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2019

Beijing Enterprises Water Group Limited
Sustainability Report

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About this report

This is the fifth non-financial report issued by Beijing Enterprises Water Group Limited. It reflects the Group's environmental, social and governance (hereinafter "ESG") performance and its efforts in respect of sustainable development.

Reporting period

The reporting period is from January 1 to December 31, 2019. Information beyond this period is indicated in such sections.

Reporting scope

All information and data are from Beijing Enterprises 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.

Data explanation

All information and data are from the Group's internal data collection and statistics, and statistical reports provided by subsidiaries. Unless otherwise specified, all monetary amounts are in RMB.

Reporting guidelines

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

Abbreviations

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

Form of 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>

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, 2020.



Chairman of the Board
Mr. Li Yongcheng

Message from the Chairman

Focusing on the mission of "safeguard the source of life and create a green environment", we align the national green growth strategy and promote the coordinated development of the Beijing-Tianjin-Hebei region, integrated development of the Yangtze River Delta, and sustainable development of the Guangdong-Hong Kong-Macao Greater Bay Area. We proactively respond to the Belt and Road initiative by implementing measures to protect the Yangtze River. We bear in mind our social responsibilities and mission as a state-owned environmental enterprise, thus contributing to the "three critical battles" and striving to build a beautiful China. In 2019, we reached the "Top Ten Influential Enterprises in the Water Sector in China" for the ninth consecutive year and was listed among the *Fortune China 500* for the fourth consecutive year. We were also awarded the "Most Honored Company" as well as the "Most Environment Responsibility Award".

Adhering to the dual-platform strategy and the asset-light business model, we accelerate the transformation from rapid development to quality development. We have built consensus and enriched our culture to achieve

the sustainable development and promote the industry's ecological value, building a community of a shared future for the water service industry. Focusing on people's well-being and taking root in the environmental industry, we implement ecological strategy and promote the prosperity of the industry, and build a water services ecosystem based on shared benefits and featuring pan-centralization as well as symbiosis, interdependence and regeneration to improve the industry's service capacity and overall value. Taking innovation as the main force, we enhance intelligent water services and streamline ecological management. We will continue to follow a sustainable development path to build the world's first-class operation platform and service brand for public utility (water service) assets.

As a leader in the environmental industry, we feel honored to participate in the development of ecological civilization and the construction of a beautiful China in this great era. With expertise, leading thinking, and pragmatism, we offer governments and society more valuable ecological products, lead the industry from a forward-looking perspective, create a more supportive environment to groom

talents and provide better solutions for cleaner water and improved ecology, thus contributing to a better life.

For ten years we have never stopped making progress and now we advance like always. Next, to embark on a new stage, we will keep pace with the country's development and the times to further integrate national strategies into our businesses. When continuously building the internal "cohesion", we will also unite the industry to form an industrial ecology of "reshaped integration, innovation, and interconnection", promoting the construction of "Beautiful China". Starting from our founding mission, we engage in the environmental industry following the spirits of the times and will make more splendid achievements on the way to be the world's best environmental company!



Chief Executive Officer
Mr. Zhou Min

Message from the CEO

It's inspiring to think about how we made our way to today. The year 2019 celebrates the 70th anniversary of the founding of the People's Republic of China when our country's economy is being transformed to quality development and ecological protection becomes a high priority. Keeping abreast of the times, we initiate the quality revolution to promote business sustainable growth. We have proposed a strategy of transform We have proposed a strategy of dual-platform development including the asset management platform and the operational management platform, to support the transformation to asset-light business model, and to enhance our core competitiveness in operating mass assets and stimulate a second growth. We will continue to strengthen our advantages in two main businesses - water services and water environment comprehensive renovation. As of December 31, 2019, the main businesses reported a revenue of HKD 28.19 billion, with a total daily design capacity of 39.389 million tons, treating a drainage area of more than 7,000 square kilometers.

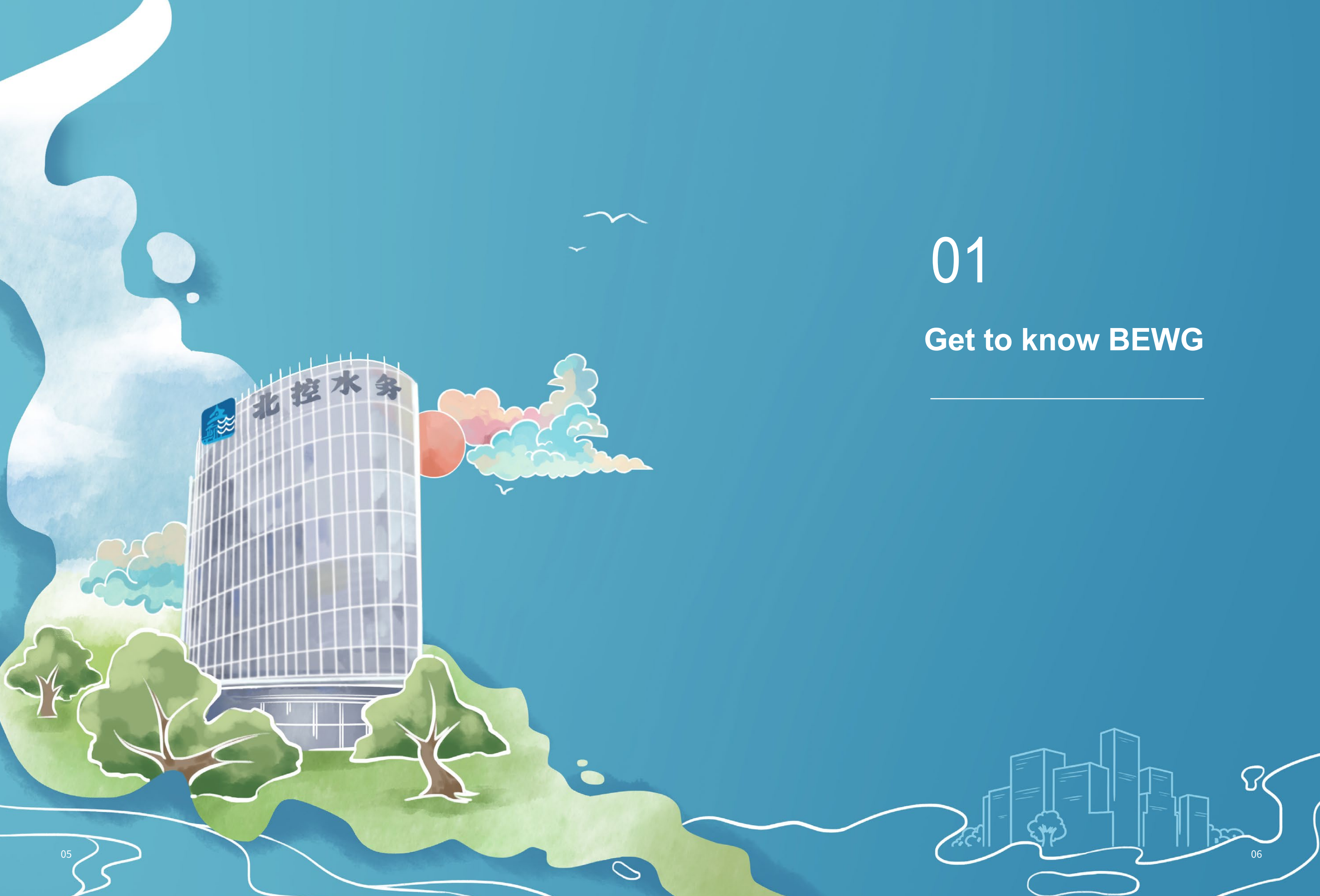
We will stay true to our founding mission and be royal to environmental protection. Centered on environmental protection, we comprehensively optimize and improve the low-carbon management,

water resource management and biodiversity protection to apply green management to the whole process. To meet stakeholder expectations, we work on targeted poverty alleviation and carry out philanthropic activities. We highlight premium services, prioritize technological innovation, appreciate employee growth and comply with ecological protection principles. To achieve win-win results in the industry, we develop an open, integrated, cross-disciplinary industrial pattern and improve the internal ecological mechanism for coordination, upgrading and innovation. We have taken efforts to ensure the prosperity of our stakeholders during coordinated development with the local environment.

We have made bold changes and crucial breakthroughs. In line with the safety development concept, we have continuously strengthened the overall risk management to ensure the compliance and sustainability of the company's operations. In 2019, we further improved the asset-light transformation and quality development to enhance the core operational capability and drive a second growth. We emphasized the technological empowerment and carried out new operational modes and explored and applied technologies to the intelligent water services to streamline operations management professionally.

We continued to promote hierarchical management for water treatment plants. Through a star rating system, thus developing excellent BEWG operations management brands. We pursued product and management standardization to improve product quality and streamline management, achieving the scale effect. We will continue to accelerate the transformation and build on core capabilities to create greater value for shareholders, society, and employees and promote the healthy development in the second decade with new driving forces.

The blueprint is in place and it's time for us to fight. A great dream makes great things happen and a great company is doing great things. In the future, we will advance in line with national strategies and the times to lead the industry and build ecological civilization. We must not fail our mission or waste any time. We should promote operations to reshape our core advantages and prioritize innovation to embrace a second growth spurt. Last but not least, we should safeguard the source of life and create a green environment.



01

Get to know BEWG

About us

Focusing on water recycling and water-related environmental protection, 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. We rank number one in the industry in China, in terms of water treatment capacity.

Besides our core businesses of water services

and water environment comprehensive renovation, we focus on five fields, including environmental sanitation and solid waste, overseas business, technological services, financial services and clean energy. Headquartered in Beijing, we serve more than 100 prefecture-level cities in 33 provinces and autonomous regions of China (including Hong Kong and Taiwan), as well as 8 countries including Malaysia, Singapore, Australia, New Zealand, Portugal, Angola and Botswana.



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33

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Botswana

BEWG's business fields

Urban water services

We actively explore the urban water services market through PPP¹, BOT², TOT³, 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

The water environment comprehensive renovation business is based on the actual needs of the people and the condition of the ecosystem. We continuously upgrade and innovate on water treatment concepts. To improve water environments, we gradually evolved from single project to region and basin-wide treatment. We offer comprehensive solutions and innovative services for local governments and regional development by assisting them in "water safety, water resources, water environment, water ecology, water landscape, water culture, water management, and water economy". At the same time, we drive local industrial upgrading to provide a green, livable environment for local residents, achieving the shared aspiration of all parties. Currently, our business covers urban black and odorous water bodies treatment, urban watershed treatment, smart environment, ecologically flexible cities, regional environmental treatment and new rural construction.

Rural water services

We 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. We 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, centralised management, and rapid response.

Industrial water services⁴

In terms of industrial water treatment, we mainly provide industrial park wastewater treatment, wastewater treatment for key industries, and comprehensive water resources utilisation. Our seven major business fields are industrial parks, the steel industry, power industry, petrochemical industry, coal chemical industry, pharmaceutical industry, and dyeing and printing industry. Our five technology fields are pre-treatment system, biochemical treatment system, advanced treatment system, reclaimed water system and zero emission system.



Seawater desalination

In order to ensure by Miyun to the north, the Yangtze River to the south, the Yellow River to the west, and Bohai to the east, we have incorporated seawater desalination into its development since 2009. We invested in the Caofeidian seawater desalination project and gradually explored the seawater desalination market.



Overseas business

We serve Asia-Pacific, Euro-American, African and Middle Eastern markets, with platforms in Malaysia and Singapore. We draw on leading technologies and rich management experience to establish a strategic position in the international water market.

Technological services

We focus on Chinese environmental industry policy studies, industry trend studies macro-environmental problems and countermeasures studies, top-level planning and design in the environmental sector, frontier field research and interdisciplinary integration, high-tech research and development (hereinafter "R&D"), transformation and commercialisation of research achievements, engineering project design support, talent training and development, and so on.



Environmental sanitation and solid waste treatment

Environmental sanitation and hazardous waste⁵

Our environmental sanitation and hazardous waste business segment - Beijing Enterprises Urban Resources Group Limited (hereinafter "BJ ENT URBAN") is a provider of comprehensive waste management solutions in China. It is listed on the main board of the HKEX (stock code: 3718. HK) on January 15, 2020. BJ ENT URBAN focuses on providing environmental sanitation services and hazardous waste treatment services.

Solid waste treatment

We are committed to becoming an international leader in solid waste treatment and disposal. Currently our solid waste treatment business operates in more than 10 provinces and cities nationwide.

Clean energy⁶

Our clean energy business segment - Beijing Enterprises Clean Energy Group Limited (hereinafter "BE Clean Energy"), is a joint venture between BEWG, CITIC Industrial Fund, and Tsinghua Qidi. It is a comprehensive clean energy investment platform that focuses primarily on solar power generation as well as wind power and heating. BE Clean Energy is listed on the main board of the HKEX (stock code: 1250.HK). BE Clean Energy works primarily on clean energy development and clean energy utilisation to provide "clean energy+" solutions. It strives to build a multi-energy, multi-business, and multi-profit clean energy ecosystem. It is committed to becoming a leading comprehensive clean energy services provider.

¹ Public-Private-Partnership refers to cooperation between government capital and social capital. It is an operation mode for infrastructural projects.

² Build-Operate-Transfer is a cooperation model in which the government and private institutions cooperate on the investment, construction, and operation of infrastructural projects.

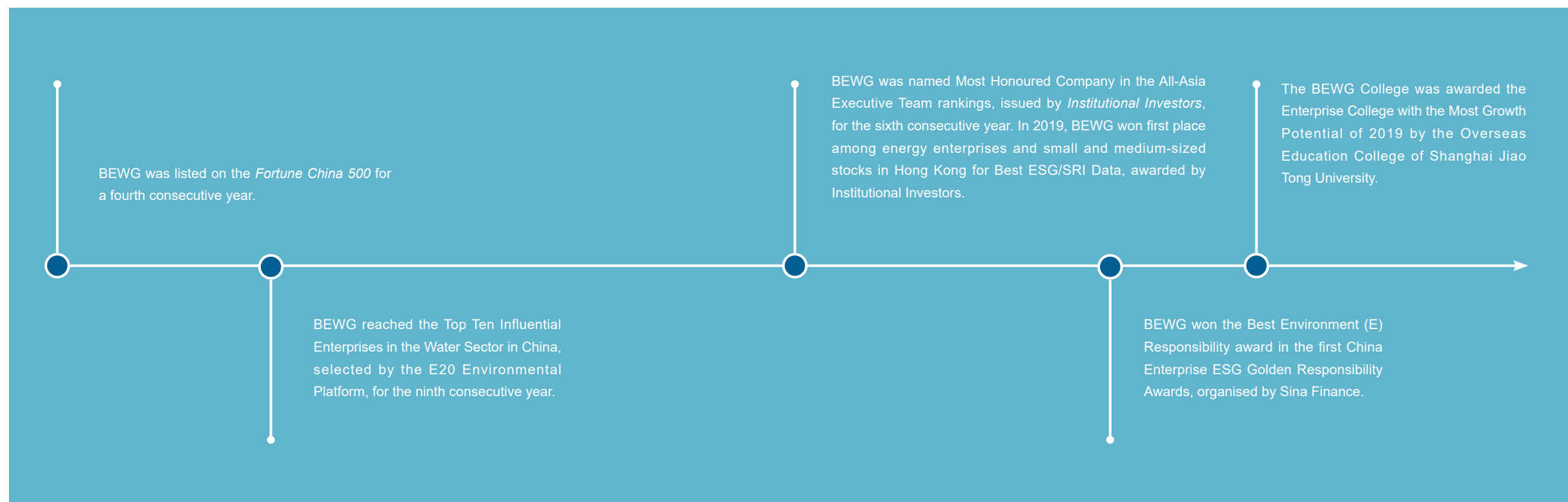
³ Transfer-Operate-Transfer is a method used to finance projects.

⁴ Beijing Enterprises Industrial Environmental Protection is responsible for this business segment.

⁵ See the ESG Report of BJ ENT URBAN (stock code: 3718.HK) for details.

⁶ See the ESG Report of BE Clean Energy (stock code: 1250.HK) for details.

Awards and honours in 2019



Performance highlights 2019



Total revenue

2,819,250 HK\$10,000



Total daily design capacity

39,388,882 Tons



Total daily design capacity for new project

4,131,789 Tons



Number of sewage treatment plants

1,058



Number of water distribution plants

162



Number of seawater desalination plants

2



Number of reclaimed water treatment plants

30



Number of water environment comprehensive renovation projects

30+

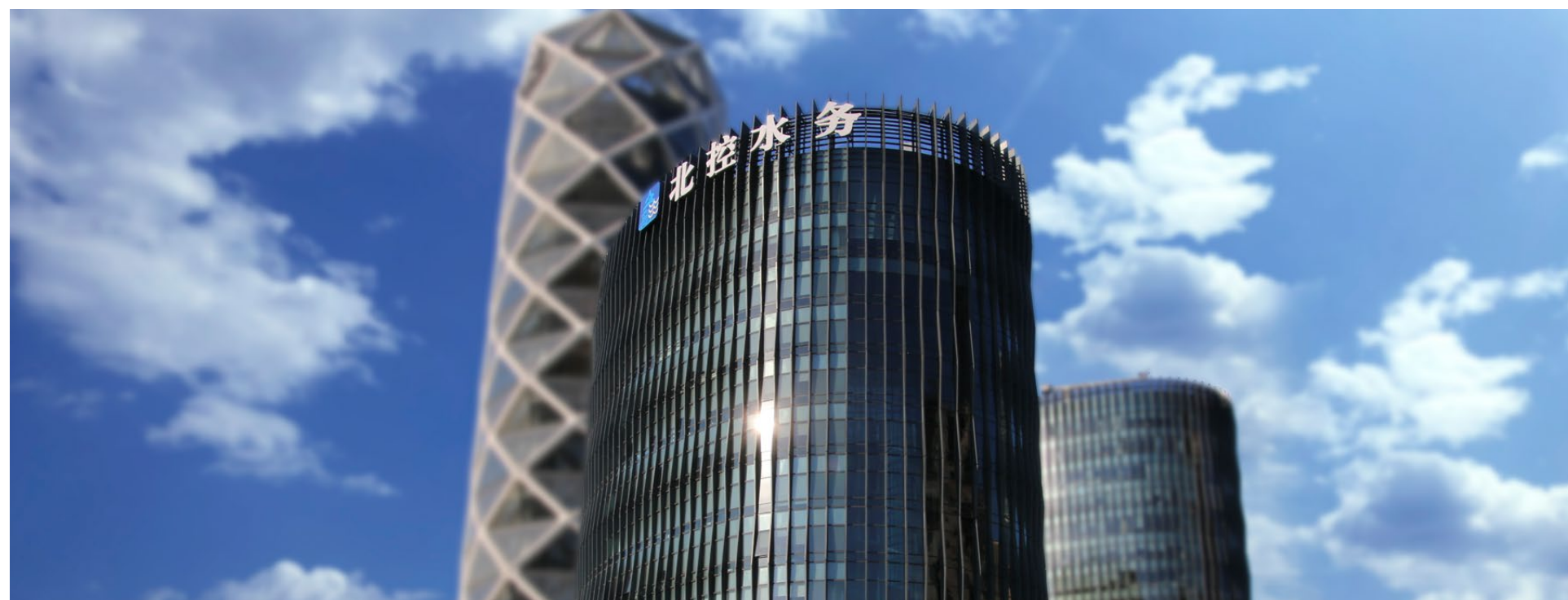


Area of river basin treatment

7,000+ Square kilometers

To stakeholders

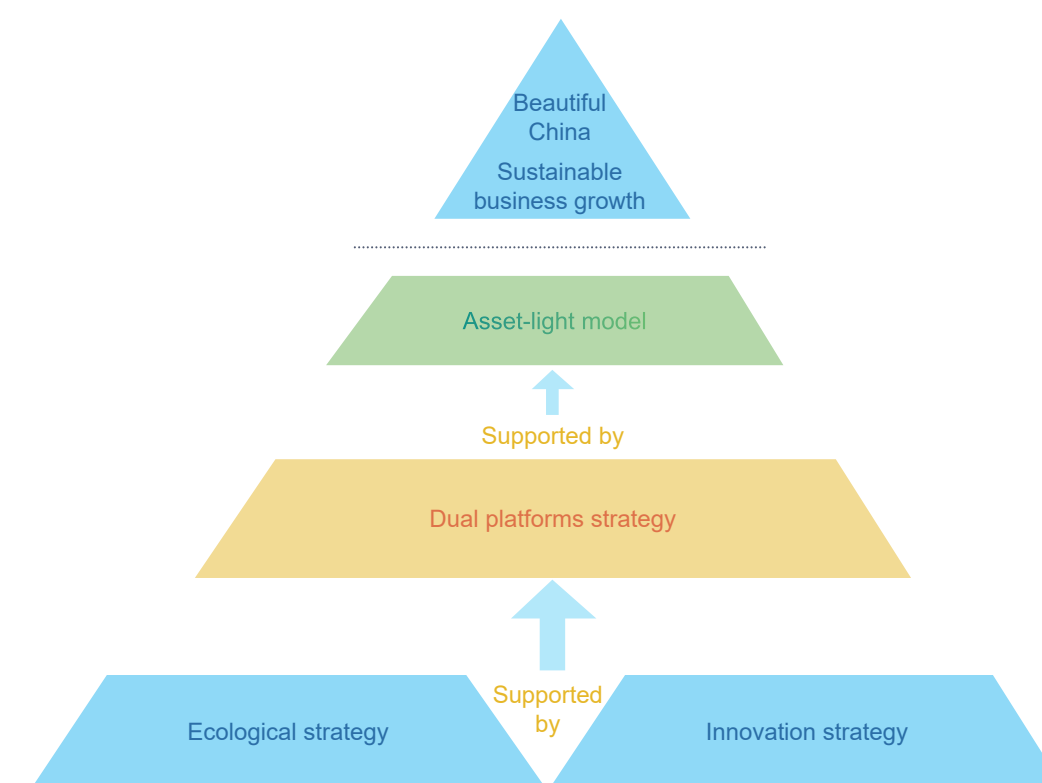
We have learned from a decade of rapid development, and shifted our focus from high-speed development to high-quality development. We propose an asset-light strategy, through the implementation of ecological strategies, to create a dual-platform (asset management and operation management development) model, and achieve a wide range of ecological collaboration with all links in the industrial chain to lead enterprises to become more sustainable.



Strategic sustainability

In 2019, keeping in step with the trends of the times and seizing the opportunities brought by the Internet revolution, we reinforced our strategic focus on environmental protection and developed an asset-light model that aims to set up dual platforms for development. We enhanced our core competitiveness by strengthening investment ability, innovating and optimising technology, applying intelligent technology, improving asset

quality and efficiency, and recruiting high-quality talent. These create a large-capacity, eco-friendly basis for all links of the industry chain, including investment, R&D, design, construction, operation and back-office support. Externally, we empowered enterprises in the ecosystem. Internally, we established an innovation platform. As a result, we have become an integrated water system solution provider for smart cities and continue to grow.

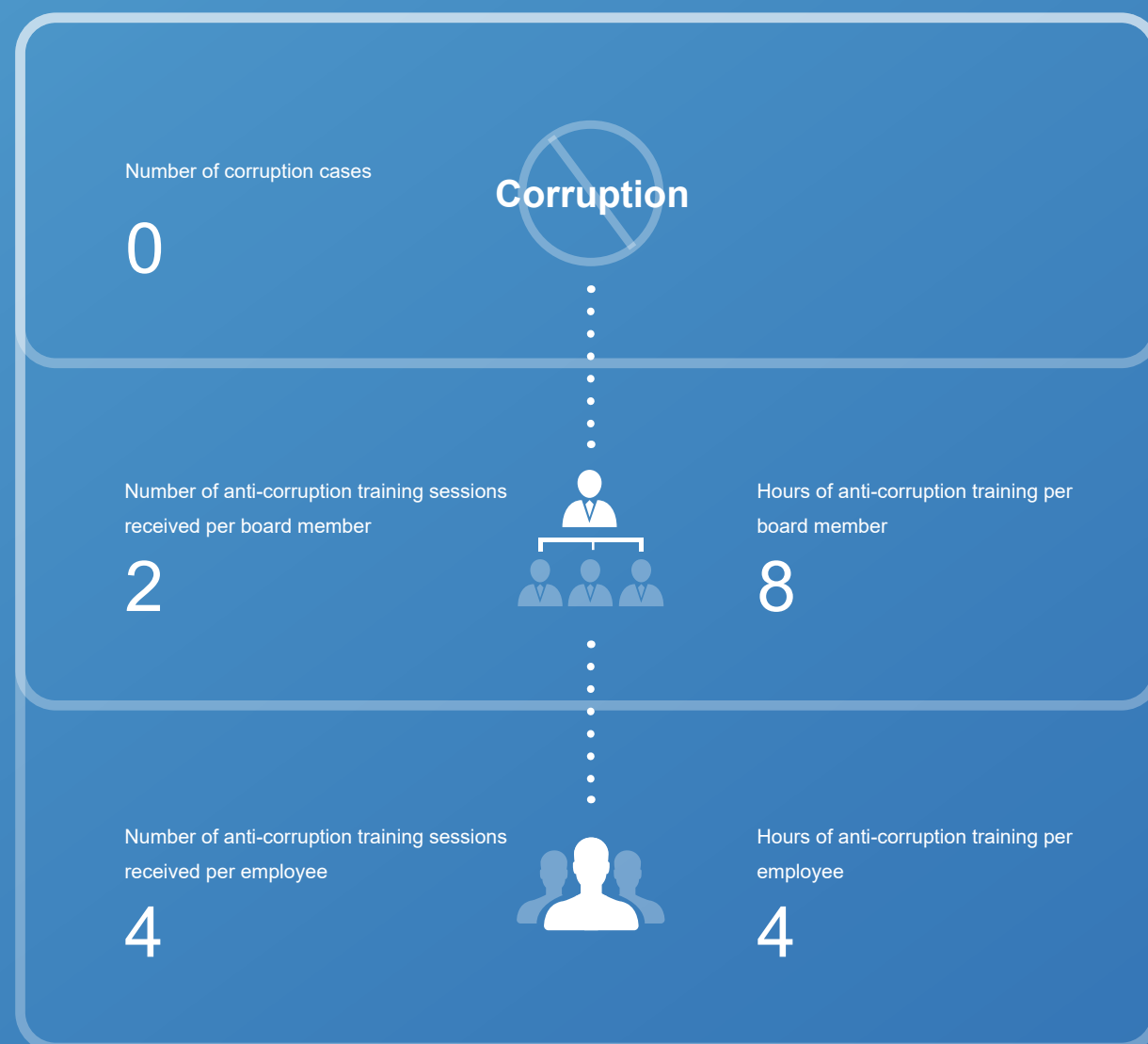


Management sustainability

In 2019, we continued to strictly comply with laws and regulations. We improved our corporate governance, standardised the functions of the Board of Directors, comprehensively improved our internal risk management capabilities and developed a "basic business unit"-based systematic risk prevention and control framework. We enhanced investment safety, improving the decision-making mechanism of key

nodes such as project initiation, bidding, and review. We enhanced financial safety, establishing a post-project analysis mechanism and the Financial Risk Map. We enhanced brand safety, comprehensively implementing public opinion management measures and PR crisis management mechanisms. We enhanced practice safety, improved anti-corruption policies and training, and promoted sustainable management.

Corporate governance indicators



Business sustainability

In 2019, we promote business standardisation. We clarified our investment direction and enhanced investment risk management with revised policies and standardisation. We put forward new operation management models, carried out unannounced inspections for ongoing projects, rolled

out project star ratings, and improved our emergency response capability. We encouraged technological innovation, accelerated the smart upgrading of water services, and initiated a "quality construction year" to ensure sustainable development.

Production and service indicators



⁷ 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.

⁸ The proportion refers to the number of star-leveled water factories assessed according to the *BEWG Implementation Rules for Star-level Operation Enterprise Appraisal*, out of the total amount of water factories participating in the star rating.

⁹ The water plants are classified from one-star-level to five-star-level according to the operation quality, among which three-star-level water plants can meet the demand of high-quality operation.

Business sustainability

In 2019, we continued our efforts to save energy, reduce emissions, strengthen water resources management, protect biodiversity,

mitigate climate change, minimize our environmental impact, and protect the sustainability of the environment.

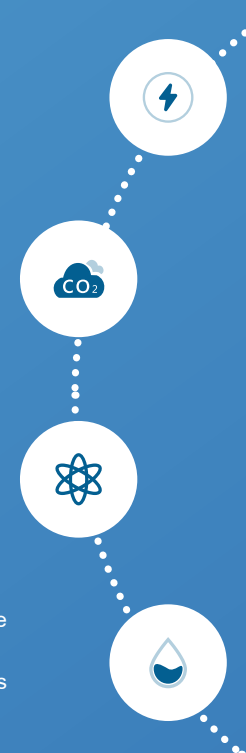
Environmental indicators

Renewable energy substitution
25,942,173.48 kWh

Carbon dioxide emissions per HK\$ 10,000 of revenue
0.44 Tons of carbon dioxide equivalent

Energy consumption per HK\$ 10,000 of revenue
0.06 Tons of standard coal equivalent

Water consumption per HK\$ 10,000 of revenue
1.01 Tons



COD¹⁰ reduced by sewage treatment
1,244,880.29 Tons

Ammonia nitrogen reduced by sewage treatment
131,967.74 Tons

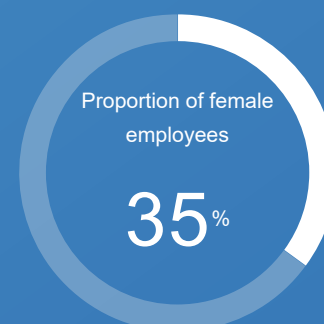
Phosphorus reduced by sewage treatment
38,820.15 Tons

Social sustainability

As a people-oriented enterprise, in 2019, we continued to protect the legitimate rights and interests of employees, ensure their health and

safety, and improve our training. We also encourage suppliers to grow with us. As we develop, we give back, to contribute to a sustainable society.

Employee, community and supplier indicators



Investment in safety measures
RMB **19.64** million



Number of Certified¹¹ suppliers
465

For BEWG, corporate development and responsibility are not overnight tasks. High-quality development and responsibility are long-term undertakings. In 2019, in line with the Group's strategic transformation plan, we officially replaced the *Corporate*

Social Responsibility Report with the *Sustainability Report*, to demonstrate our determination to build a sustainable business world. We will continue to incorporate sustainability into our regular processes and mechanisms, and hence create a lasting business.

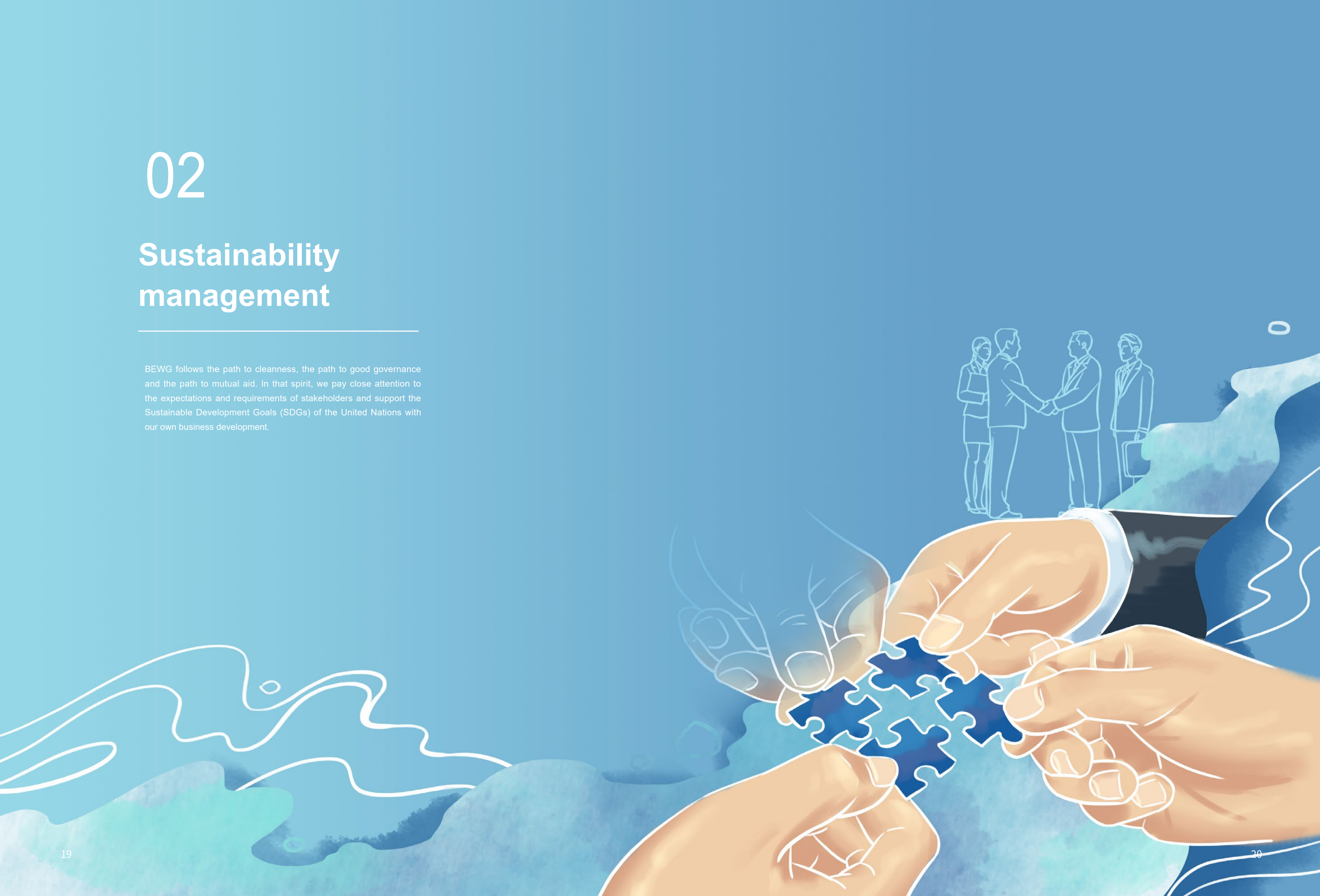
¹⁰ Chemical oxygen demand

¹¹ Suppliers certified by ISO 9001 and ISO 14001.

02

Sustainability management

BEWG follows the path to cleanness, the path to good governance and the path to mutual aid. In that spirit, we pay close attention to the expectations and requirements of stakeholders and support the Sustainable Development Goals (SDGs) of the United Nations with our own business development.












Stakeholder engagement

Stakeholders' valuable opinions are crucial to our sustainable development. BEWG pays close attention to the feedback of

stakeholders and communicates with them on a regular basis.

In 2019, in addition to regular engagement activities, we conducted phone interviews with investors, suppliers and other stakeholders to understand their concerns and expectations in respect of ESG,

climate change, water stress, innovation and exchanges, to adjust our materiality matrix.

Stakeholder	Engagement	Expectations and requirements	Stakeholder	Engagement	Expectations and requirements
 Shareholders and investors	<ul style="list-style-type: none"> – General meeting of shareholders – Periodic reporting and announcements – Investor communication meeting 	<ul style="list-style-type: none"> – Compliance – Continual and stable return on investments – Product and service enhancements – Risk management – Climate change action – Corporate governance 	 Industry	<ul style="list-style-type: none"> – Launching and participating in industrial activities – Sharing research results – Constructing communication platforms – Interindustry cooperation – Technical exchanges 	<ul style="list-style-type: none"> – Industry-leading development – Technological innovation – Product and service enhancements
 Government and regulators	<ul style="list-style-type: none"> – Disclosure of information – Daily communication and reports – On-site investigation – Supervision and inspection – Visit and reception 	<ul style="list-style-type: none"> – Compliance – Provision of employment – Response to the national strategy – Product and service enhancements – Safe production – Technological innovation – Energy saving and emissions reduction 	 Suppliers and partners	<ul style="list-style-type: none"> – Public bidding – Contracts and agreements – Suppliers' meeting – Supplier training 	<ul style="list-style-type: none"> – Compliance with contracts – Mutual benefits – Supply chain management
 Clients	<ul style="list-style-type: none"> – Customer satisfaction survey – Visits and communication – Customer activities 	<ul style="list-style-type: none"> – Product and service enhancements – Disclosure of information 	 Community	<ul style="list-style-type: none"> – In-person visits – Charity activities – Charitable donations – Volunteer activities – Open Day event 	<ul style="list-style-type: none"> – Community engagement – Community service – Community investment – Environmental protection – Compliance
 Employees	<ul style="list-style-type: none"> – Labour contracts – Opinion-seeking – Communication channels for career development – Care activities – Tailor-made training – Anonymous communication channel 	<ul style="list-style-type: none"> – Guarantee of employee rights and benefits – Occupational health and safety – Professional training and development – Employee care – Employee engagement 	 The public	<ul style="list-style-type: none"> – Open Day event – Public welfare activities 	<ul style="list-style-type: none"> – Safe and reliable products – Stable employment – Environmental protection
			 Research and academic institutions	<ul style="list-style-type: none"> – Industry-university-research integration – Talent cultivation 	<ul style="list-style-type: none"> – Talent cultivation – Industry-leading development – Technological innovation

Identification of material issues

Based on the results of stakeholder communication, BEWG initiated the material issue screening procedure

and took identified material issues as guidance on our sustainability management.

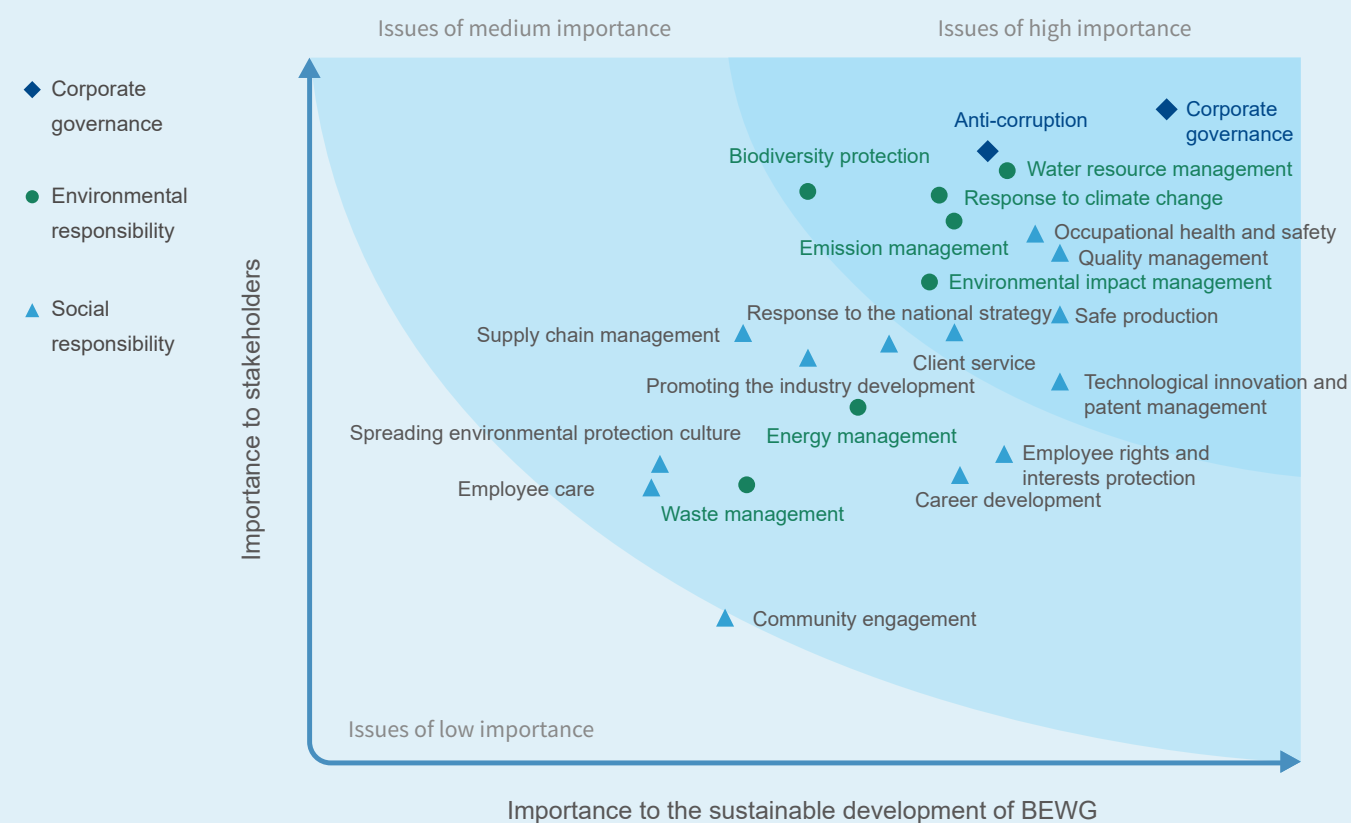
How we identified the issues



In 2019, BEWG analysed the issues related to the Group and the industry that is concerned with mainstream statistical rating organisations in the capital market with emphasis and summarized the communication results with stakeholders. In light of this discussion and analysis, BEWG broke

down previous issues and added four issues, namely, environmental impact management, biodiversity protection, emissions management, and response to climate change, revised and adjusted the level of importance of 12 issues, and finalised the 2019 materiality matrix.

BEWG Materiality Matrix 2019




Commitment to sustainable development

As an environmental company, in 2019, we will continue to support the 17 SDGs of the United Nations to fulfil our corporate social responsibility by sustaining stable water supply, improving sewage treatment efficiency,

and strengthening technological innovation.

We have identified the eight United Nations SDGs that are most relevant to us, and incorporated them into our development strategy and business:



Goal	BEWG' s actions and results in 2019	Chapter
	<p>We provide clean water for society. In 2019, we supplied a total of 6,143.4 million tons of water. We strengthened investment safety, financial safety, and production safety management, to ensure a safe working environment for the health and well-being of the public and our employees.</p>	<p>Ensuring service quality</p> <p>People-oriented culture</p>
	<p>We uphold equal employment, protect women's rights and interests in the workplace, and strictly prohibit sexual discrimination. In 2019, female employees accounted for 35% of the Group's employees.</p>	<p>People-oriented culture</p>
	<p>We provide clean, safe water for society through the water supply business, and recycle sewage into resources through the sewage treatment business, improving the reuse of water resources and ensuring safe water use. We strengthen resource management, innovate in water-saving technologies, and ensure sustainable development of water resources. In 2019, we developed the <i>Water Source Areas Management System</i> to standardise the protection of resources.</p>	<p>Addressing water scarcity</p>
	<p>We continually improve employee training, compensation and benefits. We provide good career opportunities, and help employees develop. In 2019, we had 18,424 full-time employees, all of whom received training. Training hours per employee were 105. We support local employment, for example, our Portuguese company hired more than 95% of employees locally.</p>	<p>People-oriented culture</p>

Goal	BEWG' s actions and results in 2019	Chapter
	<p>We launched a smart operation system in the water sector as we sought digital transformation. In 2019, our NEwater brand AQENT® was approved as a registered trademark. We achieved remarkable results in digital transformation, such as the BECloud smart platform and the "1+N" integrated water treatment plant management model, which effectively promoted the smart upgrading of the water sector.</p>	<p>Innovation for accelerated development</p>
	<p>We took measures to mitigate climate change by promoting clean energy and renewable energy, improving our energy conservation and emission reduction, and strengthening our green office.</p>	<p>Preserving the ecological environment</p> <p>Caring for environment</p>
	<p>We protect biodiversity throughout a project's life cycle. We have implemented six prohibition measures to protect the habitats of animals and plants, and promote the harmony between man and nature. In 2019, we developed the <i>BEWG Biodiversity Conservation Policy</i> and created ecological parks. Our Australian company carried out wildlife protection and plant yard afforestation.</p>	<p>Preserving the ecological environment</p>
	<p>We build open and win-win partnerships and join hands with parties to support regions such as the Beijing-Tianjin-Hebei region, Yangtze River Economic Belt, Guangdong-Hong Kong-Macao Greater Bay Area, and Belt and Road Initiative countries and regions. In 2019, we signed memorandums of understanding with the Kingdom of Cambodia and Kyrgyzstan to achieve common development.</p>	<p>Supporting the national strategies</p> <p>Responsible supply chain</p>

03

Sustainable development as the core

In the journey towards sustainable development, BEWG has always been committed to the mission of "safeguarding the source of life and create a green environment" and strived to alleviate the water crisis. We practice our purpose for eco-environment protection with actions, secure the stable operation of the enterprise with norms, continuously improve the service quality, and impress all stakeholders with satisfactory fruits.



Addressing water scarcity

Freshwater is a precious resource. We cannot live without it. Access to safe and sufficient freshwater is a basic human right. However, rapid population growth and industrial development have increased demands and caused frequent pollution. Water scarcity threatens the international community. World Resources Institute research shows that a quarter of the world's population faces a water crisis, and 17 countries face "extreme water stress". Frequent droughts caused by climate change exacerbate the situation. In China, more than one-third of regions face high or extremely high water stress. To mitigate this, the State Council promulgated the *Opinions of the State Council on Implementing the Strictest*

Water Resources Management System in 2012. This defines the red line for water resources development and utilisation, and states that – by 2030 – the total water consumption of China shall not exceed 700 billion cubic meters. Increasingly stringent laws and regulations regarding water resources have encouraged us to enhance management, improve efficiency and pursue technological innovation.



Enhancing water sources management

Faced with water stress, BEWG strengthened water resources management at the source. In response to the State Council's *Water Pollution Prevention Action Plan*, we developed the *Management System for Water Source Areas* – in accordance with laws and regulations such as the *Law of the People's Republic of China on the Prevention and Control of Water Pollution* and the *Water Law of the People's Republic of China* – to protect water source areas and the surrounding environment, and ensure a sustainable supply. Each project company developed its own water source protection policies, based on local conditions.

To protect this valuable resource, we took water in strict accordance with the amounts defined by the Water Procurement Permit,

and reduced the use of groundwater. To ensure sustainability, we assessed local water sources before constructing treatment plants and engaged third-party organisations to undertake independent assessment and certification. After receiving approval from the government, we carry out protective construction. We use digital technology and big data to develop smart systems that monitor the hydrological indicators of water source areas – such as water quantity and water quality – in real-time, thereby ensuring sufficient water supply and water safety. In addition, we 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.



In 2019, the project increased local tap water supply by

6.5 million tons

reduced groundwater exploitation by

10 million tons

Case Assisting the government to seal private wells to ensure safe water use

As the Nanyang People's Government discussed sealing private wells in the main city, the BEWG Nanyang Water Group raised more than RMB 60 million and spent more than eight months sealing such wells and providing access to tap water instead. We sealed 417 private wells and enabled 331 households to use tap water. In 2019, the project achieves remarkable

results: it increased local tap water supply by 6.5 million tons and reduced groundwater exploitation by 10 million tons. The project eliminated the hazards of private wells and saved resources while ensuring water safety for users.

Improving water efficiency

BEWG innovates and explores diverse methods to save water, conducts R&D to improve existing technologies, enhances water-saving capacity, recycles water resources, forecasts water demand accurately and utilises water resources rationally to improve water efficiency and ease water scarcity pressure.

Firstly, on the supply side, BEWG effectively reduces the difference rate of production and sale of water supply and improves water efficiency from the source through improving management efficiency of all links. 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 per cent. The proportion of self-supply water for plants that do not engage in process water reclamation should be no higher than three per cent. 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.

We explored new models to develop and use reclaimed water and NEWater. Drawing on internationally leading technological processes and refined operation and management, we 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 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. As of the end of the reporting period, BEWG had two ongoing

and operating seawater desalination projects. The capacity of the operating ones was 350,000 tons per day.

In addition, BEWG has always been building sponge cities with action. BEWG has 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.

2019 BEWG water consumption¹²

	Category	Unit	2019
Water Business	Reclaimed water consumption	Tons	28,736,677.35
	Fresh water consumption	Tons	2,688,615.48
Overseas Water Business	Fresh water consumption	Tons	609.00
Solid Waste Business	Fresh water consumption	Tons	165,036.00
Total of Main Business Segments	Fresh water consumption	Tons	2,854,260.48
	Fresh water density	Tons per HK\$10,000	1.01

¹² Water consumption includes only the consumption of Wastewater Treatment Business.



Case

Comprehensive treatment project of Xinfeng River Basin, Daxing District, Beijing

Xinfeng River, as a part of the North Canal Basin, is one of the important water sources in Tongzhou, the sub-centre of Beijing. Before the treatment, the Xinfeng River replenished only about 20,000 m³/d of water in Huang Village Town and some sections run dry due to the shortage of water resources. Base on the fact that the basin is short of water resources as a whole and the river is unable to supply the sufficient environmental water, BEWG proposed the water resources optimisation and utilisation system as a solution: prioritising reclaimed

water as the main water source, enabling rainwater and clean water resources supplementary to water environment improvement and protection, jointly utilising reclaimed water, rainwater and clean water, and ensuring the smooth flow of running water in the main and tributaries.

The connection and recycling project of the Xinfeng River system has been basically completed now. About 40,000 m³ of clear water is discharged into the river

every day, and the upper course of Xinfeng River and Laofeng River have been supplied with reclaimed water. At the same time, the overall improvement of water environment has also effectively promoted the restoration and improvement of the ecosystem in Xinfeng River Basin, and successfully shaped a beautiful landscape of "clear water, green riverbank, eco-friendly river and pleasant scene".



Case

Reclaimed water project in Taiyuan

Located in the middle course of the Yellow River Basin, Taiyuan is subjected to a shortage of water and environmental water. Reclaimed water is an important support for the sustainable development of Taiyuan in the future. BEWG follows the principle of "prioritising water quality with efficient allocation", reasonably and effectively uses water resources in industry, ecology, and landscaping, and promotes the utilisation of

reclaimed water according to local conditions. At present, the reclaimed water project phase I in Taiyuan has been completed, and the main framework of pipe network for reclaimed water supply to industrial enterprises, eight rivers, and landscaping in Taiyuan has been formed.

After the completion of the project, it is planned to supply 167,000 m³

of water for key industrial needs and landscaping water every day, and 25% urban reclaimed water will be reused to enable the sustainable development of the city through water capacity-based production, urban planning, population control, and land development.

Case

Daoxiang Lake underground reclaimed water plant

Daoxiang Lake Reclaimed Water Plant is the first fully underground sewage treatment plant in northern China. With an all-underground design, Daoxiang Lake Reclaimed Water Plant alleviates the environmental impact caused by the contradiction between traditional water plants and the "green heart" positioning of the northern ecological area of Haidian District, reducing the covering area from 17 hectares to

4.47 hectares. The plant has not only saved 70% of the precious land resources but also improved the quality of surrounding environment and the land value. Daoxiang Lake Reclaimed Water Plant has adopted the advanced Membrane Bio-Reactor (MBR) proprietary to BEWG, which combines traditional biological treatment with advanced membrane separation technology, so that the

outflow quality of the water plant can meet the highest water quality requirements in the globe, thus making remarkable contributions to build a resource-saving and environmentally friendly society in Beijing.



Reducing water waste

The huge urban water supply pipeline network has a significant impact on the difference between production and sale. Water leaks create massive waste and affect our costs. Reducing leaks and pipeline damage are among our most important tasks. We strictly control the quality of pipelines during construction and include the flowing, dripping and leaking of water in quality assessment. During operation, we inspect the pipeline networks for leaks and damage, and

regularly replace and repair aged pipes. Relying on the smart water supply platform, our smart leak and damage control platform uses geographic information system (GIS), hydraulic models and digital tools to create a leak and damage analysis system, and monitors leaks and damage in real-time. This greatly reduces water waste.

Case

Yongzhou Water Operation and Development Co., Ltd. prevents and controls pipeline leaks

Our Yongzhou project company implemented measures to control pipeline leaks and reduce the difference between production and sales in 2019. To strengthen leak prevention and controls, it formed a working group dedicated to managing the production/sales difference. Delivering full-process control, the group consists of six teams: leak detection, pipeline network maintenance, meter management, meter reform and inspection, pipeline installation and quality control, and

water treatment plant regulation. Yongzhou project company also formulated measures for pipeline leak detection performance assessment and management measures for pipeline networks and maintenance performance assessment. These assessments motivated employees to improve their efficiency. In addition, the company formulated an implementation plan for the meter census and established six working groups to inspect more than 120,000

water meters in the city. An e-label is attached to each inspected meter. The aim is to identify the problems and hidden risks of meters for residents and large clients. The Yongzhou project company's management of the pipeline network and its other measures paid off remarkably in 2019: it reduced its production/sale difference by 6.04 per cent from 2018.

Case

Guigang Smart Water Supply Platform starts to show leak control results

The Group invested more than RMB 10 million to develop the smart water supply platform for BE Guangxi Guigang Co., Ltd. in 2019. This systematically analyses leaks and damage in our pipeline network, and uses a water leak sound recorder to gradually replace traditional manual inspections. On receiving warning of a suspected leak, the platform arranges immediate detection and repair. The platform's ticket system – for network operation and maintenance, inspection and repair – improves work quality and timeliness.

The platform has been running for one year, controlling costly leaks and reducing the difference between

water production and sale from 22 per cent to 18 per cent.



Preserving the ecological environment

Ongoing industrialisation and urbanisation have made the impact of humans on the environment apparent. Climate change and biodiversity protection are common concerns of the international community. As a responsible nation, China signed the *Convention on Biological Diversity* in 1992 and the *Paris Agreement* in 2015 and submitted to the Secretariat of the United Nations Framework Convention on Climate Change the *Enhanced Actions on Climate Change: China's Intended Nationally Determined Contributions*. China undertakes that its carbon dioxide emissions will peak in 2030, and carbon

dioxide emissions per unit of GDP will drop to 60-65 per cent of the 2005 level. As a responsible enterprise, BEWG embraces green and low-carbon development. We protect biodiversity and undertake ecological restoration to contribute to the construction of ecological civilisation. With operations in a variety of countries, we cooperate with local governments, work towards local carbon emission reduction targets, and strictly abide by local biodiversity protection policies.



Low-carbon management

BEWG acts in strict accordance with laws and regulations such as the *Energy Conservation Law of the People's Republic of China* and promotes green and low-carbon management.

To sustain refined energy management, BEWG strictly monitors energy consumption in all business sectors, collects data and uses it to improve environmental management performance. In 2019, drawing on water treatment automatic controls and equipment assessment tools, we developed a system that monitors, and evaluates the efficiency of, major energy-consuming equipment,

and combined process operation data to analyse the energy efficiency indicators and operation parameters of major energy-consuming equipment such as lifting and conveyance, air blow aeration and sludge dewatering systems. Consequently, we established indicators and strategies to help operators monitor and control the efficiency and energy consumption of the equipment, control operation parameters in a reasonable way, and hence support water quality and energy conservation measures.



We incorporate energy conservation and emission reduction in designs and operations. We prioritise energy-efficient equipment and gradually eliminate any with high energy consumption. For example, we gradually replaced multi-stage centrifugal fans with high-efficiency, energy-saving air suspension blowers and magnetic levitation blowers. We upgraded lift pumps for economic operation and energy conservation to ensure that water pumps operate in the high-efficiency range, which significantly

Case Energy efficiency management system piloted in Guangdong Dalingshan Water Treatment Plant

In 2019, BEWG piloted an energy efficiency management system at the Dalingshan Water Treatment Plant in Guangdong Province. Using software and hardware, we enabled real-time control of the plant's power consumption,

automatic collection and analysis of energy consumption data, and early warning of excessive consumption. The results influence decision-making regarding the equipment's operation and regulation.

saved energy. At the same time, we continuously studied measures and technologies that reduce emissions and improve efficiency. We set an incentive mechanism to promote such upgrading. In 2019, we issued six technical guidelines, and appraised equipment with efficiency lower than 50 per cent. We particularly focused on the upgrading of lift pumps and blowers. In 2019, we invested RMB 17.39 million to upgrade 101 pieces of equipment, saving RMB 9.19 million

in electricity bills. Our investment is expected to be recovered within 23 months.

We also made great efforts to promote clean and renewable energy in water treatment plants, such as using solar energy to reduce power consumption and replacing coal with water source heat pumps. These efforts reduce our dependence on fossil fuels and improve our energy consumption.

Case

BEWG optimised intelligent control technology to reduce energy consumption

In 2019, we optimised intelligent unit control technology and solutions for eight new and renovated water treatment plants. This involved offline process simulation, big data analysis and artificial intelligence. We launched 13 intelligent dephosphorising agent application projects and commissioned two intelligent aeration

projects. These improvements ensured emissions were up to standard and reduced the energy consumption of air blowers by 10 to 20 per cent.



Intelligent unit control manual (excerpt)

In 2019, we upgraded

101 pieces
of equipment

Invested

RMB **17.39** million

Saved

RMB **9.19** million
in electricity bills

The investment payback period is about

23 months




Case

Saving energy and reducing emissions with solar power at Huanhai Sewage Treatment Plant

Lijin County Huanhai Sewage Treatment Co., Ltd. responded to the national strategy by working with BE New Energy to utilise solar power. The company installed over 20,000m² of solar panels on its vacant land and biochemical pool. The installed capacity totalled 975 KW. The project runs stably and its power generation per day in peak seasons could reach 5,000 kWh (1.1 million kWh annually). Most of the power is consumed by the water treatment plant. When the plant requires less power, the excess is exported to the grid.

Since September 2017, the project has generated a total of 2.2 million kWh, reducing CO₂ emissions by 1,848¹³ tons.





In 2019, the installed capacity of our new energy projects totalled

3.53^{GW}

a year on year increase of

14[%]

BEWG actively responded to China's clean energy policies and promoted the development of new energy business. Our subsidiary BE Clean Energy explores solar power, wind power and clean heating and other clean energy projects, to bring green, clean and sustainable energy to society, to mitigate climate change and to reduce greenhouse gas emissions. In 2019, the installed capacity of our new energy projects totalled 3.53 GW – a year-on-year increase of 14 per cent. The capacity of grid-connected solar power generation projects totalled 3.05 GW, wind power generation projects 485 MW. In 2019, we exported 4.586 billion kWh of electricity to the grid – a year-on-year increase of 31 per cent. The capacity of ongoing wind power and solar power projects totalled 606 MW. The capacity of proposed wind power projects is 1GW. The capacity of our clean heating business was 27.33 million m².

Some of our overseas operation projects tried to establish a carbon footprint assessment system to thoroughly monitor and manage carbon emissions.

¹³ The calculation of carbon dioxide emission reduction is based on the *Emission Factor of Baseline of China's Regional Power Grid for 2017 Emission Reduction Project*

Case

BEWG's Portuguese project company establishes carbon footprint assessments

Our Portuguese project company established carbon footprint assessments. They used cleaner production technology to reduce carbon emissions, and assessed the carbon dioxide emissions of all major projects. It grasped the energy consumption and greenhouse gas emissions of each project, thereby monitoring and assessing the energy efficiency of the projects. These assessments improved employee awareness and enhanced the company's low-carbon management.

2019 Greenhouse gas emissions of main business segments			
Greenhouse gas emissions		Unit	2019
Water Business	Greenhouse gas emissions – Scope 1 ¹⁴	Tons of carbon dioxide equivalent	2,977.56
	Greenhouse gas emissions – Scope 2 ¹⁵	Tons of carbon dioxide equivalent	1,149,527.04
	Total greenhouse gas emissions	Tons of carbon dioxide equivalent	1,152,504.61
Overseas Water Business	Greenhouse gas emissions – Scope 1	Tons of carbon dioxide equivalent	19.15
	Greenhouse gas emissions – Scope 2	Tons of carbon dioxide equivalent	86,534.40
	Total greenhouse gas emissions	Tons of carbon dioxide equivalent	86,553.55
Solid Waste Business	Greenhouse gas emissions – Scope 1	Tons of carbon dioxide equivalent	1,176.56
	Greenhouse gas emissions – Scope 2	Tons of carbon dioxide equivalent	404.23
	Total greenhouse gas emissions	Tons of carbon dioxide equivalent	1,580.79
Total of Main Business Segments	Total greenhouse gas emissions ¹⁶	Tons of carbon dioxide equivalent	1,240,638.95
	Greenhouse gas emissions intensity	Tons of carbon dioxide equivalent per HK\$ 10,000	0.44

Note:

1.Scope 1 emissions were calculated according to the *Guidelines of the Greenhouse Gas Emissions Accounting and Reporting for Other Industrial Enterprise*, by converting the consumptions of direct energy such as gasoline, diesel, and liquefied petroleum gas. Scope 2 emissions were calculated according to the *2017 Baseline Emission Factors for Regional Power Grids in China* and *Guidelines of Environmental Performance Indicators Reporting* included in the *Environmental, Social and Governance Reporting Guide Index* of the HKEX.

2.The increase in greenhouse gas intensity is mainly due to the increase in the statistical range of 2019 compared with 2018.

¹⁴ 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.

¹⁵ Greenhouse gas emissions - Scope 2 refers to those generated in production and operation from indirect energy, such as externally purchased electricity and steam.

¹⁶ Only the greenhouse gases produced in the production process are included, not the greenhouse gases produced in office buildings.

2019 Energy consumption of main business sectors

	Energy/resource	Unit	2019
Water Business	Electricity	kWh	1,267,856,816.52
	Renewable energy substitution	kWh	25,942,173.48
	Gasoline	Tons	460.01
	Diesel	Tons	451.49
	Natural gas	Cubic meter	82,117.80
	Steam for heating (purchased externally)	GJ	136.94
	Liquefied petroleum gas	Tons	2,480.58
Overseas Business	Electricity	kWh	137,356,186.73
	Gasoline	Tons	4.66
	Diesel	Tons	1.68
Solid Waste Business	Electricity	kWh	483,126.00
	Gasoline	Tons	42.30
	Diesel	Tons	336.00
Total of Main Business Segments	Comprehensive energy consumption	Tons of standard coal	174,767.36
	Comprehensive energy density	Tons of standard coal per HK\$ 10,000	0.06

Note: Comprehensive energy consumption was calculated according to GB-T25892008 *General Principles for Calculation of Comprehensive Energy Consumption* by converting the consumptions of gasoline, diesel, natural gas, electricity, and the heat purchased.

Protecting biodiversity

Ecosystems are vulnerable. Guided by the *China Biodiversity Conservation Strategy and Action Plan (2011-2030)*, BEWG is dedicated to biodiversity conservation and ecological restoration. In construction and operation, we thoroughly implement the *Environmental Impact Assessment Law of the People's Republic of China* and have developed

the *BEWG Biodiversity Protection Policy*. We respect and strictly abide by relevant laws and regulations in overseas jurisdictions, and strive for harmony with the environment based on the characteristics of its green water services.

We incorporate biodiversity protection into construction, operation and management. Before construction starts, we remove wild animals from the site and educate employees about biodiversity and animal protection. When construction is completed, we restore the site's vegetation and landscape, to preserve the ecosystem. Our *Water Source Areas Management System* explicitly prohibits fishing – including cast-net fishing, poison

fishing, electrofishing and blast fishing – and the hunting of animals under state protection, such as wild swan, egret and wild duck. It emphasises the importance of animal protection in water source areas and its implementation is supported by regular inspections.

We have an inherent responsibility to protect the water environment. Over the

years, we have been working intensively on comprehensive water environment treatment, continuously innovating water treatment concepts, carrying out regional or basin-wide comprehensive treatment, and restoring the overall ecosystem.

Case

Black-odour water treatment in Xiaotaihou River, Tongzhou District, Beijing

Located in the southeast of Beijing, the Xiaotaihou River is a critical link connecting the downtown and the sub-centre. The section of Kouzi Village-Maying Village is one of the 53 black-odour rivers in the Tongzhou District in 2017.

BEWG has been implementing landscape improvement and ecological restoration projects in the Xiaotaihou River since July 2015. The environment of the river

has been renewed now. The result of the water ecology survey indicates the presence of variety populations of plankton, zoobenthos large fish, and aquatic plant in the river, marking that the nearly complete recovery of the water ecological system. The well-arranged aquatic plants in the river guarantee the continuous improvement of water quality in the river, greatly enhance the habitat and provide a comfortable home to animals and

plants. At present, it has attracted many kinds of aquatic birds, such as the green sandpiper and little grebe, to winter or dwell here.

With the unremitting efforts of BEWG, the Xiaotaihou River has been transformed from the infamous black-odour river into a typical demonstration river full of vitality.



To address the threat posed by urban polluted and odorous water bodies to aquatic organisms, we promoted the

construction of underground sewage treatment plants. We discharged treated, purified water into surface

water bodies and built ecological parks to restore the water ecosystem.

Corporate governance standardisation

Compliance with laws and regulations is the cornerstone of a company's stability and development. Our well-established governance structure maximizes our internal efficiency.

We attach great importance to our credibility, observe high business ethics and endeavour to sustain high-level corporate governance.

Functions of the Board

In strict accordance with Appendix 14 *Corporate Governance Code* of the *Listing Rules* of the HKEX, and domestic and overseas regulatory requirements, our scientific and efficient corporate governance defines rights and responsibilities, and ensures coordinated operation.

The Board directs our development direction, determines the strategic direction, formulates the Group's overall strategies and policies, monitors the performance of management and safeguards the long-term interests of the Group and its shareholders. The Audit Committee under 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



The Board of BEWG

Audit Committee

- Identify material ESG issues
- Make recommendation on ESG goals, policies and structure of the Company
- Monitor and evaluate the ESG management approaches, strategies and goals
- Identify and evaluate the ESG related risks, ensure that the Company establishes effective ESG risk management and internal control systems
- Review and evaluate the ESG performance and report to the Board
- Review ESG report

ESG Task Force

- Carry out ESG issues materially evaluation
- Formulate ESG goals, policies and structures
- Formulate work plan for ESG management, goals achievements, etc. and ensure implementation
- Compile ESG report
- Report to the Audit Committee/management on a regular basis

The roles of Chairman and Chief Executive Officer are taken by different people. Their duties and responsibilities are well separated, to ensure the Chairman leads the Board and the Chief Executive Officer manages the Group's businesses so that the operation of the Board and the businesses, operation, and routine management of the Group are independent of each other. 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

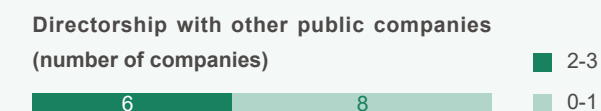
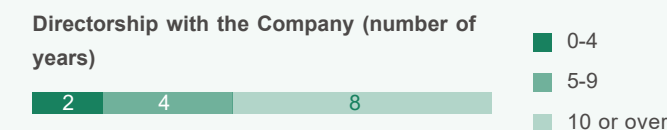
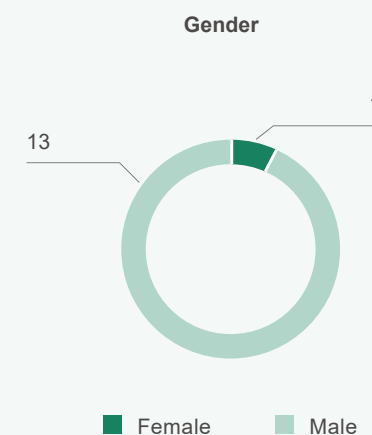
that each independent non-executive Director complies with the independence guidelines in Rule 3.13 of the *Listing Rules*.

Board diversity is important. Our *board 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 skillsets, experience and diverse perspectives required by the Group's businesses. When considering candidates, the Nomination Committee considers factors including 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 comprised nine Executive Directors and five Independent non-executive Directors. One of the independent non-executive directors holds the professional and accounting qualifications required by the *Listing Rules* of the HKEX.

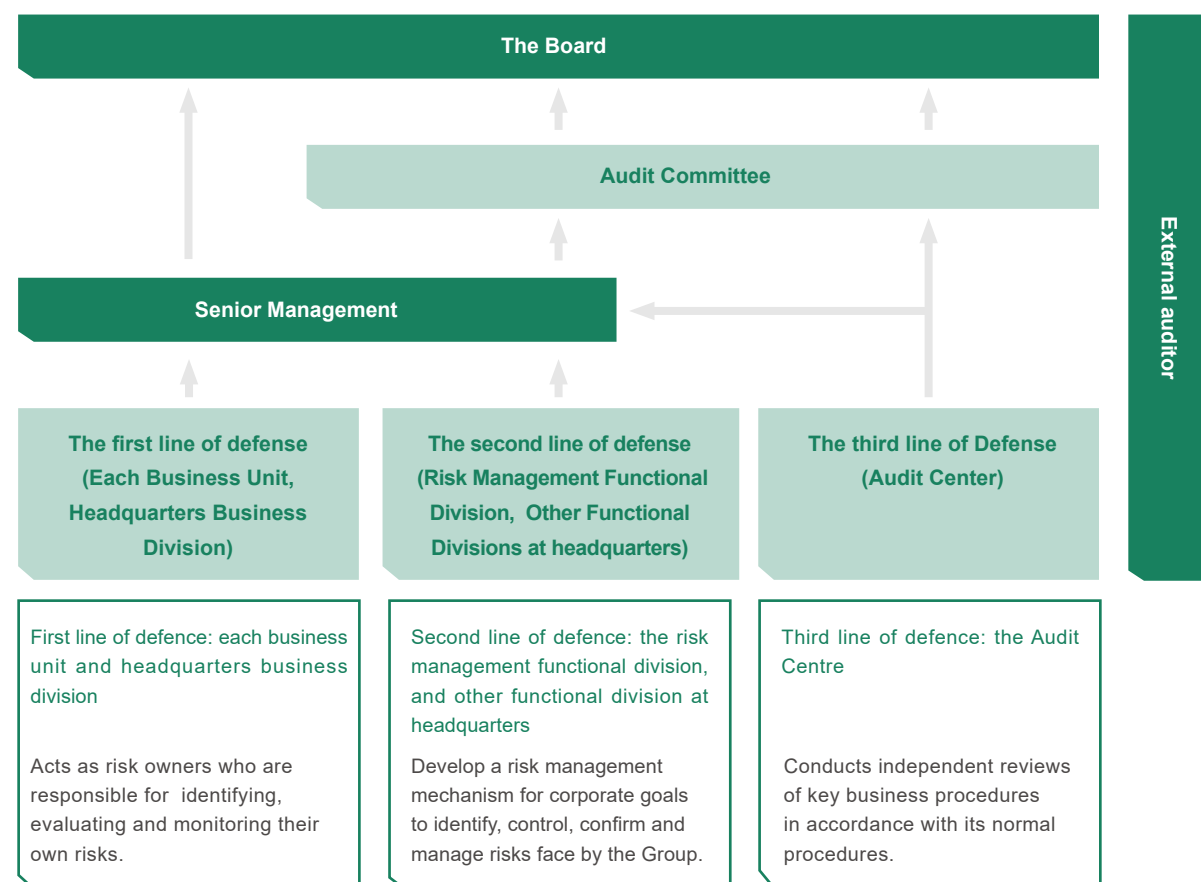
Board diversity



Risk management

The Group attaches great importance to risk management and control. The Board of Directors is fully responsible for assessing the nature and degree of risks that the Group may face and ensuring that the Group has sound and effective risk management and internal controls. The Board of Directors has delegated to the Audit Committee to oversee the management's design, implementation, and supervision of the risk management and internal control system.

We adopted the enterprise risk management framework formulated by The Committee of Sponsoring organisations of the Treadway Commission and established the "Three Layers + Three Lines of Defence" structure to clarify risk management procedures such as risk identification, risk assessment and risk handling.



To further standardise risk management, the Group formulated the *BEWG Overall Risk Management System* to prevent, control, resolve operational risks. The Group closely manages environmental and social risks, and has established a Sustainability Risk Assessment System under the Audit Committee to identify and update important environmental factors in products, services and water treatment plant construction. Before investing in a project, the Group will identify local environmental and social risks, analyse risk prevention and control measures, and

develop targeted plans for risk prevention and emergency response.

We continue to strengthen internal risk control in daily operation and management. We 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 business unit. 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 ensure our investment projects. At the same time, we established a post-project analysis mechanism and *Financial Risk Map* to enhance corporate safety and financial safety. Additionally, we fully implemented public opinion management measures and public relations crisis management mechanisms to ensure brand safety.

Anti-corruption

BEWG strictly observes business ethics and has a zero-tolerance policy for corruption. In strict accordance with laws and regulations such as the *Criminal Law of the People's Republic of China*, *Supervision Law of the People's Republic of China*, *Company Law of the People's Republic of China*, *Anti-Unfair Competition Law of the People's Republic of China*, *United Nations Convention against Corruption*, and *OECD Convention against Bribery of Foreign Public*

Officials in International Business Transactions, and ethics-related rules and regulations of the jurisdictions in which we operate. Our anticorruption system covers the entire group and all employees, standardising anti-corruption work and its supervision. We continued to establish a culture of integrity and to deepen integrity and compliance for all employees, regardless of region and business area. We take preventive measures to prevent corruption at source, creating a culture of integrity that ensures

high-quality development. At the same time, we 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 Discipline Inspection and Supervision Commission of the Group implements the anti-corruption requirements raised by the Board, performs the duties of discipline inspection and supervision and continues to enhance our anti-corruption work. Currently, the Commission has five members, including one Secretary and one Deputy Secretary, both are executives of the Group. At the Group's headquarter, the Discipline Inspection and Supervision Department strengthens our anti-corruption supervision, prevention and education, ensures the accessibility of whistleblowing channels, and standardises the handling of clues concerning corruption, bribery and violation of business ethics. Each year, all centres and regions sign an *Integrity Commitment* that defines and guides their anti-corruption responsibilities and work.

We pay close attention to improving policies and systems and deepening anti-corruption management. On the one hand, we implement business ethics thoroughly and update the *BEWG Code of Business Conduct* – applicable to all employees

and subsidiaries – every three years. We expressly ban all forms of bribery, corruption, and fraud and strictly prohibit any employee from bribing, soliciting bribes or accepting bribes, including soliciting or providing any benefits from/for customers, suppliers, legislators/law enforcement agencies or other persons related to our business, or acting as a third-party intermediary to provide, solicit or accept any Interests. On the other hand, we have established a comprehensive anti-corruption supervision and accountability system. We issued the *Anti-Corruption Management System*, *Whistleblower Protection System*, *System for the Investigation and Punishment for False Accusation*, *Confidentiality for Whistleblower System*, and *Overseas Anti-Corruption System*. We improved policies and systems with reference to relevant provisions in the *United Nations Convention against Corruption*, the World Economic Forum's *Partnering Against Corruption Initiative* and Transparency International's *Anti-Bribery Guidance*. We sought to ensure that our anti-bribery clue collection and investigation processes are applicable

to jurisdictions outside China in order to effectively prevent and punish corruptive behaviour.

Our online office platform and mobile app have a Corruption and Compliance tab. Beneath it are four items: whistleblowing methods, punishment announcements, warning cases and integrity views. The hotline, e-mail, phone and address of the Discipline Inspection and Supervision Commission are available to all. Clues about corrupt behaviour are processed in accordance with applicable laws and regulations. Our Internal Audit department, external auditors and third-party organisations are engaged if necessary. Punishment for violation of laws and regulations is announced in a timely manner. According to the whistleblowing and discipline inspection work system, when handling clues about corruptive behaviour, we endeavour to protect whistleblowers and the information provided, even if it is proved to be incorrect or lacking a factual basis. Discrimination against whistleblowers, and retaliatory action, is severely punished, in

accordance with the law and regulations.

To create a cleaner atmosphere, we actively promote a culture of integrity. We organised a series of events and activities on the theme of "fighting corruption and being devoted to career". This included visits to the Beijing Anti-corruption Warning and Education Base, the Integrity Olympic Demonstration Base and the Party School of the Beijing CPC Committee. We also held five immersive training sessions on our culture for managerial staff at all levels and regional units in Beijing. The Group's five regions, and affiliated entities, hosted the Original Aspiration course to enhance integrity and compliance training for employees at all levels. Before every important holiday, we carry out a special inspection to fight the "four evil trends" (formalities performed for formalities' sake, bureaucratism, hedonism, and extravagance) and issue an *Integrity Initiative* to all employees. We focus on "Integrity and Compliance" tab, analyse typical cases within and outside the Group – about gambling, bribery, misappropriation and other violations – in view of the Criminal Law and Public Security Administration Punishment

Law, and select cases about gambling, bribery, misappropriation, and other violations as promotion and education materials. We adopt different measures to improve employees' awareness of compliance. In addition, we continuously strengthen our own supervision and inspection team. We require employees at discipline, inspection, supervision and internal audit units to undertake anti-corruption training organised by superior organisations and the Group and study standards for criminal registration for reported violations, case investigation, department operation and anti-corruption promotion. In 2019, board members received eight hours of anti-corruption training in two anti-corruption training sessions, while general employees received four trainings with an average training time of four hours per participant. In 2019, in relation to corruption, the Group received no major complaint and there was no concluded litigation.



In 2019,
the Group conducted

2

anti-corruption training for
board members

4

anti-corruption training for
general employees



Ensuring service quality

Ensuring healthy lifestyles, and promoting the well-being of all, are essential for sustainable development. Safe drinking water plays an important role. Rapid socioeconomic growth and accelerated urbanisation have contributed to water pollution and uneven supply. We have a great responsibility for ensuring water

quality and safety. To this end, we implement high standards for the quality and safety of our construction and operations, and strictly monitor outlet water from sewage plants.



Meeting quality standards

In response to the *Three-year Action Plan for the Upgrading and Efficiency Improvement of Sewage Treatment* of the country, we made 2019 our Quality Year, and issued the *Beijing Enterprises Water Group 2019 Quality Year Construction Core*. We aim to improve quality, and draw on standardised management, and technological and conceptual innovation, to create national demonstration water environment projects and model water treatment plants.

In 2019, we promoted standardisation and consolidated the management of each business line through policy revision, standard development, management structure optimisation, and standardised data management. In 2019, in accordance with the requirements of ISO 9001¹⁷, ISO 14001¹⁸, and ISO 45001¹⁹ certification systems, we developed the *Beijing Enterprises Water Group Quality, Environment, and Occupational Health and Safety Management Manual*, and organised ISO transition training and certification audits.

In 2019, to promote standardisation, we started with business and management to improve the quality of deliverables.

Business standardisation

- **Technology:** we issued the *Technical System White Paper and Guidelines for Collaborative Operation of Water and Water Environment*, and developed and revised more than ten enterprise standards and business operation guidelines. These clarify technical standards, quality controls and processes for the entire life cycle.
- **Investment:** we completed the systematic definition of our products and services.
- **Construction:** we launched completion and acceptance standards for water and water environment projects, and worked with China Tiesiju Engineering Group Co., Ltd. to compile the *Urban Waterworks Construction Technical Manual*.
- **Procurement:** we introduced a coding system to standardise material management.
- **Operation:** we upgraded implementation rules and evaluation standards for star-level enterprises.

Management standardisation

- **Organisational standardisation:** we standardised organisational levels, classification, attributes and other rules, optimised the organisational structure of the headquarters, promoted three-level control and established a standardisation department.
- **Position standardisation:** we standardised titles of positions at headquarters, regions and business areas.
- **Project standardisation:** We clarified investment-construction-operation data transmission rules and scale data management specifications of the regions and the Group, and issued a three-volume data dictionary white paper.

¹⁷ Quality Management System Certification

¹⁸ Environmental Management System Certification

¹⁹ Occupational Health and Safety System Certification



For completed projects, we perform joint completion acceptance to ensure

100%

completion acceptance rate

100%

project inspection coverage

In terms of construction project management, from time to time, we conduct unannounced inspections of construction projects, to conduct spot checks on the timeliness of financing and construction formalities, progress, quality, safety, business management compliance and customer satisfaction. These inspections determine whether the managers and engineers meet the requirements of the projects. If any item fails to meet the requirements of the *BEWG Construction Management System – Technical Quality Work Manual*, those responsible are disciplined according to the

quality management appraisal and reward and punishment measures in the manual. For completed projects, we perform joint completion acceptance to ensure a 100 per cent completion acceptance rate and 100 per cent project inspection coverage.

Case

BEWG establishes SPV support platform to manage projects in construction projects

In 2019, we set up an SPV support platform to solve via rapid response and timely decision-making in management problems that occur between the initiation of a project and its construction.

- A project initiation meeting enhances preconstruction planning and ensures that cost, schedule, quality and safety goals are achieved.
- We carried out inspection tours and completed 119 inspections during the year.
- We formed a joint completion acceptance mechanism that engages investment, technology, construction, operation, and procurement departments. It completed joint acceptance and assessment of 43 projects. The acceptance rate was 100 per cent. We delivered high-quality projects: Xintang Yonghe, Nanyang Zhanggang, Mianyang Tazi Dam, Shenzhen Hengling, Zaozhuang Xuecheng and Daxing Yinghai
- We focused on building four national model projects in Shuangliu, Chengdu Municipality, in Yuhang, Hangzhou City, in Zengcheng, Guangzhou City, and in Yinchuan, Ningxia Autonomous Region.

The Xintang Yonghe Phase IV sewage

Exhibition of excellent projects:

treatment plant is an important element of the "Clearer Waters for Guangzhou" Action Plan and the Water Ecological Civilisation Town Programme. The project company overcame a number of difficulties, made plans in advance, alternated engineering processes, and shortened the construction period while ensuring quality. The plant opened within half a year and

completed its trial operation in the eleventh month.

We also set high standards for the Nanyang Zhanggang Sewage Treatment Plant. The construction team established models, which greatly improved construction quality. The project was highly recognised by the government for meeting its schedule and having a controllable total cost.





In 2019

222

projects among the Group applied for star-level status

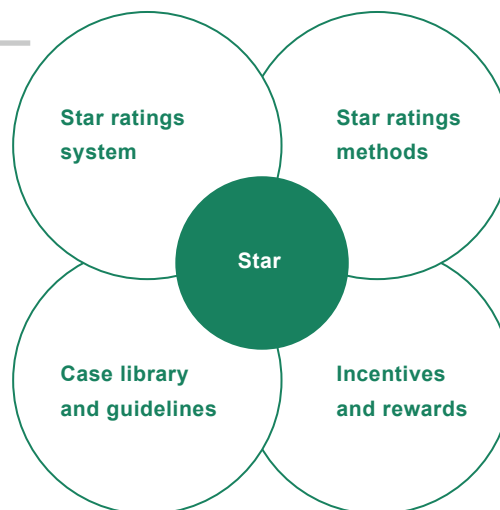
Of these

90%

qualified for one star

In terms of operation management, we innovated management methods, we rolled out star ratings for operation projects, and standardised the management process by developing systematic criteria. In 2019, 222 projects among the Group applied for star-level status. Of these, 90 per cent qualified for one star "standardised management, production safety and normal operation" or above, and over 15 per cent qualified for three star water plants.

We issued the *BEWG Implementation Rules for Star-level Operation Enterprise Appraisal*, and *Star-level Operation Enterprise Process Management Assessment Standards* (including standards for sewage operation project quality, sewage operation project operation, water supply project operation quality, water supply company operation, water treatment plant operator operation, and raw water operator operation).



We issued a library of standardisation cases and guidelines for water supply, sewage treatment and equipment operation. We analysed in detail the key issues in production management, equipment management, and integrated management, listed irregularities discovered in inspections, illustrated standardisation cases, and offered guidance for standardised operations.

A project is assessed in five areas: on-site process management, operation quality, operation management, staff capability, and innovation and benefit generation. Requirements vary for different levels to differentiate them and offer management guidance.

We issued the *Star-level Enterprise Employee Subsidy System*, according to which employees at starred enterprises receive subsidies each month based on their number of stars and the Group's staffing standards. This encouraged grassroots employees to apply for star certification.

We encouraged project companies to optimize their processes to maximize the efficiency of deep treatment and encouraged qualified projects to upgrade their water outlets. At the

same time, we pay close attention to the operation and management capabilities of water treatment plant employees, especially in quality testing and quality control. Targeted

training strengthens their skills. In 2019, the number of projects with water outlet quality exceeding Class I Standard A accounted for 52.7%.

Case

Upgrading and transforming a partner water treatment plant in the Min-Tuo River Basin

As the government raised the standard for the project from Class I Standard A to the discharge standard of pollutants in municipal wastewater – as per the *Sichuan Province Discharge Standard of Pollutants for Min River and Tuo River* – we transformed the sewage treatment plant of Chengdu BE Shudu Investment Co., Ltd. in the Min-Tuo River Basin. The capacity of the plant

was 100,000 m³/day, yet treatment reached 110,000 m³/day. Despite this excessive load, we upgraded the process from "coarse screen + lift pump + fine screen + aerated grit chamber + A2O biochemical tank + secondary sedimentation tank + D-type filter tank + UV disinfection" to "coarse screen + lift pump + fine screen and aerated grit chamber/SSGO + hydrolysis acidification and

regulation tank + A2O biochemical tank + secondary sedimentation tank + secondary lift pump and denitrification biological filter + magnetic coagulation sedimentation tank + UV disinfection". These enhancements meet the new standard and provide an overload capacity.

High-quality service

Committed to assuring the government and satisfying the public, we endeavour to incorporate excellence in our everyday management. We bring clean water and customer service to the government, enterprises and communities.

As technology and customer behaviour evolve, we focus on the customer experience when building systems and platforms, and employ technology as the driving force.

Case

Smart water supply platform in Guigang establishes BEWG as a user-friendly enterprise

In 2019, the Group established a smart water supply platform and 15 major business systems for BEWG Guangxi Guigang Co., Ltd., and optimised the management model based on system functions. A comprehensive ticket management system was launched to enable ticket-based management for 11 items, including meter reading, installation request, leak detection, and maintenance. Innovative functions such as calculation of actual person-hours, rated person-hours, automated performance calculation

were introduced to the ticket system, which significantly improved efficiency. We also provided a 24/7 hotline system and digitized all offline businesses. The regulation centre functioned as the smart brain of the management and control platform to effectively improve customer service.

The customer service platform focused on convenience and effective marketing. It integrates meter installation, meter reading, fee collection, meter

management and a service hotline, and is compatible with WeChat and Alipay for bill payments and communications. The platform enabled smart meter reading for 45,000 meters, benefitting 61,000 WeChat users. Thanks to the platform, users need visit the site only once at most. This earned BEWG first place in the Guangxi "Ease of Doing Business Appraisal".

In 2019, BEWG selected 15 pilot projects across the country to conduct customer satisfaction surveys. We invited the government officials responsible for these projects to evaluate all stages. We responded to the problems identified by developing solutions and making rectifications.

Our dedication to quality is reflected in our ability to quickly respond to, and properly handle, emergencies: to control their development, and to reduce damage and losses to customers. The

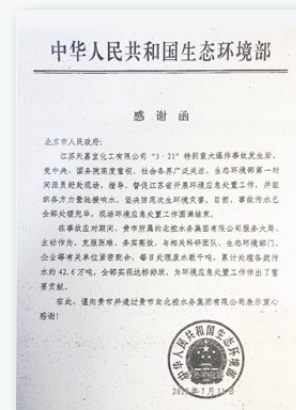
BEWG Management Measures for Production Safety Accident Emergency Response Plan and *BEWG Production Safety Accident Emergency Response Plan* detail the reporting and decision-making processes for emergencies, and the internal and external coordination mechanisms. These documents enable quick responses, ensure the safety of water supply and sewage, and safeguard industries and lives.



Case BEWG assists the government to tackle polluted water bodies

At around 2pm on March 21, 2019, an explosion occurred in Jiangsu Tianjiayi Chemical Co., Ltd. in Chenjiagang Chemical Park, Xiangshui County, Yancheng City, Jiangsu Province. BEWG started its emergency response plan immediately. Our Quality Safety Centre, Operation Management Centre and East China Region organised more than 50 employees to control and remedy the situation. The Chenjiagang Water Treatment Co., Ltd. was on

the frontline, cooperating with the Ministry of Ecology and Environment to treat polluted water, implement the emergency response plan, and ensure no untreated wastewater would be discharged into the environment. Thanks to these concerted efforts, production was resumed within one day. We consulted experts and promptly obtained the required medicament. Our action was praised by the Ministry of Ecology and Environment.



Case BEWG rushed to earthquake relief to ensure water supply and proper sewage treatment

At 22:55 on June 17, 2019, a magnitude 6.0 and a 5.1 magnitude earthquake occurred in Changning County and Gong County, Yibin City, Sichuan Province, China. BEWG attached great importance to the situation and rushed to the rescue.

Safe drinking water is the most fundamental guarantee after an earthquake. This disaster broke the pipe joint between the chlorine dioxide generator and contact disinfection chamber of the water plant of BE Gong County Water Supply Co., Ltd.

The company immediately initiated the emergency response plan for hazardous chemical leakage and took emergency measures to stop the application of agents. After all chlorine dioxide was pumped out, maintenance staff fixed the pipeline and restored disinfection facilities as soon as they can to ensure that residents in the affected area have access to clean water. The earthquake also cut the power supply to the reservoir of our Gong County company. The company took measures immediately to investigate the cause of the power outage and reported it to the Power

Supply Bureau. At 3 am on June 18, power supply was restored and the water plant began to process water. Water supply to the city was restored at 5 am.

We fulfilled the social responsibility of a state-owned enterprise and water service provider with a strong sense of mission. We spared no effort to ensure the water supply and proper sewage treatment to support earthquake relief.

Case BEWG ensured water safety during the COVID-19 outbreak

Since the COVID-19 outbreak began, all water treatment plants have acted in strict accordance with the *Suggestions of 12 Experts with the Ministry of Housing and Urban-Rural Development on Virus Removal and Control of Drinking Water Treatment Plants During the Outbreak, Notice on the Supervision of Treatment of COVID-19 Polluted Medical Wastewater and Urban Sewage, COVID-19 Polluted Medical*

Wastewater Emergency Treatment Technical Plan (Trial), Discharge Standard of Water Pollutants for Medical Organisation (GB 18466-2005), and Guidelines for Drinking-water Quality – Fourth Edition, issued by the World Health Organisation to ensure the safety of water supply and the stability of sewage treatment.

Employees of our five companies in the Hubei – Hubei Yichang

BE Water Purification Co., Ltd., Yichang BE Water Environmental Protection Technology Co., Ltd., Yingcheng BE Water Co., Ltd., Chibi BE Water Co., Ltd. and Chibi BE Urban Development and Water Co., Ltd. – worked on the frontline to ensure the safety and stability of sewage treatment. Local governments recognised the devotion and courage of BEWG employees during the outbreak.



04

Supporting the national strategies



To safeguard the source of life and create a green environment, BEWG actively responds to key national strategies such as the coordinated development of the Beijing-Tianjin-Hebei region, the Belt and Road Initiative (BRI), the Yangtze River Protection Plan, and the Guangdong-Hong Kong-Macao Greater Bay Area development plan.

Supporting Beijing-Tianjin-Hebei Coordinated Development

BEWG implements the spirit of the *Outline of the Beijing-Tianjin-Hebei Coordinated Development Plan* and upholds the strategy of solidifying business in Beijing, strengthening development in the Beijing-Tianjin-Hebei region, and fuelling growth in the Bohai Economic Rim and entire North China. We strive for the sustainable restoration of the water

environment from five aspects: source, point, line, surface and body. The aim is to build a governance system consisting of "one core and two wings" with the distinct characteristics of BEWG, to restore clear waters, lush mountains, and the harmony between cities and water, and to integrate our services into people's lives in a faster and broader way.

Promoting the development of Yangtze River Economic Belt

Chinese government aims to utilise the locational advantages of the Yangtze River Economic Belt. This stretches across East, Central and West China. As the country mobilises forces to protect the environment, shuns large-scale development, prioritises ecological restoration and pursues green development, BEWG coordinates

resources, gathers strength and contributes smart solutions in cooperation with the China Three Gorges Corporation. We will participate in the ecological restoration of the river basin and help to protect the river itself and work on six areas including equity, fund, business, dual platform, research and industrial alliance.

Case

China PPP Fund of the Ministry of Finance invests in PPP project for sewage sludge treatment in Qinhuangdao City

On March 5, 2019, the China PPP Fund of the Ministry of Finance paid RMB 330 million for shares of the Qinhuangdao PPP sewage sludge treatment project. It not only marked the formal participation of the Fund in BEWG North China's Qinhuangdao

PPP sewage sludge treatment project but also the launch of our first equity fund, based on the principle of "equal right for all shares".

The project is a high quality, prefecture-level, plant-pipe network integration, with

mud-water integration revitalizing stock assets. Consistent with current national policies, it commands the largest investment of existing PPP-based drainage facilities.

Case

Cooperating with local governments for better cities

BEWG is committed to being based in the Beijing-Tianjin-Hebei region and influencing North China. In 2019, we joined with local governments to build better cities.

February 27

BEWG and Dalian Water Group signed a strategic cooperation agreement to promote innovative development. We will focus on national strategies, deepen the reform of state-owned enterprises, give full play to our strengths, and explore cooperation in urban water supply, drainage and environmental governance.

May 28

BEWG and the People's Government of Hengshui City signed a *Strategic Cooperation Framework Agreement*. Following the public-private partnership (PPP) project for water system restoration in the main city of Hengshui, we will unite in fields such as urban infrastructure construction and operation, water environment governance and urban environmental services.

August 8

BEWG and the People's Government of Junan County signed a cooperation agreement for the Longwang River sewage treatment plant reclaimed water project in Junan.

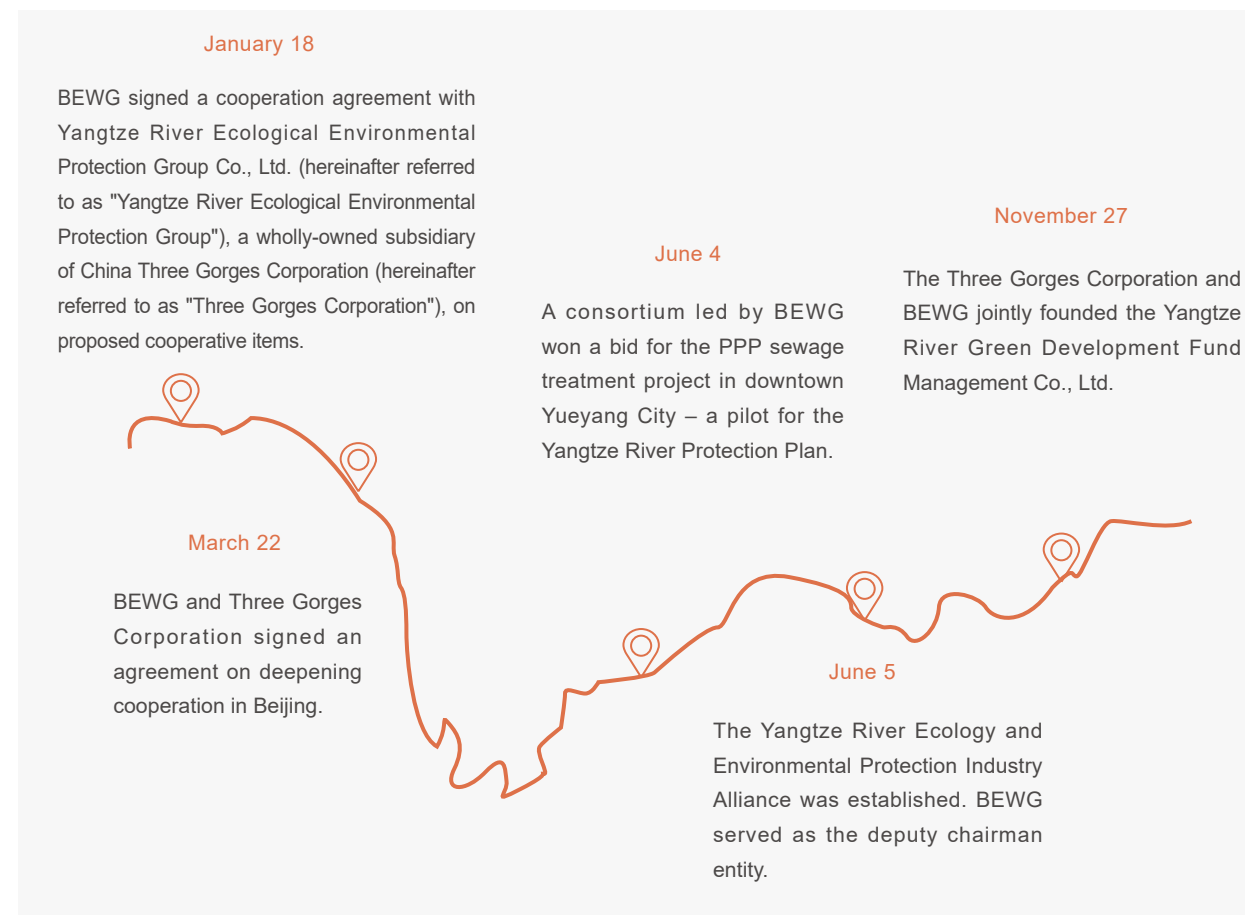
August 15

BEWG and the Baoding Municipal People's Government signed an Investment and Cooperation Agreement for the *Comprehensive Treatment of Huanghua Ditch of the Baoding Comprehensive Water System Treatment Plan (Phase I)* PPP project in Beijing. BEWG draws on its capital, technology, and operational and management strength to provide the government and local residents with a better and more comprehensive water supply, sewage treatment and water environment treatment.



▲ Sun Zhiyu, Party Division Member and Deputy General Manager of China Three Gorges Corporation, and Li Yongcheng, Vice Chairman and Executive Deputy General Manager of BEWG, signed the Agreement on Deepening Cooperation on the Protection of the Yangtze River on behalf of the two groups.

Milestones in this work in 2019 included:



The total investment of the PPP comprehensive sewage treatment project in Yueyang City was

RMB **4.445** billion



Case PPP comprehensive sewage treatment project in Yueyang City

On June 4, 2019, BEWG led a consortium of seven companies – including the Yangtze River Ecology and Environmental Protection Group and Beijing Enterprises Water Group (China) Investment Co., Ltd. – who won a bid for a PPP comprehensive sewage treatment project in downtown Yueyang. This project is one of the first pilots for the Yangtze River Protection Plan. The total investment of the project was RMB 4.445 billion. It is also the first result of China Three Gorges Corporation and BEWG signing a cooperation agreement to implement the requirements of the plan.

The model for the project integrated the plant, pipe network, river and riverbank. Inventory asset acquisition, upgrading and expansion of sewage treatment plants, improvement of the sewage pipe network and water environment management are all involved. The project revolutionised the traditional isolated-point-based treatment model. It focused on improving the overall ecological environment and took municipal sewage treatment as the entry point. Through systematic governance, demonstration and promotion, it established a new model for protecting the Yangtze River and building a green development demonstration zone.



Case PPP Yuhangtang River basin water environment treatment project

The Yuhangtang River basin has an important impact on the green development of the Yangtze River Basin and therefore on the Yangtze River Economic Belt. Investment in the environment treatment project totalled RMB 2.35 billion. With four sub-projects – sewage collection and treatment, river network and water system treatment, dredging the main course of the Yuhangtang River, and the Phoenix Mountain Park – it involved a plant, pipe network, river, riverbank and people. To build a high-quality urban ecosystem, we upgraded 5km of municipal sewage pipeline, built

an underground sewage treatment plant with a capacity of 150,000 tons per day, restored 22 rivers, built a 16.8km waterfront corridor and a 4km mountain boardwalk, enabled smart water regulation, established environmental protection education and an exhibition about environmental protection, and expanded living space.

As of the end of 2019, the Phoenix Mountain Park was essentially completed. River network regulation and Yuhangtang main river course regulation projects were 90 per cent completed, and the sewage

treatment plants were 50 per cent completed. It is expected that all sub-projects will be completed by the end of 2020. The project provides urban flood control and reduces the risk of waterlogging. It can also remedy polluted rivers and contribute to clear water and beautiful scenery, creating an enjoyable environment for local residents.



Yuhang Mountain Park upon completion

Supporting the Guangdong-Hong Kong-Macao Greater Bay Area

The Guangdong-Hong Kong-Macao Greater Bay Area is one of the most open and economically lively regions in China. It plays a strategic role in the development of the country. Guided by the spirit of the *Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area*, we contribute to the area's eco-friendly development.

Phase I of the comprehensive water environment treatment program in Pengjiang District, Jiangmen City, commended by local government

Case

In June 2019, we won a bid to treat black and odorous water bodies treatment project of the comprehensive water environment treatment project (phase I) in Pengjiang District. In the first phase of this project, we remedied water quality in the basins of the Tiansha and Duruan rivers, and thereby significantly improved the environment of the district in Jiangmen City. We completed 90 per cent of survey and design tasks, and 50 per cent of construction, within half a year. Our efforts made a remarkable contribution to the city's treatment goals. The People's Government of Pengjiang District, Jiangmen City, highly praised our work and promoted us to other cities and districts.

江门市蓬江区人民政府

关于对江门市蓬江区水环境综合整治项目（一期）——“黑臭水体治理工程”实施情况进行表扬的通知

2019年6月14日，江门市人民政府办公室印发《关于对江门市蓬江区水环境综合整治项目（一期）——“黑臭水体治理工程”实施情况进行表扬的通知》。

江门市蓬江区水环境综合整治项目（一期）——“黑臭水体治理工程”实施情况如下：该项目自2019年6月启动以来，进展顺利，取得了显著成效。项目共治理黑臭水体1.2公里，治理面积4.5万平方米，治理人口1.5万人。项目自实施以来，水质明显改善，黑臭水体得到有效治理，群众满意度显著提高。

特此通报表扬，希望全市各区镇街道、各有关部门、各企业、各市民，继续发扬主人翁精神，共同推进江门市水环境综合整治工作，为创建全国文明城市、建设美丽江门作出更大贡献。

江门市人民政府
2019年6月14日

Supporting Belt and Road Initiative

We actively implement the spirit of the BRI and draw on our capital strength, advanced technology and rich management experience to bring clean water and ecological restoration to BRI areas and countries, and contribute to BRI sustainable development.

Case

First reclaimed water project in Yinchuan City

The total investment of the first reclaimed water plant project in Yinchuan City is RMB 1.504 billion, covering an area of 31.6 hectares with the construction scale of 300,000 m³/day. The project adopted semi-underground construction form and "AAO + high-efficiency sedimentation tank + V-shape sand filter" process, and its effluent met the ground quasi-IV standard. Taking the construction of the "Belt and Road Water Ecological Experience Innovation Center E-park" as the core design, the project built the ground landscape into an open three-dimensional park which keeps warm like spring based on the design concept of "green, intelligence, innovation, and sharing", thus

becoming an open area to provide leisure and fun for citizens.

The implementation of this project will integrate sewage treatment, reclaimed water utilization and environmental knowledge sharing, and exert great significance to the ecological environment and water resources recycling in the northeast of Xingqing District and the Desheng District. In addition, the first reclaimed water plant in Yinchuan City will be used as a resource gathering area to form a vitality circle, a living circle and an ecological circle that serve the nearby area, changing the "nearby-avoiding" effect into the "nearby-benefiting" effect.

Case

BEWG signs memorandum of understanding on cooperation with the Kingdom of Cambodia

On August 20, 2019, at the invitation of BEWG, Cham Prasidh – Minister of Industry and Handicraft and State Councillor of the Kingdom of Cambodia – and delegation visited the Group held talks with Zhou Min, President of BEWG, and signed the *Memorandum of Understanding on Water Cooperation*.

According to the MoU, the Cambodian government welcomes BEWG to participate in the construction of water supply and sewage projects in Cambodia. It supports BEWG with information access, project application, communication and coordination through the Ministry of

Industry and Handicraft. We will foster in-depth cooperation with the ministry and draw on our strengths to provide quality solutions for water infrastructure in Cambodia.



Signing ceremony for the MoU with the Kingdom of Cambodia

Case

BEWG signs MoU with Kyrgyzstan

On June 13 – witnessed by Kubatbek Boronov, First Deputy Prime Minister of Kyrgyzstan, and Li Yue, Economic and Commercial Counsellor of the Chinese Embassy in Kyrgyzstan – Director Adilbek uulu Shumkarbek of Kyrgyzstan's Promotion and Protection of Investments Agency of Kyrgyzstan and Vice President Li Haifeng of BWEG signed an MoU on behalf of both parties.

The MoU will guide China and Kyrgyzstan's long-term cooperation in the water sector and lay a foundation for BWEG to

contribute to environmental protection in Kyrgyzstan.



Signing the MoU with Kyrgyzstan

Lasting business and sustainable operation

Over the years, BEWG has been determined to tackle challenges in the pursuit of clean water and green mountains. We keep in mind the mission of innovative development, design innovation strategies, lead industry collaboration and strive for information security. At the same time, we bear in mind our goal of protecting the green environment, optimize the environmental management system, take actions to implement low-carbon emissions and improve resource utilization, safeguarding the clean water and green mountains and building a beautiful home.

Innovation for accelerated development



Innovation is the eternal theme of development. Faced with the new requirements of the times and new trends in the industry, in 2019, we launched our innovation strategy. The principle of the strategy is "focusing on value, focusing on problems, expanding opening-up, daring to make mistakes, and enhancing incentives". We aimed to establish a long-term mechanism and lead the development of the industry with new thinking, new technology, and new methods.

Innovation as driving force

BEWG attaches great importance to the development of innovation capabilities and continuously and comprehensively establishes a complete innovation mechanism. In 2019, BEWG announced the Group's innovation strategy, completed the top-level design, released the report of *BEWG Strategic Framework and Comprehensive Innovation Strategy* and the *BEWG Innovation Strategy Implementation Outline* and made the plan to implement

2019-2020 innovation strategy. At the same time, we continued to explore new models of Industry-University-Research collaboration and innovation, encourage and stimulate internal innovation, and take actions to promote production innovation, technological innovation and management innovation. We see innovation as the primary driving force for development and business progress, and an important path to serving the country and society.

The BEWG Water Cup of the 2nd China Internet Plus Ecological Environment Innovation and Entrepreneurship Competition

Case

On November 9, 2019, the BEWG Water Cup of the 2nd China Internet Plus Ecological Environment Innovation and Entrepreneurship Competition came to a successful finish at the South China University of Technology. After the rigorous online preliminary round and semi-finals, 26 project teams went through to the national final. Ten projects were then shortlisted for the championship. The Harbin University of Technology team, with its unconventional green wastewater treatment technology, won first place and 100,000 RMB to fund its entrepreneurialism. In these times of mass entrepreneurship and

innovation, the Entrepreneurship and Innovation Competition promotes education, training, innovation and transformation with competition as it pays more attention to the growth of projects and talent. It has developed a set of professional and methodical service systems of nurtures innovation and talent, based on the mobile internet. And by connecting education, talent, industry and industry, value-chain and innovation chain while promoting innovation in the ecological environment and transforming it puts scientific and technological theories into practice.



BEWG holds its first innovation competition

Case

To boost operating efficiency and quality through internal innovation, BEWG held its first innovation competition – the Beidou Award – in 2019. The competition was divided into three groups: production innovation, science and technology innovation, and management innovation. Forty projects were shortlisted.



Production innovation group

The winner joined the project of "The Development and Application of Energy Efficiency Management System in Water Treatment Plants", proposed by the team from our operation management centre, and the "Study and Verification of Step Rate Testing Technology in Wastewater Network", proposed by the team from BEWG's eastern region.



Science and technology innovation group

First prize was won by BEWG's 'Seven-Stage' Decision-Making Roadmap for Biochemical Processes and the Process-Based Upgrading and Reconstruction Technology, designed by the Group's technical centre, and Overall Smart Solution for Leakage Control of the Water Supply Network, proposed by the operation management centre.



Management innovation group

First prize in this group was won by the operation management centre, with its project The Base Construction of Operation Training, and by BEWG's eastern region with its Innovative Management Practice of A Key Elements-Driven Empowerment System.



Production innovation

BEWG looks for unknown innovative implementers who contribute their share to the excellent operation in their positions, encourages more creation of individual value, completes and expands the coverage, focuses

on the production line, and improves the operation technology, equipment, process, operation method, working environment for specific posts, so as to increase employee efficiency, save cost and improve quality.

Case

"1+N" smart management

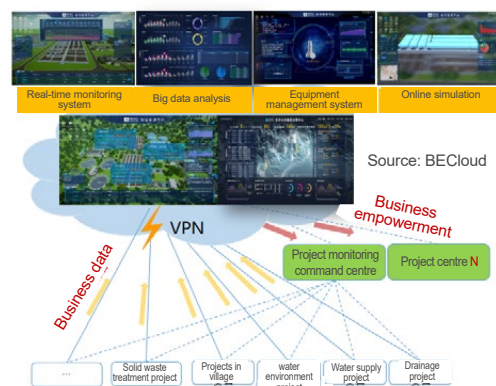
"1+N" smart integrated management is our new model for water treatment plants. It increases automation and informatization in the factory through digital technology. It facilitates regional control via an industrial control network, a video network and information management platforms. It improves operation management thanks to technology and human resources. And it is a foundation for further improvements.

In 2019, a single spark of the pilot project – in Dalingshan, Guangdong – lit fires of inspiration among our regions. These included the digital group of the Taizhou wastewater treatment plant in the east, the digital group of the Anning and Kaili wastewater treatment plants

in the west, the digital integrated multi-business group of the Beijing and Qinhuangdao plant-network integration in the north, and the digital integrated multi-business group of Mianyang in the central region. The project involves 29 water treatment plants, 100 pumping stations, 157 village wastewater

treatment stations and more than 400 km of sewer networks among four regions. The integrated management model has improved the refinement, intensification and transparency of the treatment plants.

"1+N" integrated management



Source: BECloud

Science and technology innovation

BEWG explores ways to apply cloud computing, Internet of things (IoT), big data, artificial intelligence and other internet technologies to smart water services in an effort to further the digitalization of the industry.

BEWG continues to enhance regulations and rules formations in digitalization and informatization, *BEWG Digital Project Management System*, for example, to further standardise and effectively develop smart water services.

In 2019, BEWG promoted the development of the BECloud smart cloud platform, standardised corporate information and built a digital warehouse. These moves have helped us develop our smart controls, mechanisms, smart sensing systems, business operations and lines. We also developed and improved the management of digital projects and security. In such a context, the Company has fundamentally established the basic structure of smart water for a double platform strategy forms a foundation for future digital upgrades.

Case

BECloud smart cloud platform

BEWG's open source cloud platform BECloud offers modelling tools and real-time designs for the water industry, and historical data trends, process basic modelling and basic equipment modelling for water treatment plants and other open capabilities. With the R&D of digital products based on BECloud, the Company has completed the R&D of sewage operation and management systems in towns and villages as well as the R&D of the whole process control technology of water treatment plants. The Company has also supported the regional implementation of "1+N" smart and integrated water treatment plant

management and standard digital water treatment plant. BEWG has initially completed the IoT in wastewater treatment in North China and enabled data access of 100 pilot water treatment plants and the implementation of cloud smart applications.

Enabled data access of

100

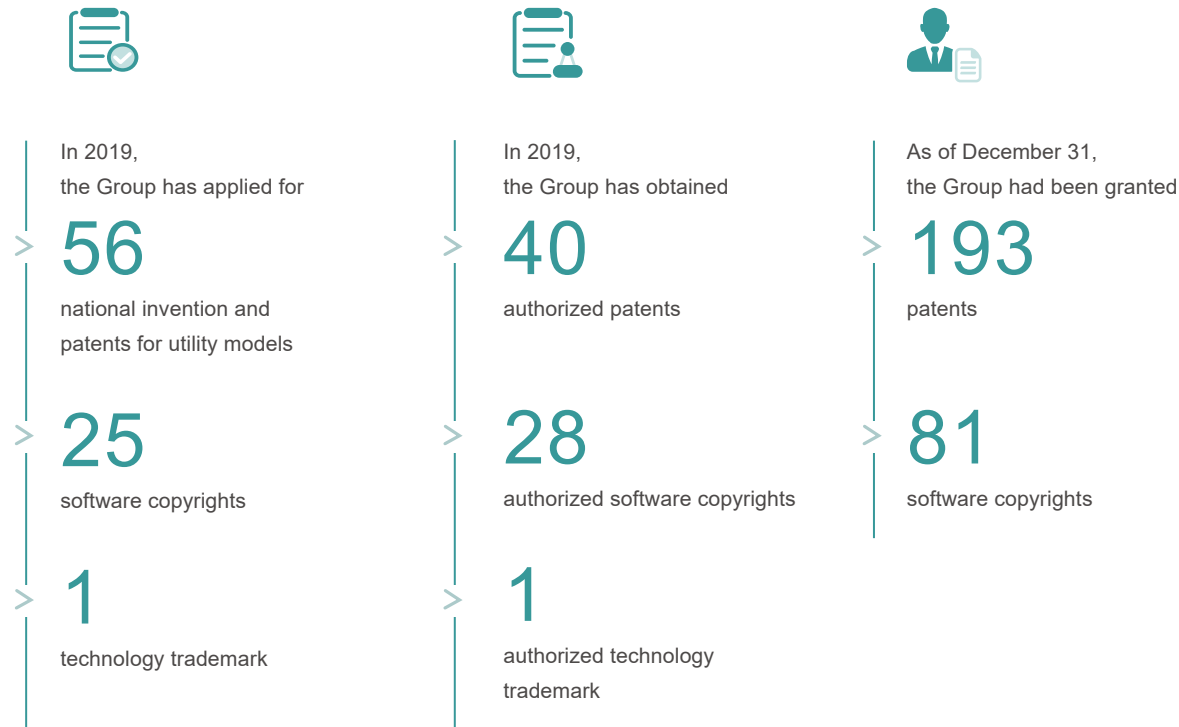
pilot water treatment plants and the implementation of cloud smart applications



We support science and technology by protecting intellectual property rights. BEWG has established and standardised procedures for applying for and granting intellectual property rights. We strengthened key steps – such as patent-pending searches, avoiding intellectual property infringements, and early patent applications – and developed *Management Measures for Intellectual Property* to promptly and effectively protect our core technology. We continue to improve incentives for intellectual property rights – including patents, software works and trademarks – and encourage employees to innovate.



BEWG digs deeper into the potential of technology, applies for patents, and promptly registers software copyrights when conducting integrated packaging for technical brands. We use a double application for technology trademarks.



Water reclamation technology brand approved as a registered trademark by the China National Intellectual Property Administration (CNIPA)

In July 2019, BEWG's water reclamation technology brand AQENT® was approved as a trademark by the China National Intellectual Property Administration. As the company's first registered trademark in science and technology services,

this is a milestone in our efforts to protect our intellectual property.

With its advanced and independent core technology, BEWG provides professional services for customers at home and abroad throughout the life cycle of projects, spanning investment, financing, design, construction and operation. The treated water can be used in industrial processes, urban environments and environmental restoration.

the trademark AQENT® of BEWG



AQENT

In 2019, to standardize our independent research projects, BEWG formulated the *Management Measures for the Registration of Independent Research Projects* and *Management Measures for the Funding of Independent Research Projects*, which cover organizational structure, project registration management, process management and acceptance, funding management and use, and intellectual property rights and asset management, to further ensure standardized management and success of independent projects.

In 2019, we undertook ten major scientific research projects, including the national key

R&D plan of the Ministry of Science and Technology, Major Science and Technology Program for Water Pollution Control and Treatment of the Ministry of Environmental Protection under the 13th Five-Year Plan and the Beijing Municipal Science and Technology Commission. We established 30 independent science and technology projects, 18 of which are ongoing. These cover three categories of R&D: industry-leading technology R&D for strategic technology reserve; technology optimization and innovation R&D to meet the demands of production and operation; business construction R&D for design optimization, improvement and operation management.

To promote the improvement and innovation of the technical capacity of the regions, project companies and front-line technical teams, BEWG has formulated the *Methods of Business Technical Capacity Improvement Plan Management* to support the technology improvement and technology verification of production process and the related business construction research conducted by all the regions and subsidiary project companies, thus effectively guaranteeing the first-line innovation.

Management innovation

BEWG is committed to developing new management models, developing new paths and improving and upgrading the management regarding management models, management mechanisms, and investment and financing methods to empower the Group's high-quality development. In 2019, we resolutely implemented the transformation to asset-light strategy, explored various asset-light investment models such as the Qinhuangdao model, and were committed to developing the core competitiveness in operation and continuously improving the quality of assets. In addition, we adopted a new centralized procurement model and took the "packaging negotiation, separately signing" method to increase management efficiency and improve product quality and service.

Case

BEWG develops new supply chain practice

In 2019, BEWG has carried out all-round and multi-perspective innovation practice in supply chain management.

New model

BEWG subverted the conventional idea of "one buy for one sale", followed the current trend of "Internet Plus" with smart "big data", and establishes a new, centralized, and smart procurement system. It implemented standardized procurement while achieving value creation, helping practicing Group's ecological strategy and light assets strategy, and boosting the high-quality development and precision management of the industry.

New ideas

BEWG has developed from purchasing equipment and services during the construction period to in-depth and extensive procurement and developed product output and technical services throughout the overall industrial chain of investment, construction and operation, forming a "great procurement" thinking; BEWG has promoted the improvement of product quality and services through procurement and business activities, contributing to achieve the "great strategy" of the Group; BEWG has used big data to empower procurement and business activities, reflecting the "great intelligence" thinking; BEWG has been adhering to the principle of information opening and sharing, jointly creating a "great ecology" pattern; BEWG has provided more cooperation opportunities to promote the industry's "great development" landscape.

New Methods

BEWG changed from control to service, actively streamlined, managed, and improved procurement. We conducted centralized negotiation while signing the contract separately, as well as delegated powers to improve the efficiency of procurement and promote the standardization of procurement; we changed the management concept from the business line-based procurement to the joint procurement by multiple units; we built a supplier data platform, established a sound approach to supplier cooperation, achieved a dynamic management system, including supplier registration, qualification, and performance review, field investigation, product quality evaluation and other dimensions, and facilitated friendly competition and healthy competition development of suppliers.

Case

BEWG develops new service models

BEWG follows the asset-light strategy. It has consulting capabilities in urban water environment projects such as top-level planning, project planning and scheme design, project risk assessment and process correction, technical management of project life-cycle and large-scale operation technical service of water environment projects. By combining those capabilities, BEWG initially formed a service-offering mode for special technology and technical management. In 2019, the model was proven to be an effective and well-received business model in six projects, including technical consultation for the Guipanhai river system improvement project (Guipanhai River system), and ecological water system protection and construction planning at the Yangtze River Delta International R&D community.

The Yangtze River Delta R&D community

is the centre of the Suzhou high-speed rail new town. The technical consulting project analyses the regional water environment, using simulation research of water quality and hydrodynamic force, and also puts forward suggestions for the improvement of the ecological environment. These measures support the R&D community's planning and construction. Aiming for a beautiful, clean and quiet system in the Xiangcheng District, our proposals – which cover diverting water, guaranteeing quality and ensuring conservation – will feature in the 14th Five-year Plan of Xiangcheng District.

Guipanhai project

commenced in March 2017, construction has fallen behind schedule, mainly owing to inadequate technical management. At the recommendation of the local authority, the owner entrusted the BEWG Water Environment Research Institute to participate as a technical consultant for three months. Through on-site investigation, problem identification, technical suggestions and on-site services, our team provided innovative and practical solutions for the problems and for customers' challenges. The owner subsequently sent a commendation letter, praising our technology and technical management.

Case

BEWG builds practical training bases to improve operation and management

In 2019, we built five practical training bases: for wastewater quality examination, equipment maintenance, water supply pipe network leak detection, water meter verification, and water quality examination and verification. By standardising our bases, courses, business training and professional title determination, we encouraged employees to be more devoted to learning and their jobs.

These bases support our employee development and talent training, and the skills of frontline workers and trainers.



The wastewater quality examination base

Examines 30 water indicators, 14 sludge indicators, and seven common chemical substance indicators.

The water meter verification base

Has five sets of verification devices, with detection capabilities ranging from DN15²⁰ to DN200²¹.

The water supply quality examination and verification base

Accommodated 20 laboratory technicians for practical training and 50 for theoretical training. Phase I of the base examines 27 water quality indicators. That number will reach 106 when Phase II is completed.

The water supply pipe network leak detection base

Equipped with pipes of different materials and calibres, leak detection areas with different road surfaces, a maintenance area, a DMA²² demonstration area and a measurement equipment testing area.

The equipment maintenance base

Offers training and certification in electromechanical integration, automatic control systems and instruments, smart water services and equipment management.

²⁰ DN15: nominal diameter of the valve 15 mm.

²¹ DN200: nominal diameter of the valve 200 mm.

²² DMA: independent measurement area; that is, water supply pipe network divided into separately metered water supply areas.

Cooperation and prosperity

Promoting industry prosperity

As the leader of the environmental protection industry, BEWG actively shares its insights into wastewater treatment and builds a platform to seek common growth, cooperation and win-win results with related companies while following eco-friendly strategies, creating an industry ecosystem and ongoing technological innovation

BEWG does more to provide support to scientific and technological innovation. The Company continues to increase investments in scientific and technological R&D and helps the

among the environmental protection industry in China, which promotes China's ecological progress and contributes to global pollution control. In 2019, BEWG was a member of 134 industry associations, societies and organisations, and paid annual memberships of more than RMB 2.81 million .

state and industry solve key technical problems in the field of municipal water and water environment comprehensive treatment. In 2019, BEWG has made the following achievements:

- We carried out eight cooperative R&D projects through platforms such as the Tsinghua-BEWG Research Institute. Six of them are being or have been demonstrated and put into practice.
- The PANTAI wastewater treatment plant – BEWG's project in Malaysia – won first prize for Excellent Municipal Engineering Design of Excellent Engineering Design Among Industry, awarded by China Engineering and Consulting Association.
- Our "management system featuring vertically and horizontally decentralised control technology" created by the Group won first prize in the modernization and innovation of Beijing corporate management.



Formulates

14

national, industrial and enterprise standards

In 2019, codeveloped

3

standards

BEWG promotes industry standardization and has 14 national, industrial and enterprise standards. In 2019, three standards codeveloped by BEWG were released: *The Reuse of Urban Recycling Water-Water Quality Standard for Scenic Environment Use (GBT18921-2019)*, issued by the Ministry of Housing and Urban-Rural Development of the Peoples Republic of China, *Indicators and Assessment System of Clean Production in Wastewater Treatment, Recycling and*

Reuse Industry, issued by the National Development and Reform Commission, Ministry of Ecology and Environment of the People's Republic of China and the Ministry of Industry and Information Technology of the People's Republic of China, and *Technical Guidelines For Underground Municipal Wastewater Treatment Plant*/CAEPI 23-2019, issued by the China Association of Environmental Protection Industry.

BEWG is the only water services supplier to collaborate on the *Indicators and Assessment System of Clean Production in Wastewater Treatment, Recycling and Reuse Industry*

Case

The *Indicators and Assessment System of Clean Production in Wastewater Treatment, Recycling and Reuse Industry* is the first such system applicable to clean production in the wastewater treatment industry. It implements the *Law of the People's Republic of China on Promoting Clean Production*. The assessment system applies to clean production auditing, potential and opportunity judgment and performance evaluation of enterprises focused on urban wastewater and

accepts a maximum of 20 per cent of industrial wastewater within a total volume of treated water. It is also enforceable in environmental impact assessments, pollutant discharge permits and environmental protection.

The compilation of the assessment system was based on multiple samples and indicators from regional water treatment plants, of different types and with different water

qualities. In combination with the operational practice, it has further given many practical suggestions to enhance the feasibility, effectiveness and instruction of the assessment system.

Collaborating with industry, universities and research institutes

BEWG initiated the China Eco-environment Industry and Education Alliance, the Integration of Production And Education Summit Forum, the "Internet Plus" Ecological Environment Innovation and Entrepreneurship Competition, and the construction of the industry college, to deepen the integration of production and education, improve people's livelihood and society and support the development of the nation's education system.

In 2019, BEWG explored a new paradigm of the industry-university-research combination: we established a college in collaboration with Changsha Environmental Protection College, Shandong Water

Conservancy Vocational College, Guangdong Polytechnic of Environmental Protection Engineering, and Yangling Vocational & Technical College. This delivers innovative and compound talents to the smart water industry.

Through joint training and collaboration, BEWG strengthens links between universities and enterprises. We established the Technology Research Centre of Coastal Ecological Restoration and Protection with Hehai University, and the Joint R&D Centre of Ecological Environment in Tropical Areas with Hainan University. BEWG and Mr. Peng Yongzhen, an academician of the Chinese Academy of Engineering, built the academician expert workstation. We also cooperated with Peng's team in strategic project consultation and guidance, technical innovation, the transformation of scientific and technological findings, scientific and technological development, and high-end talent training.



Case

Establishing courses in smart water services

With the approval of the Shandong Provincial Department of Education, BEWG and Shandong Water Conservancy Vocational College have established Water Management courses for Smart Water Services, which are not only the first course in smart water services to be approved by Shandong Provincial Department of Education. They are also the first such course in China's colleges and universities. This university-enterprise initiative creates a precedent and an example for environmental protection education in our country, and will provide the industry with more high-level skilled talent in smart water services to offer significant guidance and examples in university-enterprise cooperation.

To complement BEWG's exceptional smart water faculties at the school, we mobilised more than 50 teams – headed by our operation experts, management experts and factory directors – to design top-of-the-line smart water curricula. The

BEWG centre in the eastern region will utilise its regional advantages in nearly 100 operating companies to equip smart water majors with professional mentors and professional guidance.



Pursue win-win outcomes for ecological protection partners

BEWG implements the ecological strategy and attaches importance to building the BEWG ecosystem. Through flexible and diverse cooperation mechanisms, BEWG takes the lead and develops together with other enterprises in the industry.

We innovated business models for river basin treatment and municipal water services, and upgrade cooperation models. In 2019, BEWG and China Three Gorges Corporation established cooperation in "fund, project, research, alliance, and dual-platform" in addition to equity cooperation. The two groups launched dual-platform companies in Nanjing and Changsha to implement the dual-platform strategy on the protection of the Yangtze River. The two groups initiated the Yangtze River Green Development Fund Management Co., Ltd., which raised RMB 20 billion in Phase I.

We enhanced the collaboration with the Jinke Group, Zhejiang Kaichuang Environmental Protection Technology Co., Ltd, BG Well-point, China BEWG Co. Ltd, Huai'an Water & Power Engineering Consulting Co., Ltd., Beijing Sinotek, WPG, EJOBIM, SND Group and many other technology-based enterprises in the future through equity cooperation, and continuously improved the BEWG industrial chain to improve the competitive advantages of BEWG. In addition, we strengthened the cooperation with banks and other financial institutions. We established long-term financing cooperation with the three major policy-based banks, namely, World Bank, Asian Development Bank and China Development Bank, and executed investment collaboration agreements with China Life Investment Holdings Co., Ltd. to carry out all-round cooperation.

Case

BEWG-WPG ecological cooperation enterprise is successfully launched

BEWG and WPG established ecological collaboration through equity cooperation. WPG is a comprehensive service provider of water supply solutions, which is dedicated to solving the problems in water supply for customers regarding equipment products, technical services and standardized management. Since the cooperation was started two years ago, the two parties have been exploring the secondary water supply in the entire industrial chain from front-end investment to operation, jointly promoting the transformation and upgrading of the operation and management in the secondary water supply industry.

As an excellent ecological cooperation enterprise for BEWG, WPG was officially listed on the Shanghai Stock Exchange on February 22, 2019 (stock code: 603956).

Case

China BEWG Co. Ltd strengthens its service

With one centre and one hub, China BEWG Co. Ltd builds its presence in the market with distribution centres reaching out to the rest of the country. It centres on the Yizhuang Development Zone and Daxing District to strengthen the service philosophy as a "housekeeper" and proceeds to market by means of the public resource and technology. Our Daxing Xinfenghe project has remarkable economic and social benefits: it has made breakthroughs in financing, output, employment and ecological improvement, which have been hailed by the government and media.

Case

BEWG invests in Jinke Group

Jinke Group focuses on membrane system applications and membrane system operations. It has three core technologies including membrane universal platform equipment technology, membrane system application technology and membrane system operation technology, which are all independently developed by the company. Investing in Jinke Group is of importance for BEWG to improve the layout of the water environmental protection industry chain and further implement the Group's ecological strategy. BEWG empowered Jinke Group in four aspects, namely, technical services, business collaboration, financial services and capital collaboration, thus promoting the high-quality development of all the enterprises and jointly enlarging the industry benefits.

Case

Beijing Enterprises Holdings Environment Technology Co. Ltd makes inroads in iron and steel

Our subsidiary Beijing Enterprises Holdings Environment Technology Co. Ltd. – a pioneer of wastewater treatment for the iron and steel industry – won a bid for a new facility for Jiangsu Shente Iron and Steel Co., Ltd., with a capability of 10,000 tons per day. Our smart visual system Epick has been widely applied because it has access to the environmental protection data of 1,000 enterprises. In another first for Beijing Enterprises Holdings Environment Technology Co. Ltd, the wastewater treatment plant in Longyou County has been readied for trial operation. This is the first project application of our aerobic granular sludge technology in Asia.

Case

Zhejiang Kaichuang Environmental Protection Technology Co., Ltd deepens environmental technology research and development

Zhejiang Kaichuang Environmental Protection Technology Co., Ltd. (hereinafter referred to as "Kaichuang Environmental Protection") is a national high-tech enterprise engaged in membrane water treatment. The major business of the company is providing membrane modules, membrane equipment, membrane application solutions and back-end operation services for customers with hollow fiber ultrafiltration membrane materials which are independently developed and produced by the company as core components. BEWG executed an investment agreement with Kaichuang Environmental Protection in January 2016 and strategically invested in Kaichuang Environmental Protection to guarantee the membrane technology for existing water assets in BEWG.

Kaichuang Environmental Protection, which developed an advanced treatment process for municipal drinking water, stepped into a new business in 2019. The company has led the introduction of green and low energy-consumption technology into the printing and dyeing industry. It tackles the industry's environmental protection challenges with zero liquid discharge and utilization of salt resources.



Information security



While encouraging smart growth, we attach great importance to information security and make it the top priority of digitalization. In 2019, in accordance with laws and regulations of the state and governments at all levels, and in combination with the company-specific and industry-specific reality, with the support of its own experts and independent experts, BEWG developed the *Information Security Management System of BEWG Group* and other information security-related rules and regulations, clarified the personnel, organization, procedures, standards and specifications related to information security management, and ensured the practical implementation of the project management as well as technical framework control.

BEWG's Information Security Management Committee is headed by group leaders, and includes the Digital Research Institute and a relevant specialist from each department and region. It enforces our information security rules and regulations and tracks their implementation by teams

and projects, and organises on-site and online training. It also summarises, analyses and proposes improvements on a quarterly basis. All measures are aimed at ensuring security throughout the key links of our development.

Protecting customer privacy is an important part of corporate information security. We undertake unified identification and multilevel management of sensitive information. We have technical schemes for user authentication, application permission, structure security, storage security and network security, and safeguard customer privacy as a part of our security management.

Caring for environment



Environment management



BEWG continually increases our efforts in environmental management, improves our environmental management system, strictly controls the discharge of pollutants and advocates green energy conservation and emission reduction. We develop green

As the state is encouraging modern management systems and the capacity of ecological civilization construction and intensifying environmental protection supervision and inspection, BEWG attaches great importance to sustainable operation, and undertakes corporate responsibility for the environment while improving economic benefits.

BEWG strictly adheres to the *Environmental Protection Law of The People's Republic of China* and – using the ISO 14001 management standard – developed the *Practice and Measures of Key Control Nodes in Traditional Water Construction Projects*, *The Design of Urban Wastewater Treatment Engineering* and *The Environmental Yardstick Assessment System*. These environmental management systems require project-specific companies to strictly follow our regulations on investment, design, construction and operation. They must identify, analyse and mitigate environmental risks, and maximise environmental benefits, to achieve our objectives of saving energy, reducing consumption, cutting pollution and increasing efficiency. In 2019, in accordance

management for the entire process of each project, strive to improve resource efficiency, reduce impacts on the environment, and contribute to the protection of the environment and the recycling economy.

with our *Quality, Environment, Occupational Health and Safety Management Manual*, the Group established the *Control Procedure for Environmental Factor Identification and Evaluation*. It also mobilised all departments, first-level units and water treatment plants to identify, evaluate, summarise and update environmental factors, perform environmental assessment for all links including investment, design, construction, and operation, and fully took the scope, degree and frequency of environmental impacts into consideration. In particular, environmental factors must be identified and evaluated for new-build, reconstructed and expanded projects before construction commences. Holding fast to our environmental principles, we disclose information to all stakeholders and the public, and remain open to their supervision when pushing the process forward.



▲ BEWG developed a 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. For example, to control the impact of production and operation activities, our project-

specific company in Portugal has an environmental yardstick assessment that defines impacts in terms of effects, attributes and timeliness. Its three-level assessment is complemented by a rating system and control measures.

Emissions management

BEWG is committed to low pollution, low emissions and creating a clean and healthy ecological environment. We strictly manage water, gas, sound, solid waste and other emissions,

vigorously promote innovation in emission and waste reduction, and minimise environmental pollution and damage.



Green construction

BEWG adheres to the concept of green construction. Emissions reduction teams for construction projects rigorously control the emission of

air pollution, water pollution, noise pollution, light pollution and waste.

Preventing air pollution

- Construction waste must hoisted in a container and not thrown in the air carelessly. It should be removed and carried away in a timely fashion. Water should be sprayed to reduce dust.
- Cement and other bulk fine powders should be sealed or covered tightly. Measures should be taken during their unloading to reduce dust.
- Makeshift roads on site should be hardened with concrete or paved with cement hexagon blocks to prevent dust.
- Dust-monitoring devices must be installed on-site. Personnel and equipment must be arranged to spray water to reduce dust. These will be supervised by a construction site supervisor.

Prevention of water pollution

- A drainage ditch should be built on-site to centralise and collect the wastewater, to avoid seepage into the ground, soil pollution and groundwater contamination.
- The site must be equipped with a sedimentation tank so wastewater can be discharged into the municipal pipeline after sedimentation.
- The warehouse where oils are stored must be treated against leakage, to prevent oil spills, dripping, seepage, leakages water pollution.
- If a temporary canteen is set up on-site, it must be equipped with a simple and effective grease trap where oil should be removed regularly to prevent pollution.

Prevention of noise pollution

- Safety and noise-avoidance construction education for workers entering the site should be carried out. A management system for controlling manmade noise should be established to reduce loud sounds as much as possible and encourage staff to prevent noise disturbing residents.
- The supervisor is required to detect noise during the construction process, strictly monitor the hours of loud operations, and avoid construction at night and break time.
- To reduce the spread of loud sound, a sealed shed for mechanical equipment should be built and a silencer installed for noisy machinery.

Prevention of light pollution

- There should be no continuous lighting on the project site. Only necessary lighting shall be used, excessive lighting should be avoided during unavoidable construction at night.
- The lighting of the construction company should be centralised and cover only the scope of the site to avoid affecting nearby traffic.

Waste management

- A temporary waste storage site should be built at the site. The waste should be classified and stored separately, with clear safety signs and preventive measures.
- The waste should not be scattered or mixed during transportation. Recyclable waste should be recycled and reused.
- Engine oil, paints, anti-corrosion material tailings and cooking performance enhancers from the chemical laboratory will be collected by classification, and entrusted to a licensed organisation for treatment. The generation time, production, storage, transfer and personnel for handover for waste liquid should be recorded.

Green operation

During operation, BEWG strictly adheres to the law of 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 Air Pollution*, to local environmental laws and regulations, and to internal policies, including the *Quality, Environment, Occupational Health and Safety Procedures Document and Practice and Measures of Key Control*

Nodes in Traditional Water Construction and Emergency Response Plan for Production Safety Incidents of BEWG. These rules and regulations provide clear guidance on the generation and treatment of waste gas, wastewater, hazardous and non-hazardous wastes by operation, and cover whole-cycle management of all pollutants. For the pollutants resulting from the operation, we strictly comply with emission standards or transfer them to a qualified third party for disposal.

Case

Shenzhen Hengling phase II upgrades the high-efficiency sedimentation of sludge

The Hengling project phase II in Shenzhen was upgraded. The improved process overcame the problem of land shortage, optimized the process design and transformed the fine screen, grit chamber, DN chamber and CN chamber. A settling tank for fine sand was built and the UV disinfection channel was relocated.

The project built a new lift stations of backwashing wastewater pump and a treatment system. The treatment system consists of a DN chamber with capacity of 200 thousand m³/d and a high-efficiency sedimentation chamber with capacity of 150 thousand m³/d.

Improved residual sludge treatment for the fine sand sedimentation tank

(high-efficiency sedimentation tank) met the strict requirements for the four classes of effluent and effectively reduced the production of sludge.

Our main emissions fall into three categories:



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

A large amount of sludge is produced by regular business operations. To combat it, we develop new technologies and processes, control and reduce sludge



Waste gas, sludge and treated sewage are generated by water treatment plants. The gas mainly comes from the sulphur dioxide (SO_x) and nitrogen oxides (NO_x) 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.

at the source, transform and upgrade equipment and facilities, and innovate in sewage treatment. In 2019, BEWG encouraged the project companies to



Office waste, kitchen waste, hazardous waste and 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.

optimize the process and enhance the efficiency of the advanced treatment.

Emission Types and Emissions of BEWG in 2019

Emission Type		Unit	Emissions in 2019
Water Business	Hazardous solid waste	Tons	89,334.62
	Hazardous solid waste density	Tons/10,000 HKD	0.03
	Non-hazardous solid waste density	Tons	2,068,192.97
	Non-hazardous solid waste density	Tons/10,000 HKD	0.73
Overseas Business	Total wastewater discharge	Tons	181,357,614.00
	Non-hazardous solid waste density	Tons	14,049.57
	Non-hazardous solid waste density	kg/10,000 HKD	4.98
Environment Sanitation and Solid Wastes	Total wastewater discharge	Tons	3,685.23
	Non-hazardous solid waste density	Tons	10,212.50
	Non-hazardous solid waste density	kg/10,000 HKD	3.62
	Sulfur dioxide emission	Tons	30.81
	NOx emission	Tons	171.08
Office Buildings	Soot emission	Tons	9.05
	Hazardous solid waste	Tons	9.22
	Hazardous solid waste density	kg/10,000 HKD	0.0033
	Non-hazardous solid waste density	Tons	2,035.17
Non-hazardous solid waste density		kg/10,000 HKD	0.72

Pollutant Reduction of BEWG in 2019

Type of Pollutants	Unit	Pollutant Reduction in 2019
COD reduction	Tons	1,244,880.29
Ammonia nitrogen reduction	Tons	131,967.74
Total phosphorus reduction	Tons	38,820.15



In 2019, the Group was subject to neither serious pollution incidents nor complaints or fines due to serious pollution or violations of environmental regulations.

Managing energy and resources

BEWG seeks reductions in resource consumption, energy conservation and emissions. We strictly abide by the Law of The People’s Republic of China on Conserving Energy and other laws, and have developed internal systems such as Control Procedure of Project Operation, Control Procedure of Performance Monitoring and Chemical Agent Management Measures. We strive to improve resource efficiency and reduce our impact on the environment and natural resources through science and energy-saving technological transformation.

For special chemical agents, we have management measures and supply standards, and have incorporated relevant regulations into the evaluating of starred water treatment plants. Dosing and metering must be standardised, complete, accurate and normal. Records and statistics of chemical agent dosage must be regular, complete and

accurate. The storage of chemicals must be standardized and tidy, with complete notices. Easy-to-make agents and dangerous agents must be stored in a dedicated cabinet, with double locks whose keys are kept by two separate people. Project companies must ensure the management of chemical agents meets our standards, tighten any loopholes, and supervise starred self-inspection, business area inspection, regional inspection, group audits and acceptance. In 2019, BEWG reduced consumption at 120 projects in total, greatly improving efficiency. More specifically, those measures helped save carbon source worth over RMB 30 million and dephosphorizing agents worth over RMB 18 million. Alongside this remarkable cost saving, environmental pollution was reduced.

Energy and Resources Consumption of Office Buildings in BEWG 2019

Resources/energy Type	Unit	Consumption in 2019
Power consumption	kWh	36,051,331.53
Consumption of renewable energy	kWh	334,153.00
Gasoline consumption	Tons	976.28
Diesel consumption	Tons	172.84
Natural gas consumption	Cubic meter	61,533.26
Outsourced steam heating	GJ	1,653.24
Freshwater consumption	Tons	647,726.06



Comparing with 2018, in 2019, indoor power consumption of headquarter building was saved by

RMB 290,000



Energy-specific cost was reduced by

28%

Consumption of Chemical Agents of BEWG in 2019

Pharmacy Type	Unit	Consumption in 2019
Carbon source consumption	Tons	57,701.89
Consumption of Dephosphorizing agents	Tons	21,137.30

BEWG vigorously pushes for green operation, environmentally friendly offices, energy conservation and consumption reduction. We undertake publicity and education regarding environmental protection, and post water-saving and electricity-saving tips and reminders in offices, meeting

rooms, elevators and washrooms, to improve employee awareness. Thanks to these measures, we saved nearly RMB 290,000 in indoor power consumption of headquarter building in 2019, and our energy-specific cost fell 28 per cent from 2018.



Energy-saving measures

- Prioritise the use of energy-saving, efficient and environmentally-friendly equipment and tools recommended by the state and industry.
- Improve the management of vehicles, create account for official vehicles and regularly check vehicles for oil leaks.



Power-saving measures

- Power consumption should be measured by designated personnel. The power load shall be controlled by a separate switch.
- The person in charge of power consumption shall check whether employees shut down machines and turn off lights as they leave.
- Energy-saving appliances, LED lights, and adjusting a building's heating and cooling in the summer and winter improve efficiency.



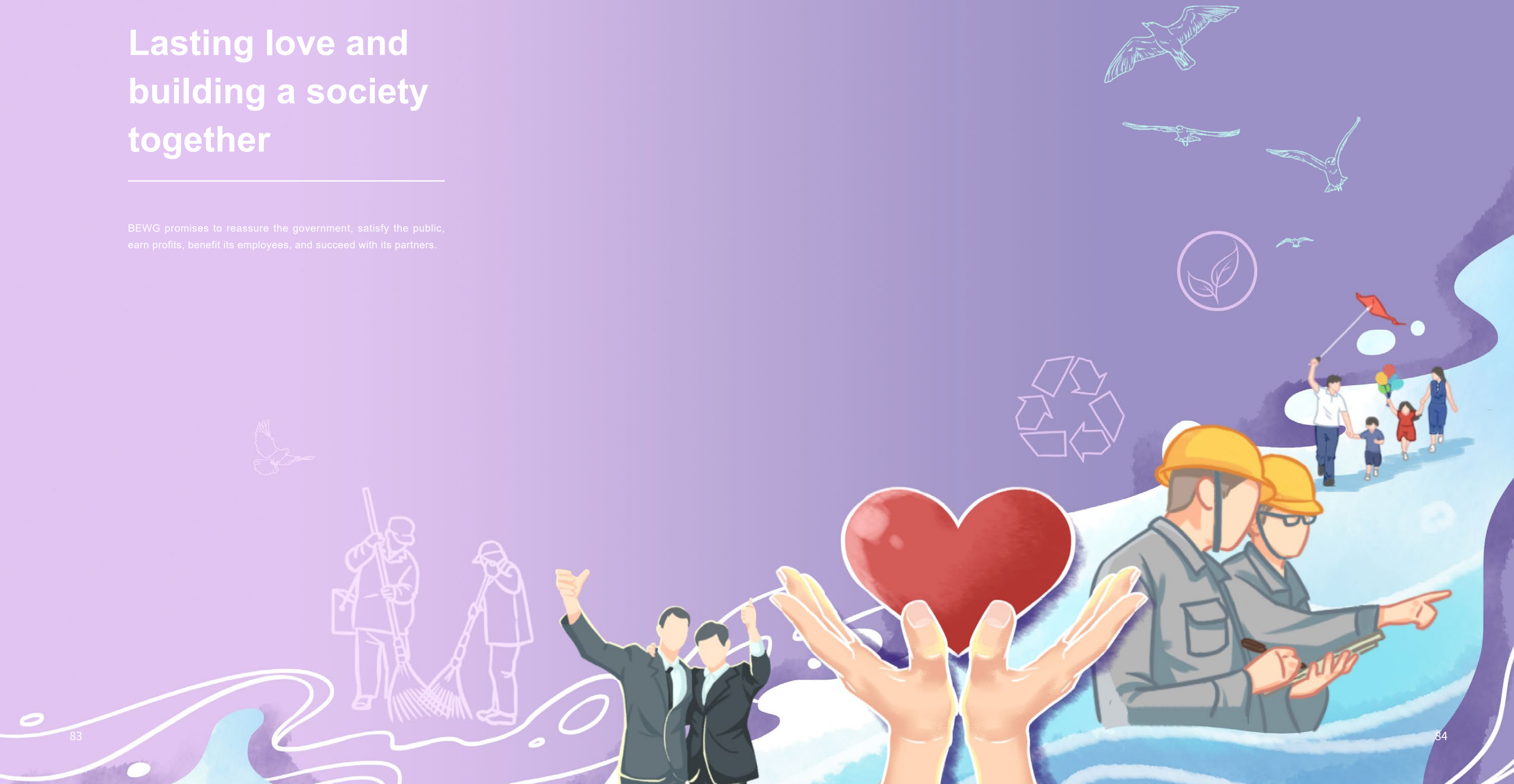
Water-saving measures

- Regular checking and maintenance of pipelines reduces waste caused by spillage, dripping, seepage and leakage.
- Water meters shall be used to reduce waste of water resources.

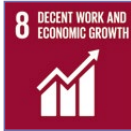
06

Lasting love and building a society together

BEWG promises to reassure the government, satisfy the public, earn profits, benefit its employees, and succeed with its partners.



People-oriented culture



Talent development is an important part of our human resource strategy. BEWG practices people-oriented management, secures employees' legal rights, health and safety, trains talent, cares for employees,

and strives to provide a healthy, safe and comfortable work environment.

Equal employment



In 2019,

18,424

full-time employees in China

738

employees in overseas companies

BEWG strictly follows the *Labour Law of the People's Republic of China*, *Labour Contract Law of the People's Republic of China* and the *Provisions on the Prohibition of Using Child Labour* to ensure employees' basic rights and interests. We advocate equality and are firmly against any form of discrimination, be it age, gender, nationality, religion or sexual orientation. We forbid child labour and forced labour. In 2019, BEWG revised the Recruitment Management Mechanism and added the Internal Recruitment Channel Management Methods to further standardize the system, clarify procedures and standards for internal recruitment, and ensure equality.

BEWG observes laws and regulations in places where it runs businesses, and supports the *Universal Declaration of Human Rights*,

Declaration on the Protection of Human Rights, *Convention on the Elimination of All Forms of Racial Discrimination*, *ILO Declaration on Fundamental Principles and Rights at Work*, *Convention on Minimum Age for Admission to Employment*, *Employment Policy Convention*, *Discrimination (Employment and Occupation) Convention*, *Convention on Equal Remuneration for Work of Equal Value for Men and Women Workers* and other international standards and norms related to human rights. Our BEWG Employee Rights Policy promises to respect employees' basic rights and interests, and details how this is fulfilled. We encourage employees to protect their own rights and interests and support their joining independent work unions and negotiating collectively.

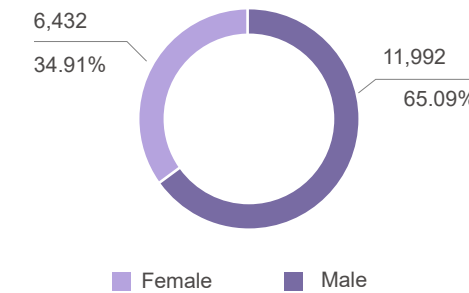
There are no instances of child labor and forced labor in BEWG. At the same time, the Group encourages employees to safeguard their rights and interests and supports employees to join independent labor unions or collective bargaining agreements.

In 2019, BEWG had 18,424 full-time employees within China and 738 employees outside of China. Our overseas project groups are subject to local laws and regulations and promote employment diversification, localization and opportunity equality as per local conditions. In 2019, our Portugal project company had 376 employees, 95 per cent of whom were local citizens.

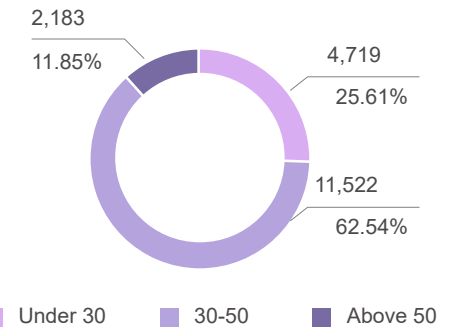


Employee demographics in 2019²³

Number of employees by gender



Number of employees by age



Employee turnover in 2019²⁴

		Employees leaving	Turnover(%)
By gender	Female	878	6.65
	Male	421	5.99
By age	Under 30	353	6.79
	30 - 50	783	6.20
	Above 50	163	6.77

²³ Full-time employees in China only

²⁴ Full-time employees in China only

Employee development

Talent is at the core of our competitiveness. BEWG attaches great importance to employee development. We continually improve our promotion system, optimize

occupational development channels and provide diverse training to help employees grow.

Promotion system

In 2019, BEWG enhanced its salary and performance management systems, to refine our human resources system and motivate employees. Taking varying roles and responsibilities into account, we utilised personal target KPIs, 360-degree evaluation, and ranking among employees at the same level to ensure fair promotion opportunities. In 2019, we renewed the existing talent evaluation tool, adopted different evaluation tools including "2431 talent basket (closed inventory tool)", online 360-degree career development survey, behaviour interview, nine-grid

figure for talent evaluation and case analysis, and established a development evaluation centre to enrich and optimize the employee evaluation dimensions and standardize the evaluation methods and criteria, thus making the evaluation results more objective and accurate. The Group headquarters also formulated the Talent Development Evaluation Work Manual and toolkit based on practice and experiences and got them promoted and implemented in all the regions to help employees grow and develop.



For in-house leaders, BEWG uses the 360-degree evaluation model in leader promotion, position adjustment and annual evaluation. This includes feedback about their performance from employees – from upper levels, the same level and lower levels – and the leader themselves. This feedback plays a key role in human resources decision-making.

Self-management, leadership and business management are core factors in the 360-degree model, making the evaluation comprehensive yet focused. It provides employees with scientific evaluation, helps them identify strengths and weakness, and encourages them to continue growing.

BEWG's employee evaluations are based on management by objectives and core value competence. Individual goals are based on our quarterly, biannual or annual performance. The results influence bonuses, promotions, salary adjustments and training, and hence drive the Group's goals.

Training system



During the reporting period,

100%

staff training coverage

BEWG attaches great importance to employee training and development. To support our overall development and human resource strategies, we have established the BEWG School. A combined online and offline model provides diverse training to employees at different levels.

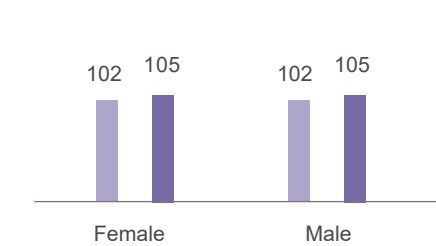
We train employees according to their aptitude. In 2019, for the management level, BEWG opened the China Environment Industry Senior Manager class (Batch 9), Senior Operation Manager International class (Batch 1), National Waterworks Director class (Batch 6), Water Supply Enterprise Management Personnel Advanced class (Batch 2), Human Resources Director class (Batch 1) and Finance Director class. These enhance the abilities of

managers and cultivate future leaders. For new employees, we opened the Management Trainee class, 2019 Internal Lecturer Development Camp and 2019 New Employee Growth Capability Enhancement Training Class. These and other camps and classes help new employees fit in with BEWG's culture, improve occupational skills, better undertake projects and realise personal values. In 2019, we had a training coverage ratio of 100% for employees.

BEWG training 2018-2019²⁵

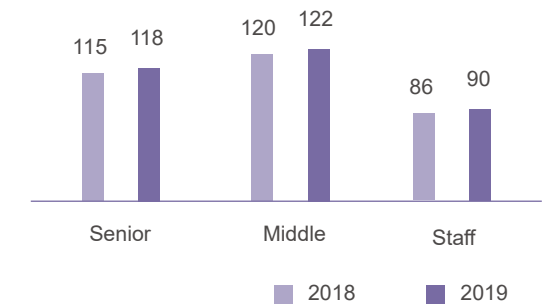
By gender

Average training (hours per employee)



By employee type

Average training (hours per employee)



²⁵ Full-time employees in China only

Case

BEWG offered China Environment Industry Senior Manager Training Class

The closing ceremony of the ninth-batch China Environment Industry Senior Manager Training Class was held in Tsinghua University's School of Environment on December 26, 2019. In total, 78 trainees – key professionals from our headquarters, regional branches, directly-controlled companies and 11 ecological enterprises – completed their study. The class opened on March 25 and lasted 30 days, including five rounds of intensive trainings and 194 hours of classes. It focused on environment industry entrepreneur competency and tracked hot issues in the industry and innovation in practice. These helped trainees broaden their international perspective and enhance their career path.

On June 17, 2011, Tsinghua-BEWG Water Environment Industry Joint Research School was officially launched at Tsinghua University, aiming to facilitate China's environment industry development and economic growth model transformation, and provide strategic guidance, technological innovation and talent cultivation to revitalise China's environment industry. The school focuses on policy research of China's environment industry, high and new technology research and applications, and senior talent cultivation. By December 31, 2019, the school had held nine batches of China Environment Industry Senior Manager Training, with 596 graduates, including 106 from other companies in the environment industry. The school is praised as the best of its kind in the

environment industry and regarded as an influential training brand by Tsinghua University and the industry.



Fun class



Graduation

Improving the ability of front-line employees

The Group organized the 2019 Knowledge and Know-how Examination²⁶ for front-line employees, which tests employees' understanding of basic knowledge such as corporate culture, safety, equipment and environmental protection supervision. The examination helped employees improve

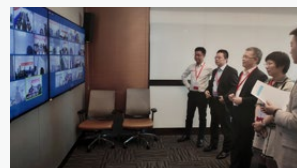
their basic knowledge and capabilities and promoted the strategic transformation of human resources for the Group. The Group also held the Employee Skills Competition in 2019, which improved the skills of first-line employees and created an atmosphere of competing to learn skills.

Case

BEWG conducts the first Knowledge and Know-how Examination and focuses on improving the ability of front-line employees

In 2019, BEWG conducted the first Knowledge and Know-how Examination for operation companies, covering nearly 10,000 people. The targets are managers from operation companies and front-line operation employees. The content is mainly about the basic knowledge of corporate culture, safety, sewage, water supply, equipment, testing and environmental protection inspection which operation employees should grasp.

This examination not only comprehensively tested the knowledge of the first-line operation management employees and business employees in the Group, but also improved the employees' learning of operating procedures and safety production specifications, which is conducive to enhancing the ability of front-line employees and promoting the strategic transformation of human resources while encouraging the enthusiasm of employees to learn the knowledge and know-how and building the Group into a learning organization.



On-site Knowledge and Know-how Examination

Case

Beijing Enterprises Water successfully held the second "Evergreen Cup" Professional Skills Competition

From December 10 to December 13, 2019, Beijing Enterprises Water Group's second "Evergreen Cup" Professional Skills Competition was successfully held in Yongzhou, Hunan. 31 players from the five regions of the Group participated in the competition.

This competition set up two competition subjects for water supply network leak detection and sewage water quality test. The leak detection project of the water supply network is an actual competition. The terrain of the stage covers different situations such as residential quarters, main roads, and commercial centers. During the competition, the average walking distance of all participants

was more than 20 kilometers, and a total of 44 effective leak points were identified. The sewage water quality test focuses on assessing the operation standardization, skill proficiency and accuracy of results of the phosphate concentration test to test the mastery and level of the relevant professional knowledge, technology and operation specifications of the sewage test players.

The two-day competition not only improved the standardization and accuracy of the sewage water quality test, selected the elite soldiers of all units, but also stimulated the enthusiasm of the employees for learning through the preparation for the competition, and created a strong atmosphere for learning.



Sewage water quality test



Inspection of leakage of water supply network

Professional training

In addition, the Group attaches great importance to all-line training. In 2019, the Group conducted professional training on different lines such as investment, construction, finance and human resources and educated the

basic operations, system regulations and management requirements of the project life cycle, comprehensively improving the professional skills of employees.



Case

BEWG launched a full line of training activities in the construction system

The theme of our construction system training was "master required knowledge and skills, empower the frontline". The meeting focused on project management, including basic operations and system norms. All of our members in the construction field were well informed. Multiple regions and projects benefited from the training and tests were organised

for relevant personnel. BEWG's functional centres worked together to complete the joint acceptance check (at completion) and onsite teaching.

National Construction Project Manager training is sponsored by the BEWG School, co-organised by Enterprise University of China Tiesiju Civil Engineering Group Co., Ltd and our human resources centre.

The first class involved two rounds of intensive training in September and December. Sixty trainees successfully completed the study. These included construction project managers from regions and business departments, and key professionals from our Construction Management Centre, construction enterprises and supervision companies.

International talent grooming



The Group takes the countries which are leading in water treatment and environmental governance around the world as the role model and learns advanced technology and operational experience from them. BEWG took the lead to launch an international operation training class in the industry. The Group sent

junior operation managers with great potentials to Japan for studying and researching and let them apply the learning to improve the water treatment operation efficiency of the Group, thereby promoting the development of international operation employees.

²⁶ 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.

Case

BEWG opens Senior Operation Manager International Training

BEWG's first Senior Operation Manager International Training – a collaboration between our Human Resource Centre, Operation Management Centre, the BEWG School, the Water Agency and the Japan-China Science and Culture

Centre – began in August. With a 40 days' preparation, the training offered 40 days of overseas training, research and study.

The training included theory and field studies, such as a water quality test

in Hanamigawa and a treatment plant study in Toyota. The initiative yielded the creation of the Overseas Research and Study Management System, generated 43 overseas research reports and studies, and facilitated strategic cooperation between water industry talent in China and Japan.



Studying water quality testing in Hanamigawa



Touring the water treatment plant in Toyota, Japan



Group photo of seminar participants

Case

BEWG promotes the strategic cooperation between China and Japan on water operation employees

On December 6, BEWG, Water Agency Co., Ltd. and Japan-China Science, Technology and Culture Association executed the Agreement on Talent Training and Strategic Cooperation Framework in Water Treatment Operation Management at the 13th China-Japan Energy Conservation and Environmental Protection Comprehensive Forum. The three parties reached a basic consensus on the cooperation based on that all parties give their full play in human resources and technology.

As progressive and professional water treatment enterprises, BEWG and Water Agency Co., Ltd. hope to deepen mutual understanding and exchange experience and technology

under the common sense of mission, striving to improve the water environment of Japan and China, or even the third parties (countries and regions).



Talent strategy agreement is signed on China-Japan Energy Conservation and Environmental Protection Comprehensive Forum

Health and safety

Safe production

BEWG prioritizes employees' health and safety and strictly follows the *Safe Production Law of the People's Republic of China, Occupational Disease Prevention and Treatment*

Law of the People's Republic of China and other laws and regulations to guarantee employees' occupational health and safety.

BEWG is clear on responsibilities and working procedures, to ensure safety in production. These are documented in BEWG Administrative Measures to Implement the "Three Simultaneous" Precautions for Occupational Diseases, BEWG Responsibility System for Safety in Production, BEWG Regulations on Hazard and Risk Assessment, and BEWG Regulations on Occupational Health.

BEWG has established production safety committees at the corporate headquarters and all primary business departments. As the supreme decision-making body, the committee at the headquarters studies and checks major production safety matters and supervises implementation of safety measures at the primary departments.

The quality security centre at our headquarters formulates annual safe production targets, according to actual conditions. It issues Letters on Commitment on Safe Production Target to all regions and departments under the direct management of headquarters. We collect monthly safety reports from all primary business departments, summarize and follow up on them, and issue a report with our analysis. This provides a scientific basis for BEWG's overall safety management.

BEWG initiates safety inspections. In 2019, over 40 specific inspections were undertaken in the five regions at corporate level. There were also 224,026 routine safety inspections, 5,884 specific inspections, 4,286 comprehensive inspections and 1,931 external inspections in our regions and project companies.



In 2019,
The Group has invested

RMB **19.64** million

in safety production

During the reporting period, there was no work safety accident above the national level in the whole group, and the number of hours lost due to injury was

0



The BEWG northern region conducted safety check inspections during safe production month

In 2019, BEWG invested RMB 19.64 million to guarantee safe production. We continually increase investment in labour protection, security facility maintenance and special equipment

testing, to safeguard employees. Within the reporting period, there is no work safety accident above the national level within the Group, and the hour lost due to injury is zero.

At the same time, we enhance employees' safety awareness by training and activities.



Project company

Project teams in Portugal

In 2019, project teams in Portugal hosted 1,325 hours of safety training. Each office area undertook at least two emergency drills and evacuation drills. Operating companies strengthened monitoring in high-voltage and chemical-stacking areas, ensured staff knew how to use fire hydrants and extinguishers, enhanced the self-protection awareness of employees and established first aid and safety plans.

Safety training



^ Confined space training in Portugal

Water reclamation project in Singapore

In 2019, our water reclamation project in Singapore undertook 12 safety trainings, primarily focused on chemicals, fire and operation specifications.



^ Chemical safety training in Singapore

Case

"Safe work month for zero incidence - preventing and eliminating risks, safe production" campaign jointly launched by the northern region and the Changping sub-regional centre

A novel safety activity was organised by the northern region and the Changping sub-regional centre at the Shahe Recycled Water Treatment Plant on June 29. It aimed to strengthen the awareness of the employees and put safe production requirements into effect. More than 60 staff took part.

The activity consists of three parts – quiz, outdoor safety drill, and building the "6S" road of the water treatment plant. Through the events, we might discover our weaknesses and turn them into strengths to improve the project company's understanding of safe management and performance.

Changping sub-regional centre makes a special outdoor training drill under the requirement of safe production activity, including "bridge making", "the wounded carried by stretcher" and "simulation drill in a confined space".

The northern region gets experience at the first line, learns about business in practice, and lays the foundation for the implementation of future work by the "safe production month" activity. At the same time, Changping sub-regional centre would continuously promote safety management, strengthen hidden-danger removal, make the safe production system more rigorous,

assign responsibility, effectively ensure safe production and achieve zero accidents per year based on the activity.



^ Safety activity at the Changping Sub-regional Centre

Case

First "Ankang Award" competition held by BEWG

BEWG's first "Ankang Award" competition was held by the Quality and Safety Centre and Labour Union and presented by the eastern region at Shandong Qingdao Jiaonan Water Treatment Plant on November 13, 2019. The competition consisted of three events, including operation and emergency rescue in a confined space, fire drill and CPR, and a safety knowledge quiz. Forty-five competitors from the five regions took part. After fierce competition, the eastern region took first place and won the superb team award.

Our frontline employees' superb safety skills are embodied in the competition. It also helps

implement the practical application of BEWG's commitment to safety, strengthens our safety training, heightens employees' awareness and enhances emergency-handling abilities. The competition reflects BEWG's focus on talent construction and the craftsmanship spirit of the

model worker, gives full play to the strengths of our workforce, and supports our mission to create high-quality employees diligently and achieve high-quality development.



^ First "Ankang Award" competition

Occupational health

BEWG has formulated BEWG Occupational Health Management Regulations to clarify our occupational health requirements and the responsibility of each business unit. Taking site-specific hazards and real production conditions into consideration, every unit must undertake occupational health management, and keep occupational health and labour health records. At posts with potential hazards, employees must receive occupational health examinations.

In 2019, the Group updated the BEWG Quality, Environment, Occupational Health Management Manual, to safeguard safe, civilised and harmonious working environments, and eliminate occupational diseases. We also revised the BEWG Regulations on Labour Protection Articles Management, clarifying our requirements regarding labour protection. Project

companies were guided to distribute labour protection articles to employees in accordance with their operating types and working conditions.

BEWG explicitly demands every business unit to held training about occupational health and labour protection, and carry out first aid drills, to improve employees' awareness. At the end of 2019, facing the outbreak of COVID-19, we put employees' health first, responding promptly and rapidly rearranging work.

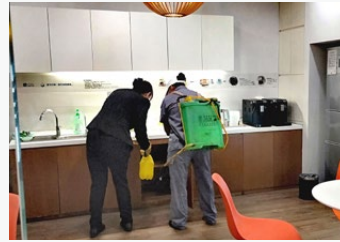
Case

BEWG quickly responds to COVID-19 and safeguards safety

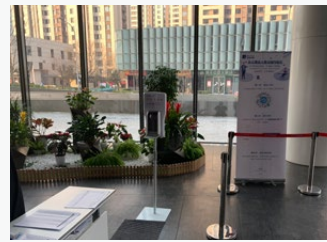
At the beginning of the COVID-19 outbreak, BEWG implemented a daily report system, regularly updated statistics, and analysed employees who had moved between different places during the Spring Festival period. We documented the movements, isolation and physical condition of employees and reported level-by-level, to identify any abnormalities.

Before work resumes, cleaners thoroughly wash and sterilise the air-conditioning systems of our buildings. Registration, temperature measurement and sterilisation of working spaces are implemented, and COVID-19 prevention posters are posted at the entrance of each floor and on electronic boards, reminding employees to protect themselves.

To resume work in an orderly manner and satisfy the PCC and State Council's requirement for effective COVID-19 prevention



Sanitation workers disinfect buildings



Access control registration

and control, BEWG has organised resumption and production by successive business units. We provide employees with masks, and regulate the in-out management of employees by measuring temperature, registering movement and logging when employees enter the building, reminding employees to wash hands regularly and wear masks, and restricting numbers in closed places such as elevators and meeting rooms. Meanwhile, we clean and disinfect offices frequently, and guarantee the normal operation of our buildings' ventilation, water supply and drainage.



Wearing masks on duty



Measuring temperature regularly

Employee care

To ensure the wellbeing of staff, BEWG introduced the Headquarters Employee Welfare System and increased the supplementary commercial medical insurance plan and supplementary pension plan on the basis of paying statutory social insurance for employees. We also offered subsidies for travelling, catering, communication, heating and high temperature. In addition, BEWG organizes employees to have periodic physical examinations to stay informed on the physical condition of employees.

BEWG believes employees are more than working partners. We view them as friends, and are therefore interested in their opinions and thoughts. We have labour unions in our headquarters, branches and subsidiaries, and encourage employees to express themselves and protect their rights and benefits.

BEWG creates comfortable office environments, with diverse plants to raise employees' spirits. In 2019, BEWG refitted and upgraded the tea room by installing a drinkable water dispenser to convenience employees during tea breaks.

Case

Internal management and consulting cultural roadshows

To improve employee engagement and respond to our units' cultural needs, BEWG held 64 cultural roadshows around the country in 2019. These entertained 4,239 people from the five regions eco-enterprises, and industrial technology research institutes, and featured cultural interviews with more than 130 mid-level managers and above. These interviews gave rise to eight management diagnostic reports.

During the phase of high-quality growth, BEWG uses both cultural roadshows and cultural diagnosis to inspect the cultural health of

the Group, and by means of cultural roadshows, promotes cultural blending, builds bridges of communication and trust, improves the cultural dynamics, represent a new way of presenting

our ambitions, and enables the implementation of co-creation of BEWG ecology and culture and innovation strategy.



A cultural roadshow in Hangzhou

Case

BEWG encourages sharing books

BEWG promotes sharing books to create a good study and communication atmosphere, and to enrich employees' leisure time. We set up special zones for

sharing, determine different themes and encourage employees to communicate their reading experiences. In 2019, our two "book floating" sessions covered

politics, economics, history, technology and humanity. By the end of December, more than 200 books had been recommended.



Books sharing

Responsible supply chain



Our long-term partnerships with suppliers are based on mutual trust. We purchase materials and services according to principles of fairness and openness. Clear rules and regulations control the selection,

management and assessment of suppliers. We regularly communicate with, and train, suppliers.

Supplier management

Suppliers and service providers are important supporters of our products and services. We have strict supplier access standards. In accordance with internal rules and regulations such as BEWG Purchasing Management System and BEWG Supplier Management System, we clarify the responsibilities of all departments and standardized supplier management and purchasing.

The ethical behaviour of suppliers is important. Corruption is forbidden in interaction with suppliers, in key sectors such as warehouse examination, bid invitation, acceptance and payment. If corruption is discovered, it is publicly

announced in the Integrity and Compliance section of our website. We provide channels to collect information about compliance violations, such as reporting via telephone, mail or site visits. The Department of Discipline Supervision and Investigation supervises an audit of the Group.

In 2019, the Group adopted a new model of group purchasing, which allows the purchase of equipment, alongside operational and administrative materials of 16 categories.



The Group selects high-quality suppliers mainly through the following means:

Access

The Group inspects the qualifications of suppliers who apply for registration and sign the Commitment Letter of Rejecting Corruption. We examine their basic information, performance in the industry, level of quality and service reputation, and prepare a shortlist. Candidates on this list – defined as reserve suppliers – receive site inspections. Subject to those inspections and the consequent reports, we create a list of qualified suppliers.

The Group is objective, fair and transparent. We have diverse evaluation.

Assessment

standards and methods for different types of suppliers. These include monthly, quarterly or annual "cooperation performance evaluations" and – to cover unexpected or occasional incidents regarding quality, service or safety – irregular "incident performance evaluations".

If a supplier violates the regulations, one-vote negation cancels their qualification. The procedures are as follows:

(1) A supplier found guilty of violations of regulations and rules, or corruption and bribery, by the Auditing Department and the Department of Discipline Supervision and Investigation is blacklisted. They may not participate in any business of the Group for three years.

(2) If a supplier has major safety accidents, they are blacklisted and may not participate in our business until the issue is fully rectified.

(3) If the annual performance (revenue and profit) of a supplier drops by more than 30 per cent, its qualification will be cancelled. It will be renewed only when performance improves and warehouse procedures are approved.

(4) If goods or services provided by a supplier have major defects or cause significant losses (more than RMB 500,000) to the Group, the qualification will be cancelled, and renewed only after the incident is handled and approval is granted. Based on the severity of the problem, the consequence will be either temporary freezing or permanent blacklisting. If the circumstances are especially serious, the supplier will be blacklisted, listed as such on our website, and barred from our List of Qualified Suppliers and from participation in our purchasing business.

Consequences of violations



The Group has

786

domestic suppliers

672

overseas suppliers

701

ISO 9001-certified suppliers

468

ISO 14001-certified suppliers

465

ISO 9001 and ISO 14001-certified suppliers

In 2019, we updated the BEWG Supplier Management Policy and assessed ESG risks for suppliers at all stages. Only suppliers who meet our ESG standards pass the preliminary assessment. Specific requirements include: manufacturers must have an environmental assessment and provide Quality Management System, Environmental Management System, and Occupational Health and Safety Management Systems certifications; manufacturing must be in accordance with the environmental protection requirements of applicable laws and regulations, use high quality and environmentally-friendly raw materials, minimise pollution, and involve facilities for environmental protection; applicable labour protection laws must be complied with, to care for the safety and wellbeing of employees and create harmonious corporate relations; neglect of ESG, creating undesirable social or environmental impacts, 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.

In 2019, we enhanced our management of existing suppliers. We evaluated and graded more than 60 major contractors, over 70 supervisors, and over 40 project managers. To ensure that we work only with excellent enterprises, we gradually eliminated unqualified ones. Using a registration system and multidimensional dynamic evaluation for equipment suppliers and business cooperation units, we selected 267 excellent suppliers, compiled a list of high-quality equipment suppliers, and designed grades for a key customer system. We chose grade-A design units and cooperation units with good performance as design suppliers and established a list of qualified suppliers. As a result, we completed the invitation and cooperation of 45 qualified advisory and design suppliers.

In 2019, we had 188 new domestic suppliers and 52 new overseas suppliers. As of the end of 2019, we had 786 domestic suppliers and 672 overseas suppliers. As of the end of 2019, we had 701 ISO 9001-certified suppliers, 468 ISO 14001-certified suppliers, and 465 ISO 9001 and ISO 14001-certified suppliers.

Communication with suppliers



BEWG endeavours to achieve ecological cooperation of all sectors in the entire industry value-chain and makes joint efforts to build an environmentally-friendly water services ecosystem based on benefit sharing and featuring pan-centralization and symbiosis, interdependence and regeneration. We also pay great attention to suppliers who play an important part in the ecosystem. With the importance attached to the communication and cooperation with suppliers, we reduced information barriers and absorbed innovative suggestions through regular exchanges and technology sharing to promote the common development of the Group and suppliers and the coordinated development of the industry.

Case

BEWG holds Supplier Technical Exchange Seminar

From May 8 to May 10, our purchasing management centre held its first training and supplier technology exchange seminar in Qingdao. More than 60 people took part, including purchasing directors from our construction and management centres, and representatives of the business departments of towns and villages, the five regions, Beijing BHZQ Environmental Engineering Technology Co., Ltd., and other units.

Representatives of key equipment suppliers were invited to conduct special technical exchange training for managers and front-line employees. After the seminar, those representatives said that they had learned a lot about BEWG's supply chain requirements

and thanked the Group for protecting suppliers' rights and interests. They also expressed a desire to align with

BEWG's management philosophy and strategic direction, to provide better services and products on a long-term basis.



Supplier technical exchange

Community philanthropy and service

The Group actively engages in community philanthropy and service and assumes social responsibilities. We use our experience and resources to inform communities about the environment. We

provide community care and assistance to people in need, contributing to community integration and fulfilling corporate social responsibilities.

Environmental education

The Group commits to informing local communities about water and environmental protection. We carry out campaigns on environmental protection, share knowledge about water and environmental protection,

and improve awareness of water conservation and environmental protection, thus contributing to eco-civilization.

Case

BEWG builds Heshan Water Treatment Education Base and promotes the philosophy of river environment protection

The Shaping River Phase II Comprehensive Improvement Project was completed on November 8, 2019. Coordinated by BEWG, this was the largest livelihood project in the history of Heshan City. It was selected as the first example of the ecological restoration of national territorial space in Guangdong Province. The Heshan environmental education base One Exhibition and One Hall opened on October 10, 2019 to educate the public about river treatment and environmental protection. The Heshan Water Treatment Education Base covers 735 square meters and is divided into the Heshan

River Treatment Exhibition and the Heshan Environmental Education Hall, showcasing water environment improvement, the popularization of environmental protection and an environmental protection bookstore.

BEWG led and participated in the base's planning, design, construction and operation. Our team has received more than 30 visits from enterprises and institutions, and over 10 visits of our own employees and teams, and has mounted five

educational campaigns. The team has promoted a high-quality, high-standard and high-efficient method of water treatment in Heshan, a northern region of BEWG.



▲ Heshan Water Treatment Education Base

Case

"Guarding the beautiful international horticultural exhibition and demonstrating the commitment of State-Owned Enterprises" - BCEG Environment Development Co., Ltd. organized an activity to promote environmental protection

Since the opening of the Beijing International Horticultural Exhibition, our subsidiary BCEG Environment Development Co., Ltd. has assigned more than seven guides to work in the BCEG Garden, receive visitors and explain the exhibition. Those guides received more than 30,000 tourists. Our "Protecting water resources and step ahead with children" activity shared our patriotism and environmental

protection knowledge with more than 30 kindergarten teachers and students. This was documented by media outlets including China Education Press, Toutiao and h2o-China.com. In turn, the company was highly praised by the Group and society.



▲ BCEG Environment Development Co., Ltd. guide explains exhibits to visitors



▲ Tourists visit "The Same River We Drink" exhibition

Case

BEWG Taiyuan launches "same blue sky, same Fenhe river" activity for World Environment Day

In anticipation of World Environment Day (June 5), Taiyuan BEWG Water Purification Co., Ltd., Coshare Environment (Taiyuan), Taiyuan Mengya Environmental Protection Association, and the eighth branch of the China Democratic League in Taiyuan organised the "same blue sky, same Fenhe river" activity. Twenty families from Taiyuan City participated in the environmental education event. All were members of the Fenhe River Partner Program, encouraging people to guard the River and protect the ecological environment. Coshare Environment

(Taiyuan) subsequently launched Fenhe River Partner Program corporate classes for Taiyuan BEWG Water Purification Co., Ltd. These are an

important part of the development of environmental education in Shanxi Province.



▲ The "Same blue sky, same Fenhe River" event

Case

Inner Mongolia Jiufengshan Water Co., Ltd. protects the environment at community level

On October 12, 2019, Inner Mongolia Jiufengshan Water Co., Ltd. – a northern region of BEWG – carried out activities to promote environmental protection in the square of the Luyuan community. With videos, panels and banners, the public were encouraged to participate in environmental protection. Our employees gauged awareness of environmental protection with questionnaires and a quiz that offered prizes. At the end of the activity, the on-site staff read a proposal that encouraged everyone to contribute to the environment in everyday ways, mobilise neighbours to join, and

safeguard the environment – and thus contribute to a brighter sky, clearer waters and a cleaner land.



▲ Inner Mongolia Jiufengshan BEWG Water Co., Ltd. protects the environment at community level

Community service

As a state-owned, responsible enterprise, BEWG actively responds to the calls of the CPC Central Committee, strongly supports the national strategy of Targeted Poverty Alleviation, and takes serious action in the "Three Tough Battles". We promote the environmental management of towns and villages and the building of beautiful villages. We deliver poverty alleviation through industry development, intelligence development through science

and technology, and self-improvement through culture and education. We have formed "Three Joint Construction" work system: joint construction of the Party, joint construction of government and enterprises, and joint construction of schools and enterprises, to better contribute to poverty alleviation work.

Case

BEWG creates the "Minning Model" for beautiful villages

BEWG executed an agreement with Minning Town, Ningxia Province, an exemplary region of Targeted Poverty Alleviation, to implement the "Minning Model" through "Three Joint Constructions". The aim was building a new model of pollution control in a rural area that could be widely adopted and promoted.

BEWG and the Minning Municipal Government cooperated in fields

such as talent exchange, project construction and poverty alleviation via boosting employment and industry development. Through joint supervision, volunteer service, on-site classes and cultural exchange, "Red Memory" was formed to integrate the Party construction with the administrative management and business operations. We utilised high-quality resources to promote environmental protection

and education – themed "BEWG Water Power" – on campus. Via environmentally-friendly activity, themed "First Class for New Semester", we fostered the concept of protecting clear water and green mountains among teenagers and continually promoted the development of an environmental protection culture.



BEWG's youth volunteers host "First Class for New Semester" with pupils from Gengbiao Hongjun Primary School, Minning Town



As of December 31, 2019, the Group has donated supplies and cash worth

RMB **910,070**

to fight COVID-19

The Group actively integrates into surrounding communities, and encourages and guides employees to engage in philanthropic events. By strengthening communication, and supporting local people, we hope to achieve development both the Group and our communities.

The COVID-19 pandemic that broke out at the end of 2019 attracted everyone's attention. BEWG, which cares deeply about people on the frontline, mobilized its resources and encouraged units and employees to make donations. After

learning about the lack of disinfectants in the relevant department of Deqing County, Deqing Dakuo Water Production Co., Ltd. – a company in the eastern region of BEWG – donated sodium hypochlorite solution to the government on the premise of ensuring routine water production. Supplies and money that BEWG have donated to fight the COVID-19 outbreak have totalled RMB 910,070.

Case

CPC members of BEWG Guigang volunteer in the community

To cultivate and implement core socialist values, and realise a duty to serve people in practical ways, the general Party branch of Guangxi Guigang BEWG Water Co., Ltd. organised CPC members to go to Nanping Community, Guicheng Street, Guigang City, to conduct Party Day activity – themed "CPC members of the company volunteer in the community" – on June 8, 2019. Corporate CPC members discussed water use with community representatives to grasp the situation of water use in the community, and learned about and participated in community activities. They contributed supplies to improve office environments, offered financial assistance to people in need, and endeavoured to solve problems and serve the community's people.



CPC members of Guigang BEWG Water Co., Ltd. in the community

Case

Yongzhou BEWG Xiangjiating Water Purification Co., Ltd. organized public service event themed "Fulfilling Small Dreams"

Responding to the Group's appeal, Yongzhou BEWG Xiangjiating Water Purification Co., Ltd. actively carried out philanthropic events including volunteer service, community assistance, and donations, thus contributing to the promotion of the harmonious development of the community.

Yongzhou BEWG Xiangjiating Water Purification Co., Ltd. supports the community

To carefully carry out the construction of the new-era civilization practice centre and the activity themed "Families and Relatives Help Each Other to Alleviate Poverty and Build a Moderately Prosperous Society" and give full play to the vanguard and exemplary roles of corporate

CPC members, the Party branch of Yongzhou BEWG Xiangjiating Water Purification Co., Ltd. and Xiangjiating community of Qilidian office jointly carried out the paring support activity themed "Fulfilling Small Dreams" on May 10, 2019. Our learn-from-Lei Feng volunteers,

accompanied by staff from the community, provided necessities to 10 families in need. The volunteers also distributed leaflets to promote the public's awareness of the law and environmental protection.



▲ Conducting volunteer activity themed "Fulfilling Small Dreams"

Yongzhou BEWG Xiangjiating Water Purification Co., Ltd. organises the "Dream of Children" initiative

The "Fulfilling Small Dreams" initiative took place on May 31, 2019, before International Children's Day. Employees of Yongzhou BEWG Xiangjiating Water Purification Co., Ltd. went to the Qilidian campus of Xujiating Primary School in Lingling District and conducted the heartwarming activity, in the spirit of families and relatives helping each other. Our learn-from-Lei Feng volunteers donated supplies and gifts, including schoolbags and books, to 31 impoverished students.

This cooperation between the school and our company will become a common work in the future. Through

the activity, we can build community spirit, enabling children in need to develop in the care of a wider family.



▲ The "Dream of Children" initiative

Case

BEWG overseas project teams organized community philanthropic events

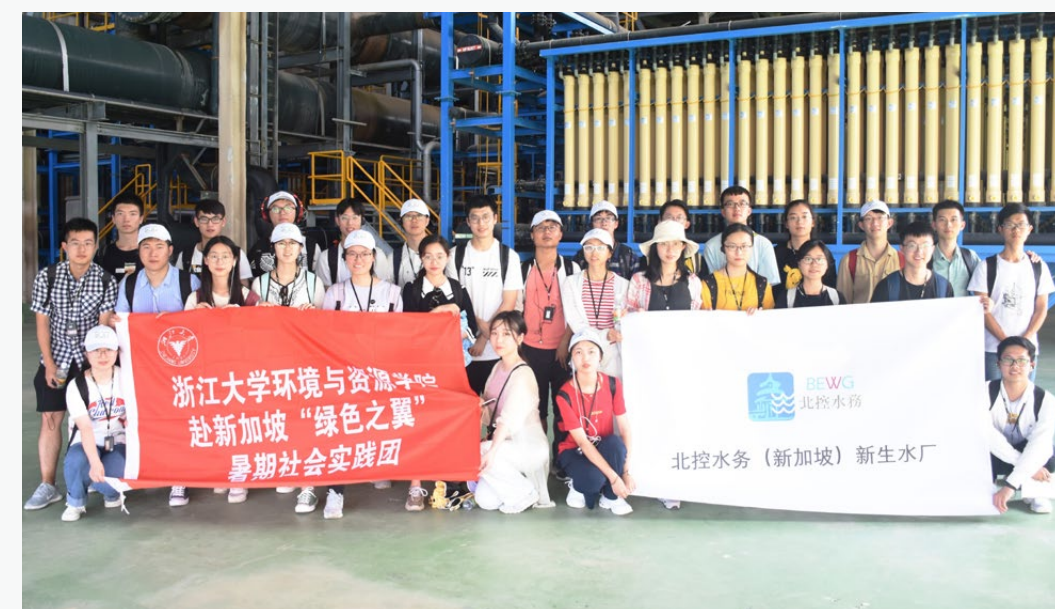
Responding to the Group's appeal, BEWG's overseas project companies encouraged employees to carry out public service in the local community, to improve the economic situation and livelihood of the community and contribute to the sustainable development of the community.



▲ BEWG Australia project company organizes the tree-planting activity



▲ BEWG Malaysia Pantai Il Project distributes soup to the local people



▲ Zhejiang University conducts summer-vacation social activities at the Singapore NEWater plant



Future outlook

In 2019, we kept our original aspiration in mind, speeded up the pace toward high-quality development, upheld customer-orientation and commitment to the industry, leveraged our strength in business thinking and capital concept. We sustained our faith in technology and professionalism, continued to deliver quality service, furthered the creation of a globally shared community of water environment, and devoted ourselves to a world-class operation platform and service brand in public utility (water) assets.

In past year, we have held stick to dual-platform strategy with asset management platform and operation management platform and deepened the shift to asset-light development; we persisted to accelerate technology innovation and intensified security management with professionalism to promote product and management standardization; we continuously concentrated on the environmental industry with endless devotion; we actively optimized water resource management and low-carbon management, vigorously carried out biodiversity protection, and created green

management throughout the project. We also paid attention to employee growth, promoted industry development with joint efforts, enthusiastically gave back to the society and worked together with employees, suppliers, industry partners and neighboring communities to achieve common development. We also developed a dedication to the society and the country as we actively responded to the call of the central government, seriously participate in the three tough battles, and earnestly undertook the social responsibility of state-owned enterprises in the capital.

In the future, we will continue following our mission to "safeguard the source of life and create a green environment", and keep abreast of the country with our commitment to the profession, the industry and the society and the country. We will lead the industry growth, reshape the core advantages, focus on innovation to restart the engine for growth, do more to the construction of ecological civilization, and contribute more to providing a better life.

ESG indicator index

ESG Indicator			Disclosure and Description
Environmental	Aspect A1: Emissions	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	P76-81
		A1.1 The types of emissions and respective emissions data.	P80-81
		A1.2 Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P38
		A1.3 Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P80
		A1.4 Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P80
		A1.5 Description of measures to mitigate emissions and results achieved.	P77-81
		A1.6 Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	P77-81
	Aspect A2: Use of Resources	General Disclosure Policies on the efficient use of resources, including energy, water and other raw materials.	P29-31&35-38&81-82
		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).	P39&81-82
		A2.2 Water consumption in total and intensity (e.g. per unit of production volume, per facility).	P31
		A2.3 Description of energy use efficiency initiatives and results achieved.	P35-38&81-82
		A2.4 Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	P29-34
		A2.5 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	N/A
	Aspect A3: The Environment and Natural Resources	General Disclosure Policies on minimising the issuer's significant impact on the environment and natural resources.	P39-40
		A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	P39-40
Social	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	P85
		B1.1 Total workforce by gender, employment type, age group and geographical region.	P86
		B1.2 Employee turnover rate by gender, age group and geographical region.	P86
	Aspect B2: Health and Safety	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	P92-94
		B2.1 Number and rate of work-related fatalities.	P92
		B2.2 Lost days due to work injury.	P92
		B2.3 Description of occupational health and safety measures adopted, how they are implemented and monitored.	P92-95

Social	Aspect B3: Development and Training	General Disclosure Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	P86-91
		B3.1 The percentage of employees trained by gender and employees trained by gender and employee category (e.g. senior management, middle management).	P87
		B3.2 The average training hours completed per employee by gender and employee category.	P88
	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	P85
		B4.1 Description of measures to review employment practices to avoid child and forced labour.	P85
		B4.2 Description of steps taken to eliminate such practices when discovered.	P85
	Aspect B5: Supply Chain Management	General Disclosure Policies on managing environmental and social risks of the supply chain.	P97-100
		B5.1 Number of suppliers by geographical region.	P99
		B5.2 Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	P97-100
	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	P47-52&65-68&75
		B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons.	N/A
		B6.2 Number of products and service related complaints received and how they are dealt with.	P47-52
		B6.3 Description of practices relating to observing and protecting intellectual property rights.	P66-67
		B6.4 Description of quality assurance process and recall procedures.	P47-52
		B6.5 Description of consumer data protection and privacy policies, how they are implemented and monitored.	P75
	Aspect B7: Anti-corruption	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	P45-46
		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.	P46
		B7.2 Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	P45-46
	Aspect B8: Community Investment	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.	P101-106
		B8.1 Focus areas contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	P101-106
		B8.2 Resources contributed (e.g. money or time) to the focus area.	P101-106

GRI Standard index

ESG Indicator	Description	Chapters	Pages
GRI 101: Foundation 2016			
GRI 102: General Disclosures 2016			
Organizational Profile			
102-1	Name of the organization	About this report	P1-2
102-2	Activities, brands, products, and services	About us	P7-8
102-3	Location of headquarters	About us	P7-8
102-4	Location of operations	About us	P7-8
102-5	Ownership and legal form	About us	P7-8
102-6	Markets served	About us	P7-8
102-7	Scale of the organization	About us	P7-8
102-8	Information on employees and other workers	People-oriented culture	P85-86
102-9	Supply chain	Strengthening our supply chain	P97-99
102-10	Significant changes to the organization and its supply chain	Strengthening our supply chain	P97-99
102-11	Precautionary Principle or approach	Corporate governance standardisation	P43-44
102-12	External initiatives	About us	P1-2
102-13	Membership of associations	Innovation for accelerated development	P71
Strategy			
102-14	Statement from senior decision-maker	Message from the Chairman Message from the CEO	P3-4
102-15	Key impacts, risks, and opportunities	Message from the Chairman Message from the CEO	P3-4
Ethics and Integrity			
102-16	Values, principles, standards, and norms of behavior	To stakeholders	P13-14
102-17	Mechanisms for advice and concerns about ethics	Corporate governance standardisation	P45-46
Governance			
102-18	Governance structure	Corporate governance standardisation	P41
102-19	Delegating authority	Corporate governance standardisation	P41
102-20	Executive-level responsibility for economic, environmental, and social topics	Corporate governance standardisation	P41
102-21	Consulting stakeholders on economic, environmental, and social topics	Corporate governance standardisation	P41
102-22	Composition of the highest governance body and its committees	Corporate governance standardisation	P41
102-23	Chair of the highest governance body	Corporate governance standardisation	P41-42
102-24	Nominating and selecting the highest governance body	Corporate governance standardisation	P42
102-25	Role of highest governance body in setting purpose, values, and strategy	Corporate governance standardisation	P41-42
102-26	Identifying and managing economic, environmental, and social impacts	Identification of Material Issues	P23-24
102-27	Effectiveness of risk management processes	Corporate governance standardisation	P43-44
102-28	Review of economic, environmental, and social topics	Identification of Material Issues	P23-24
102-29	Highest governance body's role in sustainability reporting	Corporate governance standardisation	P41
102-30	Communicating critical concerns	Stakeholder engagement	P21-22
102-31	Nature and total number of critical concerns	Stakeholder engagement	P21-22

Stakeholder Engagement			
102-32	List of stakeholder groups	Stakeholder engagement	P21-22
102-33	Identifying and selecting stakeholders	Stakeholder engagement	P21-22
102-34	Approach to stakeholder engagement	Stakeholder engagement	P21-22
102-35	Key topics and concerns raised	Identification of Material Issues	P24
Reporting Practice			
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102-37	Defining report content and topic Boundaries	About this report	P1-2
102-38	List of material topics	Identification of Material Issues	P24
102-39	Restatements of information	About this report	P1-2
102-40	Changes in reporting	About this report	P1-2
102-41	Reporting period	About this report	P1-2
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102-43	Reporting cycle	About this report	P1-2
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102-45	Claims of reporting in accordance with the GRI Standards	About this report	/
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102-47	External assurance	/	/
Topic-Specific Disclosures			
Economic			
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GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	About us	P11-12
	103-2 The management approach and its components	About us	P11-12
	103-3 Evaluation of the management approach	About us	P11-12
201-1	Direct economic value generated and distributed	About us	P11-12
GRI 203 Indirect Economic Impacts 2016			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Serving cities and supporting the development of the Beijing-Tianjin-Hebei region Protecting the Yangtze River Supporting the Guangdong-Hong Kong- Macao Greater Bay Area Supporting Belt and Road Initiative countries	P53-60
	103-2 The management approach and its components	Serving cities and supporting the development of the Beijing-Tianjin-Hebei region Protecting the Yangtze River Supporting the Guangdong-Hong Kong- Macao Greater Bay Area Supporting Belt and Road Initiative countries	P53-60
	103-3 Evaluation of the management approach	Serving cities and supporting the development of the Beijing-Tianjin-Hebei region Protecting the Yangtze River Supporting the Guangdong-Hong Kong- Macao Greater Bay Area Supporting Belt and Road Initiative countries	P53-60
202-1	Infrastructure investments and services supported	Serving cities and supporting the development of the Beijing-Tianjin-Hebei region Protecting the Yangtze River Supporting the Guangdong-Hong Kong- Macao Greater Bay Area Supporting Belt and Road Initiative countries	P53-60
202-2	Significant indirect economic impacts	Serving cities and supporting the development of the Beijing-Tianjin-Hebei region Protecting the Yangtze River Supporting the Guangdong-Hong Kong- Macao Greater Bay Area Supporting Belt and Road Initiative countries	P53-60

GRI 204: Procurement Practices 2016

GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Strengthening our supply chain	P97-99
	103-2 The management approach and its components	Strengthening our supply chain	P97-99
	103-3 Evaluation of the management approach	Strengthening our supply chain	P97-99

GRI 205: Anti-corruption 2016

GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Corporate governance standardisation	P45-46
	103-2 The management approach and its components	Corporate governance standardisation	P45-46
	103-3 Evaluation of the management approach	Corporate governance standardisation	P45-46
204-1	Operations assessed for risks related to corruption	Corporate governance standardisation	P45-46
204-2	Communication and training about anti-corruption policies and procedures	Corporate governance standardisation	P45-46
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GRI 206: Anti-competitive Behavior 2016

GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Corporate governance standardisation	P45-46
	103-2 The management approach and its components	Corporate governance standardisation	P45-46
	103-3 Evaluation of the management approach	Corporate governance standardisation	P45-46
205-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Corporate governance standardisation	P45-46

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GRI 302: Energy 2016

GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Environmental Protection Protect the beautiful environment	P35&81
	103-2 The management approach and its components	Environmental Protection Protect the beautiful environment	P35&81
	103-3 Evaluation of the management approach	Environmental Protection Protect the beautiful environment	P35&81
301-1	Energy consumption within the organization	Environmental Protection Protect the beautiful environment	P35&81
301-3	Energy intensity	Protect the beautiful environment	P39
301-4	Reduction of energy consumption	Environmental Protection Protect the beautiful environment	P35-36& 81-82
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GRI 302: Water 2016

GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Addressing water scarcity	P29
	103-2 The management approach and its components	Addressing water scarcity	P29-33
	103-3 Evaluation of the management approach	Addressing water scarcity	P29-33
302-1	Water withdrawal by source	Addressing water scarcity	P29-31
302-2	Water recycled and reused	Addressing water scarcity	P30-33

GRI 303: Biodiversity 2016

GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Environmental Protection	P39
	103-2 The management approach and its components	Environmental Protection	P39-40
	103-3 Evaluation of the management approach	Environmental Protection	P39-40
303-1	Significant impacts of activities, products, and services on biodiversity	Environmental Protection	P40
303-2	Habitats protected or restored	Environmental Protection	P40

GRI 304: Emissions 2016

GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Protect the beautiful environment	P76-79
	103-2 The management approach and its components	Protect the beautiful environment	P76-79
	103-3 Evaluation of the management approach	Protect the beautiful environment	P76-79
304-1	Direct (Scope 1) GHG emissions	Environmental Protection	P38
304-2	Energy indirect (Scope 2) GHG emissions	Environmental Protection	P38
304-3	GHG emissions intensity	Environmental Protection	P38
304-4	Reduction of GHG emissions	Environmental Protection	P37
304-5	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	Protect the beautiful environment	P80

GRI 305: Effluents and Waste 2016

GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Protect the beautiful environment	P77-79
	103-2 The management approach and its components	Protect the beautiful environment	P77-79
	103-3 Evaluation of the management approach	Protect the beautiful environment	P77-79
305-1	Water discharge by quality and destination	Protect the beautiful environment	P80
305-2	Waste by type and disposal method	Protect the beautiful environment	P80
305-3	Significant spills	Protect the beautiful environment	P81
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GRI 103 : Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Protect the beautiful environment	P76-77
	103-2 The management approach and its components	Protect the beautiful environment	P76-77
	103-3 Evaluation of the management approach	Protect the beautiful environment	P76-77
306-1	Non-compliance with environmental laws and regulations	Protect the beautiful environment	P81

GRI 307: Supplier Environmental Assessment 2016

GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Strengthening our supply chain	P99
	103-2 The management approach and its components	Strengthening our supply chain	P99
	103-3 Evaluation of the management approach	Strengthening our supply chain	P99
307-1	New suppliers that were screened using environmental criteria	Strengthening our supply chain	P99
307-2	Negative environmental impacts in the supply chain and actions taken	Strengthening our supply chain	P99

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GRI 401: Employment 2016

GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	People-oriented culture	P85
	103-2 The management approach and its components	People-oriented culture	P85
	103-3 Evaluation of the management approach	People-oriented culture	P85
401-1	New employee hires and employee turnover	People-oriented culture	P85-86
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	People-oriented culture	P95-96

GRI 402: Labor Management Relations 2016

GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	People-oriented culture	P85
	103-2 The management approach and its components	People-oriented culture	P85
	103-3 Evaluation of the management approach	People-oriented culture	P85

402-1	Minimum notice periods regarding operational changes	People-oriented culture	P85
GRI 403: Occupational Health and Safety 2016			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	People-oriented culture	P92&94
	103-2 The management approach and its components	People-oriented culture	P92&94
	103-3 Evaluation of the management approach	People-oriented culture	P92&94
403-1	Workers representation in formal joint management-worker health and safety committees	People-oriented culture	P92
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	People-oriented culture	P92
GRI 404: Training and Education 2016			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	People-oriented culture	P87
	103-2 The management approach and its components	People-oriented culture	P87
	103-3 Evaluation of the management approach	People-oriented culture	P87
404-1	Average hours of training per year per employee	People-oriented culture	P88
404-2	Programs for upgrading employee skills and transition assistance programs	People-oriented culture	P89-91
404-3	Percentage of employees receiving regular performance and career development reviews	People-oriented culture	P89-91
GRI 405: Diversity and Equal Opportunity 2016			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Corporate governance standardization People-oriented culture	P42&85
	103-2 The management approach and its components	Corporate governance standardization People-oriented culture	P42&85
	103-3 Evaluation of the management approach	Corporate governance standardization People-oriented culture	P42&85
405-1	Diversity of governance bodies and employees	Corporate governance standardization	P42
GRI 406: Non-discrimination 2016			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	People-oriented culture	P85
	103-2 The management approach and its components	People-oriented culture	P85
	103-3 Evaluation of the management approach	People-oriented culture	P85
406-1	Incidents of discrimination and corrective actions taken	People-oriented culture	Discrimination is prohibited
GRI 407: Freedom of Association and Collective Bargaining 2016			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	People-oriented culture	P85
	103-2 The management approach and its components	People-oriented culture	P85
	103-3 Evaluation of the management approach	People-oriented culture	P85
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	People-oriented culture	P85
GRI 408: Child Labor 2016			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	People-oriented culture	P85
	103-2 The management approach and its components	People-oriented culture	P85
	103-3 Evaluation of the management approach	People-oriented culture	P85
408-1	Operations and suppliers at significant risk for incidents of child labor	People-oriented culture	Child labour is prohibited

GRI 409: Forced or Compulsory Labor 2016			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	People-oriented culture	P85
	103-2 The management approach and its components	People-oriented culture	P85
	103-3 Evaluation of the management approach	People-oriented culture	P85
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	People-oriented culture	Forced labour is prohibited
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	103-2 The management approach and its components	Community philanthropy and service	P101-106
	103-3 Evaluation of the management approach	Community philanthropy and service	P101-106
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GRI 411: Supplier Social Assessment 2016			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Strengthening our supply chain	P97-98
	103-2 The management approach and its components	Strengthening our supply chain	P97-98
	103-3 Evaluation of the management approach	Strengthening our supply chain	P97-98
411-1	New suppliers that were screened using social criteria	Strengthening our supply chain	P99
411-2	Negative social impacts in the supply chain and actions taken	Strengthening our supply chain	P99
GRI 412: Customer Health and Safety 2016			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ensuring service quality	P47-50
	103-2 The management approach and its components	Ensuring service quality	P47-50
	103-3 Evaluation of the management approach	Ensuring service quality	P47-50
412-1	Assessment of the health and safety impacts of product and service categories	Ensuring service quality	P47-50
GRI 413: Customer Privacy 2016			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Innovation for accelerated development	P75
	103-2 The management approach and its components	Innovation for accelerated development	P75
	103-3 Evaluation of the management approach	Innovation for accelerated development	P75
413-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Innovation for accelerated development	None
GRI 414: Socioeconomic Compliance 2016			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Corporate governance standardisation	P41-46
	103-2 The management approach and its components	Corporate governance standardisation	P41-46
	103-3 Evaluation of the management approach	Corporate governance standardisation	P41-46
414-1	Non-compliance with laws and regulations in the social and economic area	Corporate governance standardisation	None

Feedback form

Dear readers,

Thank you for reading *caring for environment*. 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 ✓ on your answer)

1. Do you think this report can reflect material impact of BEWG on economy, society and environment?
- Yes ☐ Probably Yes ☐ No ☐
2. Do you think this report can identify stakeholders and correctly and comprehensively analyze their relationships with BEWG?
- Yes ☐ Probably Yes ☐ No ☐
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 ☐ Probably Yes ☐ No ☐

Open-ended question

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

Name:

Tel.:

Employer:

E-mail: