



# Beijing Enterprises Group Company Promoting Projects in Hong Kong

November 2017

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# **BG Investments Promotion In HK**

## **I. BG Basics**

Established in January 2005, Beijing Enterprises Group Company Limited (hereinafter referred to as "BG") is a state-owned company funded by People's Government of Beijing Municipality. BG operates in both domestic and overseas markets, with a business scope covering both real economy and capital market. Among the listed companies owned by BG, Beijing Enterprises Holdings Limited, Beijing Enterprises Water Group Limited, Beijing Enterprises Environment Group Limited, Beijing Properties (Holdings) Limited, China Gas Holdings Limited, Beijing Gas Blue Sky Holdings Limited, Beijing Enterprises Clean Energy Group Limited, Beijing Enterprises Medical And Health Industry Group Limited are listed in Hong Kong; and Beijing Yanjing Beer Brewery Co., Ltd, Fujian Yanjing Huiquan Brewery Co., Ltd are listed on A-share market. Up to the end of 2016, BG has over 400 enterprises under its administration, with total assets exceeding 200 billion RMB.

Following the core philosophy of "Dedicating with Care, Sharing with Respect", and the development model of "Specialized Development and Inclusive Growth", BG offers integrated urban upgrading solutions for the improvement of modern city infrastructure and public utilities by sticking to green economy featuring low carbon development and the benchmark of high-end development in a bid to enriching the concept of "BG ,China" and building BG into a world-class company group both in China and even the whole globe.

In terms of industrial development direction, high-end green industry will be the keynote of BG's development, which also follows green city development philosophies, such as smart, low-carbon, energy conservation, ecological, and livable, etc. with focus on energy (city gas, regional integrated smart energy, photovoltaic); environment (integrated treatment and utilization of river system and water environment, environment hygiene, and solid waste treatment); integrated urban

planning, design and consulting; infrastructure development in real estate, logistics, elderly care, and smart cities.

In terms of industrial layout, BG follows the keynote of serving three national strategies, namely coordinated development of Beijing, Tianjin, and Hebei Area, *Belt and Road Initiative*, Yangtze River Economic Belt, as well as Planning on Canton, Hong Kong, Macau Greater Bay Area and relevant national new areas. Among which Xiong' An New Area, Canton, Hong Kong, Macau Greater Bay Area, and national new areas along the *Belt and Road* and Yangtze River Economic Belt will be our focus. Due attention will also be given to provincial capitals and cities with great development potential. BG's strategic goal, namely integrated smart city operator could thus be realized by industrial upgrading induced by coordinated integration and serving the society.

In accordance with BG's development strategy and industrial layout, BG puts forward six programs, covering energy, environment protection, and real estate that serves Beijing, Tianjin, and Hebei Area, Belt and Road countries and regions.



## II. BG Major Promoting Projects

### *(I) Beijing Xing Ao Ice & Snow Entertainment Industrial*

#### *Investment Fund (2022 Winter Olympics)*

##### **1.1 Project Overview**

**Project Background:** 2022 Winter Olympics will be held in Beijing and Zhangjiakou city. It will be the 1<sup>st</sup> Winter Olympic Games and the 3<sup>rd</sup> Olympic Games held in China after the 2008 Beijing Summer Olympics and the 2014 Nanjing Youth Olympics. In August 2015, President Xi Jinping said at a meeting of Central Political Bureau that the preparations for 2022 Winter Olympic Games should be economical, sharing, open, and financially clean. He emphasized that there must be strict budget management to keep the cost under control, and the spirit of sharing means to introduce social capital into the constructions of venues, stadiums, Olympic villages and relative commercial facilities.

Beijing Enterprises Group and Malaysia VXL Group launch a 10 billion RMB fund to invest in the projects relevant to Olympics facilities in YanQing District and ChongLi District, aiming to contribute to the winter sports development in China and to initiate the social investment to the Winter Olympics construction. The fund will make great efforts to ensure high-quality preparations for the 2022 Winter Olympic Games and create a "remarkable, extraordinary, and excellent" event. Meanwhile, the fund will not only help to achieve the goal of motivating 300 million people participating in winter sports by 2022, but also help to promote the integrated development of Beijing, Tianjin, and Hebei, and to improve these cities governance.

**Project Content:** The fund sponsors, as well as the cornerstone investors, are Ji De Investment owned by Beijing Enterprises Group and Ming De Investment owned by VXL Group. The fund will invest in the construction projects of the 2022 Winter Olympics venues, relative sports facilities, supporting facilities, and other residential construction, commercial construction, urban infrastructure construction

projects around the area. The fund will also integrate projects in prosperous industries such as culture, tourism, entertainment, etc.

**Project Location:** Yanqing, Beijing; Chongli, Zhangjiakou

**Total Investment:** RMB 31.26 billion

**Total Target Scale of the Fund:** RMB 30 billion

**1st Round Fund Raising:** RMB 10 billion

**Fund Operation:** Investment, Operation/Management and Exit

**Profit Model:** Profit from the sale of residential or commercial real estates, IPO listing of assets, equity transfer, etc.

**Management Team:** The core members of the management team are appointed by Beijing Enterprises Group and VXL Group. Most of the team members graduated from Cambridge University, Tsinghua University, Peking University and other top universities, domestic and abroad. Thank to years of work experience in listed companies and investment banks, the core members have rich experience in real-estate development, fund management and investment management.

## 1.2 Project Advantages

2022 Winter Olympics will bring great opportunities for local city's development. The fund will be organized by the way of market mechanism. As the cornerstone investors, Beijing Enterprises Group and VXL Group have their own features and specific advantages. Beijing Enterprises Group has already been appointed as the government representative to invest in Olympic venues and facilities in Yanqing. By providing services to the APEC Meeting in 2014 and the Belt and Road Forum in 2017, Beijing Enterprises Group have gained valuable experience and reputation in international activities organization and facilities construction. VXL Group, the other cornerstone investor, is a large international investment group based in Malaysia. It has operated a ski park, the Genting Resort Secret Garden, in Chongli and the park will be one of the competition venues for 2022 Winter Olympic



Games. VXL Group has the land resource nearby the Winter Olympics venue area in Chongli and gained strong approval and support from central and local leaders.

### 1.3 Fund raising process

Under raising process

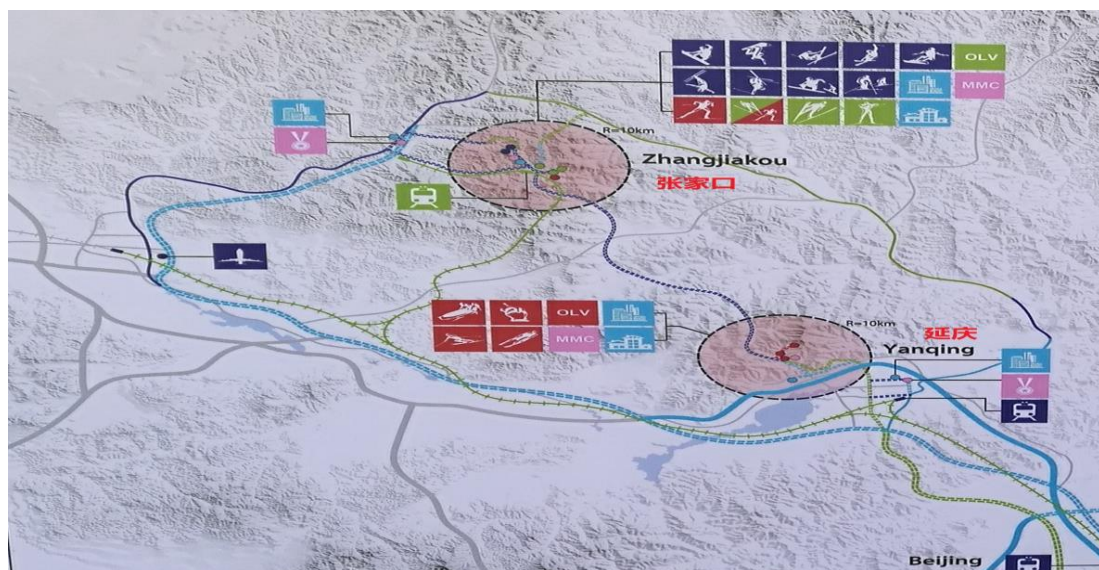
### 1.4 Needs for Partners

Construction enterprises, financial institutions (state-owned banks, joint-stock banks), financial holding groups, fund management companies, etc.

### 1.5 Contact Information

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## ***(II) Function Improvement Project of Beijing Yanqi Lake***

### ***International Conference Area***

#### **2.1 Background of the Project**

After the completion of Beijing Yanqi Lake International Convention Centre, it has successfully held the 2014 APEC Summit and the Belt and Road Forum for Cooperation in 2017, and now it has been world-renowned and become an important platform for international communication.

To make further study and implement of the series of speeches of Chairman Xi Jinping and the spirit of the Beijing Municipal Party Committee Secretary, Cai Qi, who made the speech of “Strengthening the establishment of an international communication center and implementing the necessary requirements of the strategic position of the capital city are the tasks of fulfilling the “four services”. We must prioritize the function building of the international communication center and better serve the overall development of the party and the country”, BG(BEIJING ENTERPRISES GROUP COMPANY LIMITED) carried out some relating work on regional capacity expansion and improvement around Yanqi Lake, organized professional forces, and made systematic research and special studies on improving the regional service quality and functional facilities to formulate the idea of planning and upgrading around the Yanqi Lake.

#### **2.2 Project Summary**

Yanqi Lake, with the area of 24 square kilometers, now relying on the ecological base of “three mountains one lake and one region” is being planned the space function layout with the “five areas on the stand, one town under the stand”. “Three Mountains and One Lake” means the ecological structure of Yanqi Lake area surrounded by mountains and water. There are Jindeng Mountain, Hongluo Mountain,

Jundu Mountain as well as the Yanqi Lake around the project. And the “one region” means the ecological conservation landscape region.

The “five sections on the stand” refers to the theme function area where many industries accompany and cooperate together around Yanqi Lake, which includes the high-end political and economic conference section, science and technology cultural exhibition section, ecological horticultural exhibition section, conference comprehensive service and Yanqi Lake Park. And the “one town under the stand” refers to the integration area of the International Conference and Science City - -- Yanqi Township.

### **2.3 Function Orientation**

There are the services of high-end political and economic conference, science and technology culture and exhibition, integrated conference, ecotourism, technological innovation and green ecological demonstration.

### **2.4 The Specific Methods**

The first is to improve the security facilities of high-end political and economic conference. As a world-class conference place, it should be planned to enhance the functional construction of “international communication center” improved the safeguard mechanism of the service of major political and economic conference, proactively arranged the construction of meeting facilities and service ability, especially strengthened the service supporting and service quality of high-end series of meeting.

The second is to set up an international science and technology cultural exchange platform. Relying on the International Convention and Exhibition Center, it will create a platform for scientific and technological exchanges such as international

cooperation in science and technology and publication of achievements. It will attract various kinds of academic and scientific conferences and related forums to be held at Yanqi Lake and perfect related services for Huairou Science City.

The third is to create a world-class ecotourism place. Yanqi Lake international conference is planned and constructed according to the standard of 5A of scenic spot, to further improve the cultural tourism and leisure facilities, provide supporting services for participants during the high-end summit, and meet the demand for leisure and vacation tourism on weekdays and achieve sustainable operation.

The fourth is to become a green ecological demonstration area. On the basis of the original green energy-saving ecological-environmental technologies, it will be further improved through the functions of ecological-development demonstration zones in this region, making supplement for the ecological-gardening, displaying high-end eco-friendly energy-saving technologies and create a leading green low-carbon demonstration zone around the world.

The fifth is to make the Huairou Science City Supporting Area (Yanqi Township) responsible for Davos, building a world-class characteristic town, solving the living problems of practitioners in Huairou Science City and International Conference, fully supplying life and commercial facilities and serving reporters, followers and other side events and activities during important meetings.

## **2.5 Cooperation Requirements**

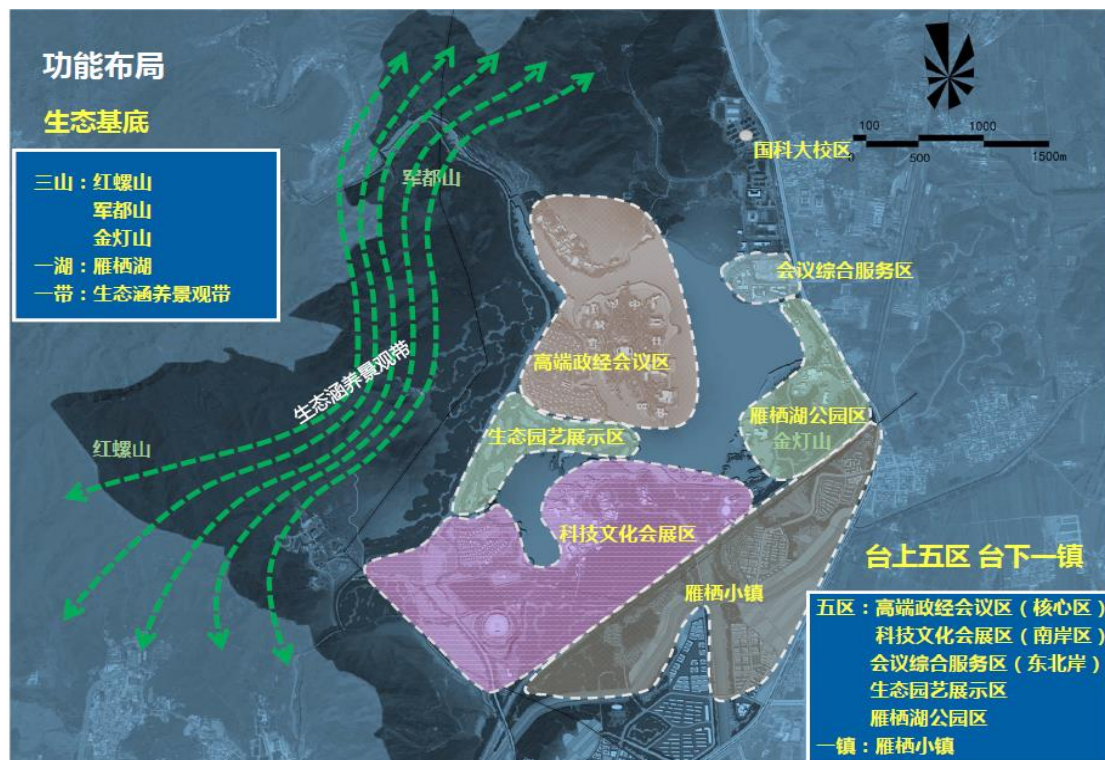
There are the enterprises of high-end exhibition, cultural exchange, and the advanced technology applications.

## **2.6 Contact Information**

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### ***(III) Sino-Cambodian Phnom Penh Special Economic Zone (The Belt and Road)***

#### **3.1 Project Background**

Sino-Cambodian Phnom Penh Special Economic Zone is the largest economic zone approved by the government of Cambodia, with a total planned area of 50-60km<sup>2</sup> containing multiple functions such as industry, logistics, trading, residence, research, education, entertainment and public service, etc. The vision of the project is to build a largest industry city and industry innovation base in the region of Mekong Valley.

The current development stage of Cambodia has very much in common with the earlier “Reform and Opening Up” period of China. The average annual GDP growth rate has been around 7% for almost ten years. Cambodia has been recognized as a healthy economic entity with a young population and active foreign trading. The Sino-Cambodian Phnom Penh SEZ dedicate to a new successful industry-city, to achieve promotion, upgrade and diversification to the industry and sustainability to the economic growth.

For China, the SEZ could become an experiment of the Belt And Road initiative in South-East Asia, providing chances of industry capacity cooperation, capital investment and business innovation to various of companies, finance institute and other kind of business organization.

**Project Content and Description:** The SEZ has registered a development company named Zhong Jian Jin Bian Jing Ji Te Qu Ltd. which is responsible for the planning, expanding, marketing, construction, financing and operation of the SEZ. This company is controlled and directed by Beijing Enterprises Group Company Ltd. and its subordinate listed company Beijing Properties (Holding) Ltd..

A total planned area of 50 km<sup>2</sup> requires a total investment of 3 billion USD (20 billion RMB) in the future. The project is divided into more than one stage. Around 14 km<sup>2</sup> of lands are being brought and permanently owned during the first



stage, as well as an investment of 1 billion USD (6.6 billion RMB) is put forth. More lands is being acquired in the meantime.

**Project Location:** Kampong Chhnang, Cambodia

**Total Investment Funds:** 20 Billion RMB (3 Billion USD)

**Estimated Financing Demand:** 16 Billion RMB

**Profit Model:** Land development and transfer/lease; payment for city municipal public service

**Current Project Operation Team:** Professional engineering financing, legal and administration team operating in Cambodia, Beijing and Hong Kong.

### **3.2 Project Advantage**

The investment policy of Cambodia is stable, especially supported by a very stable bilateral relation of China-Cambodia.

The Project has obtained 14 km<sup>2</sup> in current stage which could be enlarged to 50 km<sup>2</sup> in the future. It will be the biggest Special Economic Zone near Phnom Penh or even within Cambodia with an outstanding scale of economic and population around.

The transport communication is convenience, such as No.5 National Highway 5, Tonle Sap River, ongoing constructed railway of Cambodia and Thailand, and a new airport of Phnom Penh in concept.

The developer has a perfect title of its acquired land and could assist investor to obtain a permanent usage for the land. The developer has full capacity and much experience to develop such project.

### **3.3 Project Status**

Land acquisition 14 km<sup>2</sup> is completed. The develop plan is being submitted for approval and the construction of the 4km<sup>2</sup> -“kickoff zone” will be stated by the end of 2017. The estimated investment of municipal facilities in the kickoff zone

during 2018 – 2019 is 2-3 Billion USD. The SEZ Company has already signed land sales agreement with some investor.

### **3.4 Cooperation Requirement**

Companies, finance institutes and other organizations with will of industry investment, or those with experience in trading, logistics, research, education and city development in the international market. For instance:

An industry company to build a factory in the SEZ;

A service company to build a servicing base;

A real-estate company to participate in the land development;

A construction company to provide BOO service for power, water supply, and sewage treatment;

Providing Financing, education, medical, Culture and Entertainment service to the SEZ;

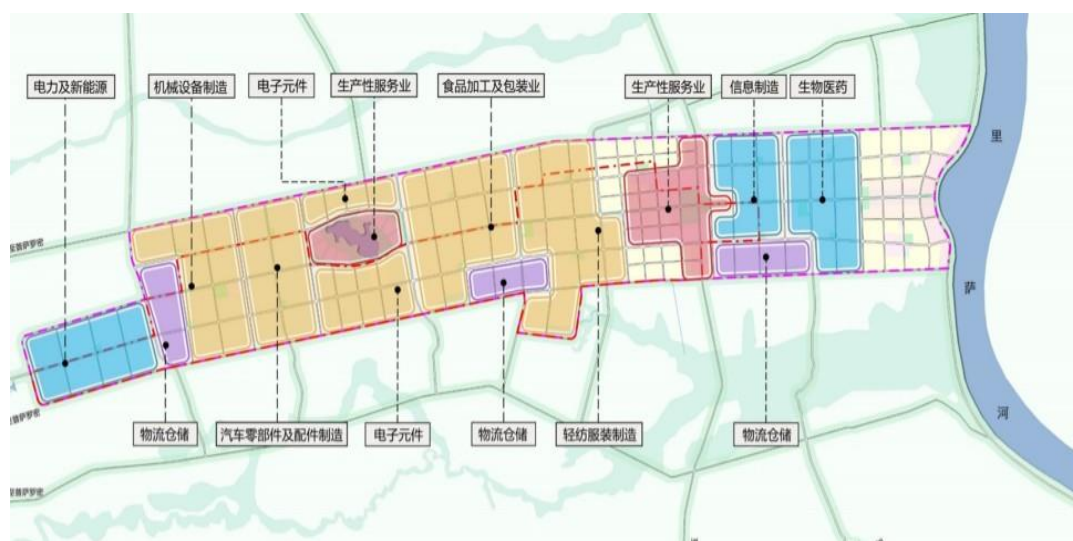
To add other value for the success of an innovation-type industry-city.

### **3.5 Contact information**

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## ***(IV) Synthetic Natural Gas and Supporting Projects in Ordos***

### ***(Energy Aspect)***

#### **4.1 Project Overview**

**Background:** The characteristic of our country's energy source is "rich in coal, poor in oil and gas". In the world's fossil energy proven reserves, China's coal reserves account for about 15%, oil and gas resources accounted for about 2.7%. Oil and gas supply and demand contradictions exist for a long time, so the need for a large number of imports to meet domestic demand. From the perspective of national energy security strategy, the development of alternative energy has become an important way to guarantee the sustainable development of the national economy. Coal clean and efficient use has become an important task for China's energy supply side reform. Production of coal-based natural gas in areas with abundant coal resources and sent it to the natural gas market through pipelines with low prices, which is conducive to easing natural gas supply and peaking pressures. From the current technical maturity and industrial feasibility point of view, coal-based natural gas is not only an important way to clean coal conversion, an important supplement to conventional natural gas, and also have the basis of large scale industrialization.

Beijing BG Energy Investment Co. Ltd. (hereinafter referred to as "BE") is a subsidiary of Beijing BG Corporation ("Beijing BG") founded in January 2013. BE's business scope includes upstream clean energy business, coal development, coal gas development and production, new energy implementation, energy engineering and services, LNG and LPG trading.

**Project Description:** This project includes the SNG project, the supporting coal mining project and the long-distance natural gas pipeline network from Ordos to Beijing. The project uses the abundant coal resources in Ordos, Inner Mongolia as raw material, through the integrated construction mode of upper and lower reaches, uses clean and efficient production craft, constructs and operates the Coal mining project and coal-based natural gas production equipment (SNG project), transports the natural gas product to Beijing and the periphery areas, to alleviate the pressure of

clean energy supply and air pollution in Beijing, Tianjin, Hebei and surrounding areas.

The project has been included in the 13th plan of five year energy development plan and the Beijing air cleaning program. The completion of the project will better meet the capital's future demand for clean energy and strategically ensure the safe operation and supply of energy in Beijing. At the same time, it will help Beijing BG achieving the goal that create formation of natural gas integration industry chain.

**Project Location:** Jungar Banner, Orders, Inner Mongolia Autonomous Region

**Total Investment:** About 12 billion

**Project Team:** BE is a wholly-owned subsidiary of Beijing BG. The company and its subsidiary Inner Mongolia Project Company have a total of more than 70 members with various professionals including R & D, project management and investment and financing. Company management team has excellent professional background and rich management experience in large state-owned enterprises, listed companies. BE has subsidiaries in Inner Mongolia, Xinjiang and Hong Kong respectively.

## **4.2 Project features and advantages**

The project is advanced in technology, energy efficiency, advanced environmental protection level, and much of the indicators reach the international and domestic advanced level. The project undertakes some national demonstration tasks and aims to build a benchmarking project in the industry.

The upstream and implementation conditions of this project are stable. The coal resources, which are the upstream of the project, have been approved by the Government of Inner Mongolia Autonomous Region, which can ensure long-term, stable supply to the SNG project. This project is the only one which obtains the supporting coal resources in China at present. At the same time, the project water resources, land and the implementation of indicators have been achieved. Hazardous



waste Disposal Center, ash residue field, power supply and other ancillary projects also have reliable guarantees.

Downstream markets are clear. The project has signed the gas supply agreement with Beijing Gas Group, a subsidiary of Beijing Enterprises Group. In the meanwhile, the project has been included in the Petro China "Shanxi-Beijing fourth-line pipeline project Feasibility Study Report" as its supply gas source to Beijing-Tianjin-Hebei region, Shanxi-Beijing fourth line will meet the transport conditions at the end of 2017. The downstream markets of the project have reliable guarantees.

#### **4.3 Project Process**

The preliminary procedure of the project is complete.

The SNG project has obtained the National Environmental Protection Department EIA approval and the National Development and Reform Commission approval, the project Water Index, the land target, the environmental capacity index has obtained; the coal mine project has obtained the official configuration of the Inner Mongolia Autonomous Region government.

#### **4.4 Cooperation Requirements**

**Strategic investors:** To participate in the construction, operation and management of the project together with BG; the expected rate of return is not higher than the overall rate of return of the project. The relevant industry investment experience is preferred.

**Financial investors:** Medium and long term financial investor (for example, 5-8-year industry fund); Short term investor who is flexible in operation mode or has obvious capital cost advantage.

#### **4.5 Contact Information:**

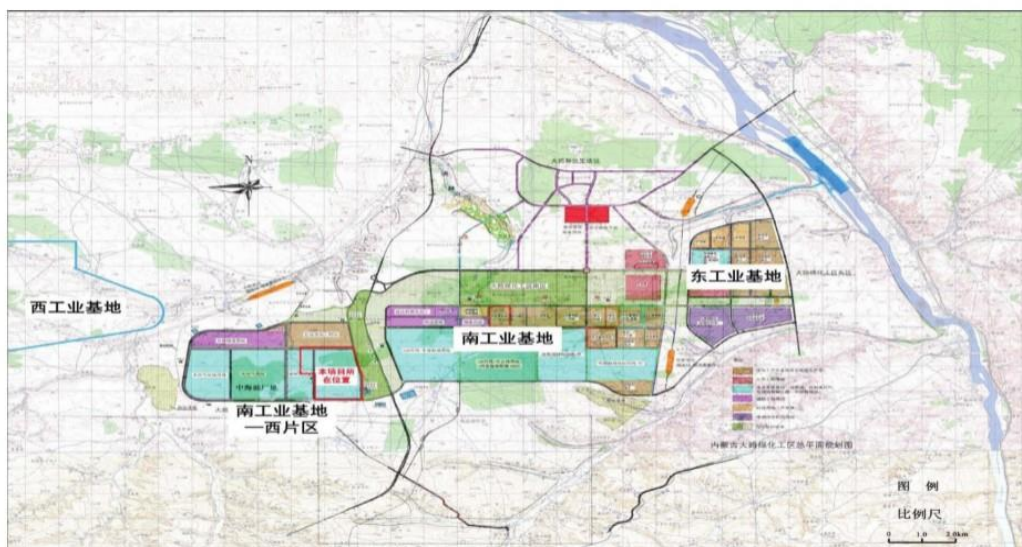
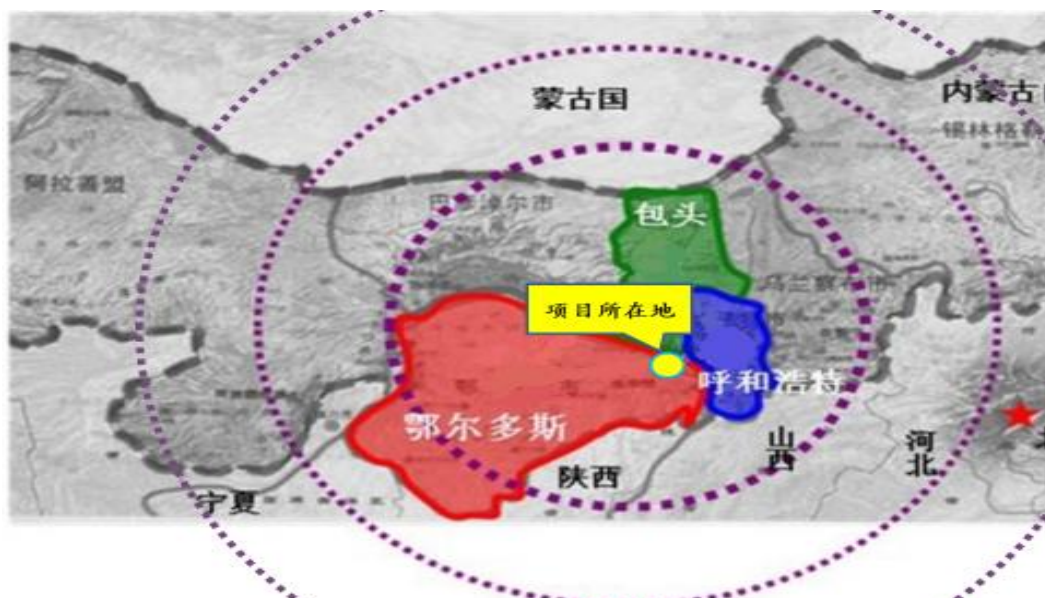
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Ms. Deng Ke      010-87303899-8616



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## ***(V) BIIC Green Energy Industry Fund Project (Energy Aspect)***

### **5.1 Project Profile**

**Background:** Beijing Instrument Industry Group CO., LTD. ("BIIC") is a wholly owned subsidiary of Beijing Enterprises Group Company Limited ("BG"). As investment and financing and operation management platform in the field of photovoltaic, BIIC has its own photovoltaic products and systems of key manufacturing technology, with a post-doctoral research station, seven post-doctoral research sub-station, to participate in the development of national photovoltaic industry standards 5, with photovoltaic cell crystal materials production and processing equipment manufacturing, amorphous silicon battery production equipment manufacturing, photovoltaic module production, photovoltaic power generation system and independent power generation design and implementation, photovoltaic power plant EPC total package (project consulting, construction) and other business segments, and has formed the whole industry chain integration solutions and service system from the design research and development, product manufacturing, construction investment, intelligent operation and maintenance.

BG Green Production (Qinghai) New Energy Limited (Hereinafter referred to as "BG Green Production Company") was set up in 2011 by BIIC (holding 85%) and BG Green Industry Investment Co., Ltd. (Beijing Enterprises Group Co., Ltd. subsidiary, holding 15%). As a carrier of the concrete implementation of PV development strategy, BG Green Production Company has a wealth of photovoltaic power plant investment, construction and operation and management experience, and has formed a more obvious first-mover advantage in the field of concentrated ground photovoltaic power generation. By now, the company has built and operated PV power plant 125MW, and represents the parent company BIIC to manage the power station 135MW that has been connected to the grid. The cumulative generating capacity is up to 630 million degrees. In June 2017, BG Green Company was listed on the National Small and Medium Enterprise Stock Transfer System (new three board) (stock code: 871438).

In view of good revenue, stable cash flow, and good prospects for development, BIIC would seize the national implementation of energy-saving emission reduction and development opportunities of strategic adjustment of energy structure, continue to vigorously develop photovoltaic power plant business operation. In 2020, BIIC will achieve 1.2GW construction scale, 1GW operation scale, to get a good income while making a contribution to the green, low-carbon and circular development.

**Project Content:** In order to realize the development target of photovoltaic industry, BIIC together with another financial investors set up "BIIC Green Energy Industry Fund". The fund size is 1 billion. The fund injects into BG Green Production Company dollar as equity investment, for the acquisition of BIIC's existing power plants, photovoltaic sector's other business, and development photovoltaic power plant business investment operation.

**Total investment:** RMB 5 billion yuan

**Fund scale:** RMB 1 billion yuan

**Profit-making mode:** The fund injects into BG Green Production Company dollar as equity investment to gain dividends and equity upside, or exit to make profit after BG Green Production Company is listed on the main board.

**Existing resources:** BIIC has owned grid connected power station 260MW (125MW had been injected into BG Green Production Company) in Qinghai Golmud, Hebei Pingquan, Shijiazhuang, Shanxi Hunyuan and other places. At the same time, BG Green Production Company intends to build in Hebei Pingquan, Sichuan Panzhihua, Shandong Xintai and other places to invest in the construction of 600MW power station. A number of centralized and distributed investment cooperation agreements have been signed with local governments in Shandong, Hebei, Qinghai and other provinces with good lighting condition, favorable policies and obvious location advantage.

**Project team:** BG Green Production Company currently has 26 employees, and BIIC has a related engineering and technical team of more than 100 people.



## **5.2 Characteristics and Advantages**

The project has the characteristics of definite expected income, stable and reliable cash flow, less risk and relatively safe capital.

BIIC has owned the whole industry chain integration solutions and service system from the design research and development, product manufacturing, construction investment, intelligent operation, which could provide strong support for the company's business expansion.

Based on BG and BIIC's deep foundation in the enterprise management, capital operation, operation of photovoltaic and other fields, BG Green Production Company has accumulated a wealth of photovoltaic power plant investment, construction, operation and management experience, trained and reserved a number of photovoltaic field operation of high-level talents and rich project management personnel and professional maintenance personnel, built the network the information management system, and the management level is in the forefront of the industry

## **5.3 Project process**

BIIC has communicated with the relevant national industry fund, and raised part of the intention capital. The fund is scheduled to be set up in June 2018.

## **5.4 Requirements for Investors**

Interested parties to jointly set up "BIIC Green Energy Industry Fund", and green energy investment experience is preferred.

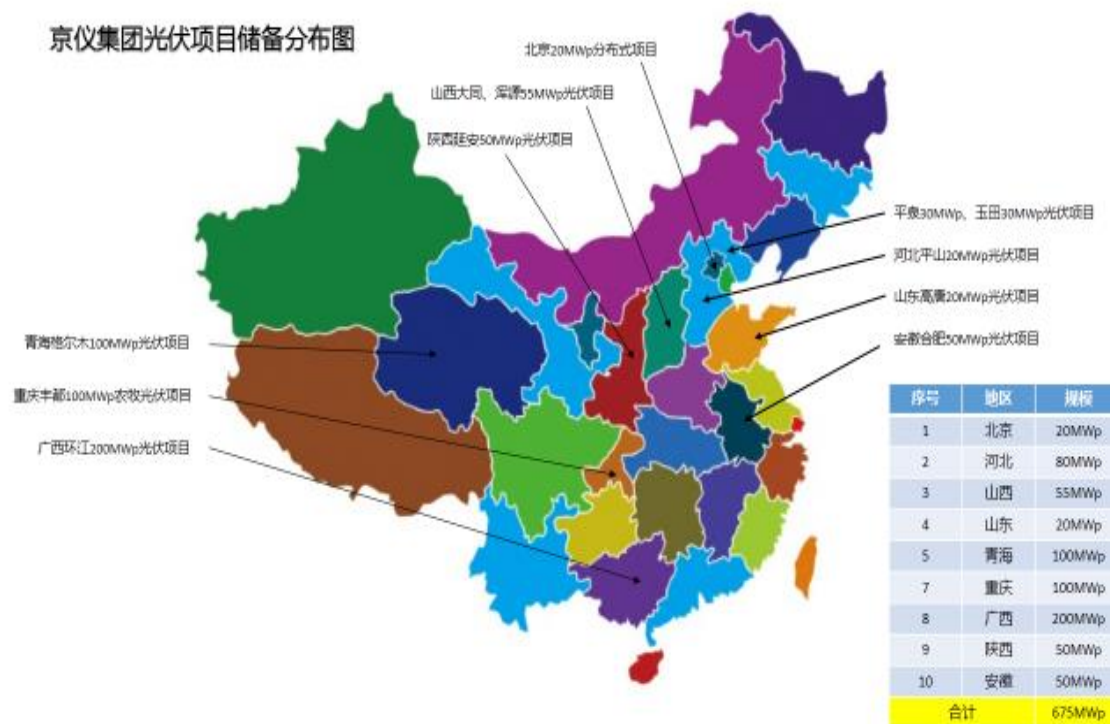
## **5.5 Contact Information:**

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京仪集团光伏项目储备分布图



## ***(VI) Fund Project (environmental protection) of Beijing***

### ***Enterprises Water Group Limited***

Beijing Enterprises Water Group Limited (hereinafter referred to as “BEWG”), a company listed on the Main Board of The Stock Exchange of Hong Kong Limited (Stock Code: HK00371), is a large-scale group which provides a broad range of water services and environmental protection services in China and has been selected as a constituent stock in Hang Seng Mainland 100 Index and in Hang Seng Hang Seng Composite MidCap Index. Strategically positioned as a “leading integrated water system solution provider”, leveraged on its market-oriented approach, solid capital foundation, advanced technology and sound management, the Group focuses on its core businesses on environmental water protection business. BEWG has been developed into professional and leading water services and environmental protection services provider involving such fields as water services in cities and towns, water services in river basins, industrial water services, seawater & freshwater services, environmental sanitation, minerals, green energy, environmental services, etc. and covering the full industrial chain including industry investment, planning and design, building and reconstruction and operation and service.

BEWG has established the strategic cooperation relation with many large financing institutions to carry out all-round cooperation in merger and acquisition fund and industrial fund, to create its own financial holding service platform. As for equity investment, BEWG provides not only the financing service, but also such value-added services for the investee units as post-investment management, capital operation, merger and acquisition and market value management.

#### **Project process**

#### **6.1. PPP project of rural and urban sewage pipe network in Yixing by BEWG**

## 1) Overview

**Project content:** PPP project of rural and urban sewage pipe network in Yixing covers the over-village main pipe network in pipe collecting villages of non-market town areas; pipe collection for enterprises and public institutions in all-in-one distributed treatment facilities villages and non-power distributed treatment villages, main pipe network and pip collection in market areas after township merging and sewage main pipe network and pipe collecting in urban areas. The above-mentioned pipe network is about 2000km long.

**Total project investment:** the estimated total investment amount of the project is RMB 4.685 billion yuan. Except that the existing project is to be paid on the evaluated price, the newly built project will be subject to the actual amount together with the amount determined by final account audit for completed project by the agency designated by the authority concerned.

**Financing amount:** it is intended to raise the capital fund by establishing a fund, wherein, RMB 896 million yuan will be contributed by the prior limited partner and RMB 3.379 billion yuan by the loan from the project bank.

**Profit-making pattern:** the authority concerned will pay by means of service fees, wherein, RMB 233.90 million yuan will be paid for the existing project per year and 167.30 million yuan for the newly built project per year.

**Project team:** BEWG is responsible for the project construction and post-stage operation while Beijing Enterprises Financial Service (Beijing) Investment Holding Co., Ltd. is responsible for the earlier-stage financing.

## 2) Project features and advantages

The water service project has definite pricing mechanism and the service fee will rise in the future, therefore, the profit rate will advance further. Though the

construction period of the project is two years, the authority concerned will pay the service fee after completion of check and acceptance of partial engineering, to provide cash flow for the project. As the Top 100 Counties in China and with great fiscal capacity, Yixing is able to pay, so the project's payment collection will be guaranteed.

### **3) Project progress**

At present, the value-for-money evaluation, financial bearing capacity argumentation and preliminary implementation scheme, feasibility study and environment assessment of the project have been completed and approved. After put in the PPP Project Library of Department of Finance of Jiangsu Province, the project is under the approval process of the Department.

### **4) Cooperation requirements**

Mid-and-long-term financial investor

### **5) Contact Information**

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## **6.2. PPP project of ruralsewage treatment in Yixing by BEWG**

### **1) Overview**

**Project content:** PPP project of rural sewage treatment in Yixing covers new construction, operation, and maintenance of the sewage collection and treatment facilities in 2948 villages and entrusted operation and maintenance of the existed sewage treatment facilities in 150 villages. The service period of the project is 26 years (construction period included) from the effective date of the *PPP Contract*

*Agreement and Franchise Agreement.* The project will be constructed in two separate sections and the first section is about construction of all-in-one distributed treatment facilities, installation and commissioning of the equipment, and check and acceptance by the authority concerned before December 31, 2018.

**Total project investment:** the estimated total investment amount of the project is RMB 2.043billion yuan. The actual amount and the amount determined by final account audit for completed project by the agency designated by the authority concerned shall prevail.

**Financing amount:** it is intended to raise the capital fund by establishing a fund, wherein, RMB 361 million yuan will be contributed by the prior limited partner and RMB 1.383billion yuan by the loan from the project bank.

**Profit-making pattern:** the authority concerned will pay by means of unit standard service fees, which is RMB 171.85 million yuan per year.

**Project team:** BEWG is responsible for the project construction and post-stage operation while Beijing Enterprises Financial Service (Beijing) Investment Holding Co., Ltd. is responsible for the earlier-stage financing.

## **2) Project features and advantages**

The water service project has definite pricing mechanism and the service fee will rise in the future, therefore, the profit rate will advance further. Though the construction period of the project is two years, the authority concerned will pay the service fee after completion of check and acceptance of partial engineering, to provide cash flow for the project. As the Top 100 Counties in China and with great fiscal capacity, Yixing is able to pay, so the project's payment collection will be guaranteed.

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#### **4) Cooperation requirements**

Mid-and-long-term financial investor

#### **5) Contact Information**

Contact Name: Haoxiang Yu

Phone Number: +8618612100570

### **6.3. PPP project of urban water ecology promotion and comprehensive promotion in Baotou City by BEWG**

#### **1) Overview**

**Project content:** according to the *Feasibility Study Report of Urban Water Ecology Promotion and Comprehensive Promotion Project in Baotou City*, the project covers the round-the-city water system with the north to Daqing Mountain, the south to Yellow River, the west to Kundulun River and the east to Baiyin Lake. By diverting water to Damao Banner and BaiyunEbo District, the project will help construction of the industrial park, targeted poverty alleviation and reconstruction of dry land farming and implementation of key projects including interconnection of rivers and lakes, water system circulation, rain and sewage water diversion, garden landscape, cultural tourism, efficient water-saving irrigation, etc. The project mainly involves in five categories of engineering, i.e. water safety promotion, water



allocation promotion, water environment promotion, water landscape promotion and smart water service. In addition, the project is planned to be completed within three years.

**Total project investment:** the total investment of the project is about RMB 20.8 billion yuan, 19.7 billion of which is the static investment amount and 1.1 billion is the interest during the construction period; and 878 million of which is the total investment for the quasi-commercial project and 19.922 billion is for the non-operating project with 3.933 billion as the investment for compensation for land acquisition and relocation.

**Financing amount:** it is intended to raise the capital fund by establishing a fund, wherein, RMB 1.8 billion yuan will be contributed by the prior limited partner and RMB 16.387 billion yuan by the loan from the project bank.

**Profit-making pattern:** the authority concerned will count the available service fees based on 7.35% (pre-tax). The profit rate of the operation and maintenance service fee is 6.8%/year (yearly operation and maintenance service fee = yearly operation and maintenance cost  $\times$  (1+ reasonable profit rate)).

**Project team:** BEWG is responsible for the project construction and post-stage operation while Beijing Enterprises Financial Service (Beijing) Investment Holding Co., Ltd. is responsible for the earlier-stage financing.

## **2) Project features and advantages**

As an urban integrated operating project, the project aims to promote the urban environment. At the same time Baotou, the subject for repayment, has great financial strength, with lower debt ratio and good credit. Besides, Baotou's GDP ranks 46 in 297 cities and its public budget revenue is next only to Ordos in Inner Mongolia. What's more, the repayment source of the project is clear, and the agreed profit is

definite, with less investment risk. And, the profit rate is higher based on 7.35%/year of available service fee. In addition, Baotou will bring all the service fees in the financial budget to pay the project company and formulate the mid-and-long term financial budget planning.

### **3) Project progress**

BEWG (China) Investment Co., Ltd. has signed the PPP contract with the authority concerned and will act as the bid winning subject to contribute and set up the project company. The value-for-money evaluation, financial bearing capacity argumentation and preliminary implementation scheme of the project have been completed and approved. After put in the PPP Project Library of Department of Finance, the project is under implementation.

### **4) Cooperation requirements**

Mid-and-long-term financial investor

### **5) Contact Information**

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## **VII) Automatic Green Chemical Free SWRO Desalination System (High-Tech Aspect)**

### **7.1 Project Overview**

**Background:** BEWG has developed Green Chemical-free SWRO Desalination System adopting advanced RO technology in the world. On the stage of RO and cleaning process, it uses no chemicals. At the same time, it uses highly compact plug type structure design so as to reduce the construction cost and reduce construction period. It also uses green solar photovoltaic power generation system to provide energy. So the common problem of small and medium-sized desalination equipment is solved, for example, short service life of equipment, poor stability of equipment, high labor cost of maintenance and lack of conventional power resource and high power consumption. The green desalination system can effectively solve the freshwater shortage in coastal areas, islands and areas under emergency conditions.

**Project Content:** The system adopts two level two stages RO, adding biological flocculation and RO online cleaning technology, and realizes whole energy recovery on 1<sup>st</sup> RO stage and 2<sup>nd</sup> RO stage. The system has lower energy consumption. Its treated water quality fully meets the WHO drinking water standard, of which the desalination technology is one of the most advanced technologies. For example, the 500 tons/day desalination system & hybrid power system of PV & diesel has been built in Yongxing Island in Sansha City of Hainan province, which was the first successful case of domestic micro photovoltaic network in the area of desalination. At the same time, the system obtains GPRS wireless communication technology to realize wireless remote information monitoring and automatic data transmission ability and can be controlled by mobile phone APP. In addition, the system can also be applied in field of brackish water desalination and zero discharge industrial wastewater. In addition, BEWG has successfully completed several

cooperative achievements with desalination engineering design & key equipment enterprises in domestic and abroad. For example, BEWG has tested high-speed penetration water intake system with NAGAOKA to provide basic data for selection of large-scale desalination water intake system. At present, BEWG has 3 national invention patents: ‘New thermal & membrane coupling process of desalination system’, ‘A RO system and circulating brine control method’ and ‘Biological pretreatment process for seawater reverse osmosis’. BEWG is declaring 2 national invention patents, namely, ‘A method and system for cleaning sea water intake pipe by use of brine and fresh water’ and ‘A online reverse cleaning method and device of ultrafiltration membrane and RO membrane under high osmotic pressure’.

Compared with the traditional desalination technology of the same scale, the performance indexes and core technologies of green chemical-free SWRO desalination technology are as follows:

	<b>TRADITIONAL DESALINATION TECHNOLOGY</b>		<b>GREEN CHEMICAL-FREE SWRO DESALINATION TECHNOLOGY</b>	
	<b>INDEX</b>	<b>CONTENT</b>	<b>INDEX</b>	<b>CONTENT</b>
Power consumption (Kwh/ton)	3.5	Energy recovery on 1 <sup>st</sup> RO stage and no energy recovery on 2 <sup>nd</sup> RO stage	3.2	Energy recovery on 1 <sup>st</sup> and 2 <sup>nd</sup> RO stage
Chemical consumption (Yuan/ton)	0.4-0.6	Flocculants, fungicides, oxidants and others	0	No chemical in pretreatment stage and RO stage



Labor cost (Yuan/ton)	0.5-4	Membrane cleaning and dispensing	0.2-2.5	Fully automatic cleaning, no dispensing and remote monitoring
Working day /year (day)	330	Chemical cleaning time	350	NO
Construction Cost	High	Construction workshop(necessarily)	-	NO
Construction Period	6 ~ 10 month	Civil engineering and commissioning on site	1 month	NO

In summary, the green desalination technology can reduce the total cost of project by 20%, reduce operation cost by 20~50% and decrease comprehensive water price by about 20%.

## 7.2 Market Prospect

According to the water standard of UNESCO, half of the world's population will live in the water shortage environment in 2030. Desalination technology can change water into sweet, which is an advanced water treatment technology. Desalination industry can guarantee the use of water resources to address climate change. So desalination technology is the only way for the development of human society.

The national '13th Five-Year' plan is clearly stated that promoting desalination application is necessary and the total size of seawater desalination in 2020 will reach 2.2 million tons / day to alleviate the pressure of water shortage. In the first half of 2017, the annual growth rate of global desalination market was 4.4%. On the other hand, along with the localization of membrane equipment production,

desalination equipment manufacturing cost is expected to break through the bottleneck, thereby reducing the terminal water price finally.

Therefore, the current market scale of small and medium-sized desalination manufacturing equipment in domestic and foreign market is about 1 billion Dollars / year and the market scale of desalination manufacturing equipment in the field of zero discharge of industrial wastewater, water reuse and brackish water desalination is about hundreds of billions of dollars / year.

### **7.3 Project Team**

BEWG has an excellent desalination professional team, while the total number of employees reaches more than 20 people, including of developer, investment personnel, operator, manager and other related personnel. At the same time, BEWG has invited foreign desalination technology experts regularly to communicate and exchange.

### **7.4 Requirements for Cooperation**

#### **1) Achievement transformation**

- ✓ Looking for investment partners to promote green desalination equipment industry
- ✓ Expanding the application field of desalination equipment industry
- ✓ Cultivating leading desalination equipment manufacturing enterprise

#### **2) Investment cooperation project**

- ✓ Looking for desalination investment projects (BOT, BTO, EPC+F)
- ✓ Building medium and large scale desalination plant by use of green chemical-free SWRO desalination technology
- ✓ Shock cooperation and project development

✓

## 7.5 Contact Information

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