Student Out-of-School Activity Center of Yuxi City Ecological Environment Bureau Hongta Branch jointly organized the "Environmental Protection Education Practice Activity", which invited 50 teachers and students from four primary schools to visit Yuxi Sewage Treatment Plant on a field trip and via cloud video.



50 primary school students from Yuxi went to Yuxi Sewage Treatment Plant to explore the "secrets" of water treatment

#### Case: BEWG carried out environmental protection education through a series of "BEWG Water Culture" activities

BEWG has put into production a number of projects with environmental education bases for the public and students. Moreover, our "BEWG Water Culture" series of activities have been promoted in the national poverty alleviation demonstration site-Minning, Ningxia, Confucius hometown-Qufu, Shandong, and other places.

BEWG studied and discussed Xi Jinping's thoughts on ecological civilization and Chinese traditional water culture many times with the Qufu Municipal Government, Education Bureau, Housing and Urban-rural Development Bureau, and other units in Shandong and organized environmental protection experts and young volunteers to enter the "Confucius Academy" with environmental protection classes for primary and secondary school students, which was widely praised by the local government and people.

Relying on the Fourth Sewage Treatment Plant in Qufu City, we built "BEWG Water Culture Xingtan School" "BEWG Water Technology Laboratory", and "BEWG Water Culture Ecological Park", and designed and promoted "BEWG Water Culture and Ecological Environment Research and Learning Program" to disseminate ecological civilization and root the concepts of water culture, water technology, resource conservation, and garbage sorting in the minds of young people.



Leaders from Qufu Municipal Government, Housing and Urban-Rural Development Bureau, Education Bureau and other units of Qufu. Shandong jointly studied water culture-related knowledge



## **Practicing social services**

BEWG practises corporate social responsibility, implements the CPC Central Committee's spirit of poverty alleviation and building a well-off society in an all-round way by 2020, and actively implements the national "targeted poverty alleviation" strategy. While continuing to promote environmental governance in villages and towns, we fully implement all requirements of poverty alleviation work, insisting on poverty alleviation by developing industries, poverty alleviation by developing education and doing a solid job of targeted poverty alleviation, so as to ensure that all the remaining poor people are lifted out of poverty. We also implement and improve the monitoring and assistance mechanism for those returning to poverty, in order to consolidate poverty alleviation achievements.

In 2020, BEWG invested in eight industries in seven provinces and cities, amounting to more than four billion yuan, and created 12,402 jobs with the stock and new projects in seven provinces and cities. Driven by the photovoltaic poverty alleviation benefit linkage mechanism, 3,667 povertystricken people were registered. Another 625 poverty-stricken people were registered driven by our urban resource and environmental sanitation business. The endogenous motivation of poor households was kicked off by supportive education and more skills training. We subsidized the education of students in poverty-stricken areas to broaden their development horizon, provided learning opportunities, and created employment opportunities for them. In 2020, BEWG made in-depth efforts to systematically carry out targeted poverty alleviation work. Initial results were obtained, winning us the "Beijing Poverty Alleviation Cooperation Award for Organizational Work".

BEWG conducted a pilot project to promote publicspirited environmental education activities for primary and secondary school students in Ningxia. We entered the Geng Biao Red Army Primary School and Minning Middle School in Minning Town to hold "BEWG Water Culture" series of activities for two consecutive years, and assisted the schools to build a "Bookstore of Original Intention".



"BEWG Water Culture" entering Geng Biao Red Army Primary School of Chinese Workers' and Peasants' Red Army in Minning, and entering Minning Middle School, Ningxia





BEWG won the "Beijing Poverty Alleviation Cooperation Award for Organizational Work"



### Case: BEWG actively implements the "Minning Cooperation" industrial model to promote local poverty alleviation work

From poverty alleviation to rural vitalization, BEWG, as a state-controlled leading enterprise in the field of environmental protection, demonstrates the responsibility of the state-owned enterprises with practical actions. While continuing to promote environmental governance in villages and towns and building beautiful villages, we fully implement poverty alleviation through industry, science and technology, and culture, forming a "three co-construction" (party building, government-enterprise co-construction, school-enterprise co-construction) work system and creating the "Minning Model" of sewage treatment in villages and towns in the country's east-west poverty alleviation showroom and "national poverty alleviation model" site.

BEWG completed the water supply pipe network, drainage pipe network, sewage treatment and road hardening works and built 25 sewage treatment stations for 3,097 households in Wuhe Village and Yuhai Village, Minning Town. After the overall project was put into use, the living environment of Wuhe Village and Yuhai Village significantly improved, which greatly enhanced the sense of security, gain and happiness of surrounding villagers. In addition to improving the living environment, BEWG helped local farmers build greenhouses to cultivate agaric and other crops, consistently revitalizing the local economy.



BEWG completed the demonstration site of sewage treatment in villages and towns at Geng Biao Red Army Primary School in Minning Town named the "national poverty alleviation model"

Malaysia is a country where more than 60% of its citizens

for local residents.

are Muslims. BEWG respects local customs and religious culture. During the construction period, on the occasion of the Eid al-Fitr festival every year, we invited residents around the Pantai project to dine together and celebrate this important Muslim festival, and presented residents in surrounding communities with Eid al-Fitr gifts.







#### Case: Yongzhou BEWG Xiangjiating Water Purification Co., Ltd. organized a series of community-based public welfare activities

Yongzhou BEWG Xiangjiating Water Purification Co., Ltd. in the Central Region responded to the Group's call by actively carrying out various public welfare activities to contribute to the harmonious development of the community.



Yongzhou BEWG Xiangjiating Water Purification Co., Ltd. added equipment for garbage sorting and set up a garbage sorting publicity column



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BEWG fully respects the folk culture of localities where it operates across the world, and attaches great importance to cultural exchanges with local people. While exporting the concept of environmental protection and green development to local people, we integrate social responsibility into various projects and businesses at any time to seek well-being

### Case: Muslim community gift-giving activity carried out by BEWG overseas business

During Eid al-Fitr, employees of BEWG Pantai project invited nearby residents to celebrate the festival



## Outlook

During the extraordinary year of 2020, BEWG navigated various obstacles while moving ahead. In the face of the COVID-19 outbreak, BEWG fully demonstrated the role and mandate of state-owned enterprises as a leading company in the industry, and made every effort to prevent and control the epidemic and resume work and production. Facing the iterative upgrade of the industry and the elevation in customer demand, BEWG proactively embraced changes, reinforced fundamentals, improved productivity, and unleashed new momentum for transformation and development.

Pragmatism and innovation dot our committed journey braving the wind and rain. In 2020, BEWG continued to adhere to their concept of responsibility, "to promote harmonious development with water services and environmental protection and to build the ecological environment with innovative mechanisms". We continuously paid attention to safety and environmental protection, made solid efforts in innovation to make breakthroughs, strengthened win-win cooperation, protected employees' rights and interests, paid attention on talent training, maintained community relations, and committed to public welfare undertakings, striving to give back to society.

Only by seizing the present can we win the future. BEWG will continue to firmly follow the path of sustainable development, build brand credibility, and lay a solid foundation for the path of asset-light transformation and high-quality development. We will focus on customers, deepen reforms, steadily implement digital transformation, and make every effort to promote harmonious development. We will break boundaries, reshape integration and advance resource sharing. We will share our experiences, capabilities and benefits, and make active contributions to customers, employees, and society development.





## **HKEX ESG Disclosures Index**

		ESG Indicator	Disclosure and Description
		General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	P48-51
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	Aspect A1:	A1.2 Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	P50
	Emissions	A1.3 Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P84
		A1.4 Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P84
		A1.5 Description of measures to mitigate emissions and results achieved.	P48-49&P81-83
Environmental		A1.6 Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	P82-83
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	Aspect A2: Use of Resources	A2.1 Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	P50-51
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		A2.5 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	No packing material involved
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	Aspect B1: Employment	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	P87
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	Development and Training	B3.1 The percentage of employees trained by gender and employees trained by gender and employee category (e.g. senior management, middle management).
		B3.2 The average training hours completed per employee by gender and employee category.
	Aspect B4: Labour Standards	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer B4.1 Description of measures to review employment practices to avoid child and forced labour.
		B4.2 Description of steps taken to eliminate such practices when discovered.
	Aspect B5:	General Disclosure Policies on managing environmental and social risks of the supply chain.
	Supply Chain	B5.1 Number of suppliers by geographical region.
	Management	B5.2 Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.
	Aspect B6: Product Responsibility	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer
Social		B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons.
		B6.2 Number of products and service related complaints received and how they are deal with.
		B6.3 Description of practices relating to observing and protecting intellectual property rights.
		B6.4 Description of quality assurance process and recall procedures.
		B6.5 Description of consumer data protection and privacy policies, how they are implemented and monitored.
	Aspect B7:	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer
	Anti-corruption	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.
		B7.2 Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.
	Aspect B8:	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.
	Community Investment	B8.1 Focus areas contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).
		B8.2 Resources contributed (e.g. money or time) to the focus area.

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**Disclosure and** 

Description P89 nd skills for discharging duties at work. gender and employees trained by gender P93 ent, middle management). employee by gender and employee P93 P87 ns that have a significant impact on the ment practices to avoid child and forced P87 ch practices when discovered. P87 P63-64 risks of the supply chain. P65 ng suppliers, number of suppliers where P63-65 are implemented and monitored. P54-59 ns that have a significant impact on the No products sold or ed subject to recalls for safety and health shipped subject to recalls for safety and health reasons omplaints received and how they are dealt P57 ng and protecting intellectual property P74 and recall procedures. P54-56 ind privacy policies, how they are P59 P61 ns that have a significant impact on the ng corrupt practices brought against the P61 iod and the outcomes of the cases. histle-blowing procedures, how they are P61-62 and the needs of the communities where P101&P104

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## **Reader's Feedback**

Dear readers,

Thank you for reading Beijing Enterprises Water Group Limited Sustainability Report (2020). We value your and expect to listen to your feedback on sustainability management, practices and information disclosure of BEWG. Your opinions and suggestions are the important basis for us to carry forward sustainability management and practice. We are looking forward to your reply.

#### Optional questions (please mark $\sqrt{}$ on your answer)

1. Do you think this report can reflect material impact of BEWG on economy, society and environment?

Yes D Probably Yes D No D

2. Do you think this report can identify stakeholders and correctly and comprehensively analyze their relationships with BEWG?

Yes D Probably Yes D No D

3. Do you think the information in this report is comprehensive?

Yes 
Probably Yes 
No

4. Do you think the information in this report is readable?

Yes D Probably Yes D No D

#### **Open-ended question**

You are welcome to make comments and suggestions for caring for environment.

Name:	Tel.:	Employer:	E-mail:



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