

Hong Kong | Environmental Protection | Company Report

Investment Summary

Leading enterprise in water industry, the main businesses grow steadily

The principal businesses of the Company include operations in water treatment business, construction and technical services for the water environmental renovation. The coverage of the Company's water plants has extended to 21 provinces, 5 autonomous regions and 2 municipalities all across Mainland China. As at 31 December 2018, the Company entered into service concession arrangements and entrustment agreements for a total of 937 water plants including 771 sewage treatment plants, 139 water distribution plants, 25 reclaimed water treatment plants and 2 seawater desalination plants. Total daily design capacity for new projects secured for the year was 5,756,813 tons, total daily design capacity was 36,824,633 tons. Since 2018, the CAGR of total daily design capacity is 37.71%. 17th Water Industry Strategy Forum released 2018 annual water industry enterprises selection list, the Company ranked No.1 among top ten influential enterprises in the water industry in 2018 with 46.7mm tons/day of total water processing scale and 4.94 tons/day of total incremental processing scale

"Dual Platform" Strategy Boosts Light Assets Transformation

The company has determined the strategic direction of light assets transformation, and gradually turned itself into a light asset enterprise by building an asset management platform and an operation management platform - "dual platform". The company's asset management platform is to co-operate with third-party institutions to establish a fund management company - Beijing Enterprises Jinfu (Beijing) Investment Shareholding Co., Ltd. to provide financial supports for the company's projects. In terms of operation management platform, through the establishment of "Digital Research Institute", the company built up an intelligence water platform and a procurement center to improve operational management efficiency, reduce manpower and operating costs, and achieve value growth. It's expected that the company's "dual platform" strategy will continue to promote each other, and the company's ability to transform from heavy assets to light assets will continue to strengthen.

Cooperation with China Three Gorges Corporation, Promising on "Yangtze River Protection"

China Yangtze Power Co., Ltd., a controlling subsidiary of China Three Gorges Corporation, subscribed for a 5% stake in BEWG through a wholly-owned subsidiary China Yangtze Power International (HK) Co., Ltd. In January 2019, the Ministry of Ecology and Environment and the National Development and Reform Commission jointly issued the "Action Plan for the Protection and Rehabilitation of the Yangtze River". In June 2019, the newly established joint venture company by BEWG, China Three Gorges Corporation and other companies was awarded the first PPP project in Yueyang City with a total investment of RMB 4.45 billion. The Company believes that the "Yangtze River Protection" is expected to have a market value of more than one trillion RMB, and with the company's rich experience in water treatment projects, operational advantages and sufficient technology precipitation, it can cooperate well with China Three Gorges Corporation to achieve a significant synergy effect.

Initial coverage with TP of HKD 5.81 and investment rating of "BUY"

Based on our residual income valuation model, we initiate coverage on BJ Ent Water with a TP of HKD 5.81, corresponding to FY19/FY20/FY21 10.71x/9.36x/8.04x PER with a 22.57% potential upside compared with CP of HKD 4.74 as of July 8, 2019, and recommend "BUY" investment rating.



10 July 2019

BUY (Initial)

CMP HKD 4.74

(Closing price at 8 July 2019) TARGET HKD 5.81 (+22.57%)

COMPANY DATA

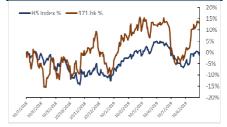
O/S SHARES (MN)	9332
MARKET CAP (HKDMN)	47,473
52 - WK HI/LO (HKD):	5.09/3.61

SHARE HOLDING PATTERN • 9	6
BE Environment	41.17
CN Yangtze Power Intl (HK) Ltd	5.00

PRICE PERFORMANCE > %

	1M	3M	1Y
BJ ENT WATER	10.75%	0.73%	12.95%
HSI	2.73%	-6.05%	-1.24%

RETURN & HSI



Source: Phillip Securities (HK) Research

KEY FINANCIALS

RET THUR CHILD					
mn HKD	FY17A	FY18A	FY19E	FY20E	F١
Revenue	21,192	24,597	27,229	30,577	3
Net Profit for Owners	3,717	4,471	5,178	6,061	
EPS HKD	0.42	0.48	0.54	0.62	
P/E	11.17	9.89	8.74	7.64	
BVPS HKD	2.37	2.73	3.00	3.32	
Р/В	2.00	1.74	1.58	1.43	
ROE	19.94%	19.33%	19.12%	19.85%	2

Source: Company reports, Phillip Securities Est.

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Industry Analysis

The current status of water quality in China

According to the "Environmental Quality Standards for Surface Water (GB3838-2002)" issued by Ministry of Environmental Protection, the water quality in China is divided into six grades: I, II, III, IV, V and inferior V, of which I-III is good water quality.

Table-1: Water quality classification in China

Quality Classification	Standard
Ι	Water quality is excellent, the groundwater only needs to be disinfected, the surface water is recommende
	for purification treatment (such as filtration), and it can be used for drinking after disinfection; it is mainly suitable for source water and national nature reserve.
Π	The water quality is slightly polluted. After conventional purification treatment (such as flocculation, sedimentation, filtration, disinfection, etc.), the water quality is available for drinking; mainly suitable for centralized drinking water, surface water source first-level protection area, rare aquatic habitat, fish and shrimp spawning field, larvae, juvenile fish, etc.
III	Applicable to secondary protected areas of centralized drinking water sources, general fish protection area and swimming areas
IV	Applicable to general industrial protection areas and recreational water areas where the human body is not in direct contact
V	Applicable to agricultural water areas and general landscape requirements
Inferior V	In addition to adjusting the local climate, no other function can be used

Source: Phillip Securities (HK) Research, Ministry of Environmental Protection"Environmental Quality Standards for Surface Water (GB3838-2002)"

According to the "2018 China Ecological Environment Bulletin" issued by the Ministry of Environmental Protection, the water quality of surface water and rivers in China has gradually improved in 2018, but the water quality of lake water and groundwater is not optimistic. The current status of water quality is shown as follows based on the classification:

• For surface water, the proportion of I~III was 74.3%, up 3.1% YoY; the proportion of inferior V was 6.9%, down 1.6% YoY.

• For rivers, the proportion of Class I was 5.0%, up 2.8% YoY; the proportion of Class II was 43.0%, up 6.3% YoY; the proportion of Class III was 26.3%, down 6.6% YoY; the proportion of Class IV was 14.4%, down 0.2% YoY. The proportion of V is 4.5%, down 0.7% YoY; the proportion of inferior V is 6.9%, down 1.5% YoY.

• Among the 111 important lakes (reservoirs), there are 7 lakes (reservoirs) with Class I water quality, accounting for 6.3%, up 0.9% YoY; 34 of Class II, accounting for 30.6%, up 6.5% YoY; 33 of Class III, accounting for 29.7%, down 3.3% YoY; 19 of Class IV, accounting for 17.1%, down 2.5% YoY; 9 of both Class V and inferior V, accounting for 8.1%, up 1% YoY and down 2.6% YoY, respectively. The main pollution indicators are total phosphorus, chemical oxygen demand and permanganate index.

• Among the 10,168 national groundwater quality monitoring points in China, Class I water quality monitoring points accounted for 1.9%, down 6.9% YoY; Class II accounted for 9.0%, down 14.1% YoY; Class III accounted for 2.9%, up 1.4% YoY; Class IV Accounted for 70.7%, an increase of 18.9% YoY; Class V accounted for 15.5%, an increase of 0.7% YoY. The over-standard indicators are manganese, iron, turbidity, total hardness, total dissolved solids, iodide, chloride,

"tri-nitrogen" (nitrite nitrogen, nitrate nitrogen and ammonia nitrogen) and sulfate.

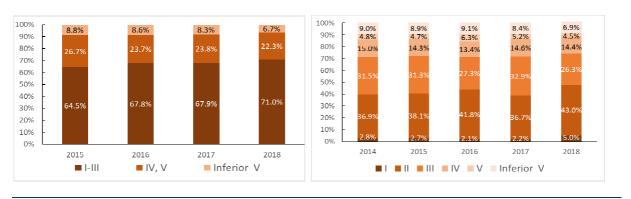


Fig-1: The ratio of surface water quality based on categories Fig-2: The ratio of rivers quality based on categories

Source Ministry of Ecology and Environment, Phillip Securities (HK) Research

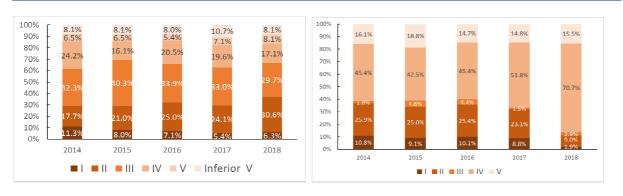


Fig-3: The ratio of lake water quality based on categories Fig-4: The ratio of groundwater quality based on categories

Source: Phillip Securities (HK) Research, Ministry of Ecology and Environment

The current status of water industry in China

The growth of urbanization in China has created long-term demand for water and sewage treatment business. By the end of 2016, China had built 3,552 sewage treatment plants in urban and rural cities, with the sewage treatment capacity of about 190 million m^3 /day, and the growth rate was between 4%-6% in recent years. In terms of water supply, by the end of 2016, the urban water penetration rate has reached 98.4%, and the county water penetration rate has also reached 90.5%. In recent years, the construction of water supply facilities has approached saturation, and the total urban water supply in China has remained basically stable, maintaining a growth rate of 1%-3%.

Figure-5: 2010-2018 the sewage treatment and water supply capacity in China (10,000 tons/day)

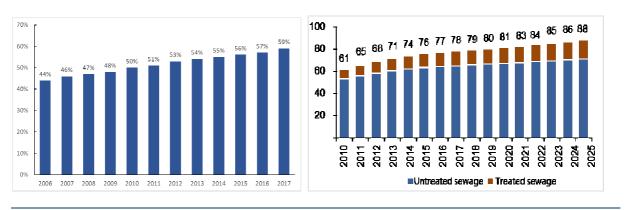




Source: Phillip Securities (HK) Research, National Bureau of Statistics, Ministry of Housing and Urban-Rural Development According to the statistics from National Bureau of Statistics, the proportion of urban population in China was 59% in 2017, and it showed an increasing trend year by year. Correspondingly, according to BMI Research, the sewage treatment demand in China will reach 88 billion m³ by 2025. The sewage treatment market in China has strong demand and insufficient supply, and there are many long-term opportunities in the future sewage treatment business.

Figure-6: The percentage of urban population

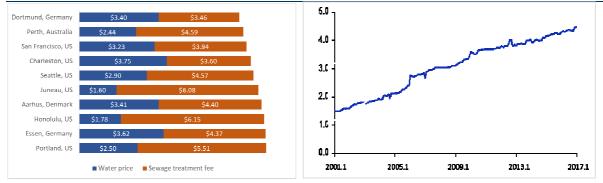
Figure-7: Sewage treatment business demands (billion m³)



Source: Phillip Securities (HK) Research, National Bureau of Statistics, BMI Research

According to the 2017 Global Water Price White Paper released by GWI, water price in China is much lower than that of other countries in the world. The highest water price in China is less than one tenth of the most expensive city in the world, and sewage treatment fees are also much lower than that of the top ten cities with the most expensive water prices in the world. There is still much space for improvement in the water price and sewage treatment fees in China.





Source: Phillip Securities (HK) Research, GWI, Wind

Policy promotion, water environment treatment market still has huge room for development

According to the "13th Five-Year Plan for Ecological Environmental Protection" issued by the State Council in November 2016, by 2020 the proportion of the water quality of centralized drinking water sources at or above the prefecture level reaching or exceeding Class III will be more than 93%; the trend of increasing pollution will be initially curbed, the proportion of groundwater with extremely poor quality is controlled at around 15%; the proportion of black and odorous water in urban built-up areas is controlled within 10%, and other cities strive to eliminate heavy black and odorous water bodies; rivers near coastal provinces (districts, cities) into the sea basically eliminate the inferior V water; all county towns and key towns have sewage collection and treatment capacities, urban and county sewage treatment rates reach 95% and 85%, respectively; prefectural and above cities basically realize the complete collection and treatment of sewage; improving the level of sewage recycling and sludge disposal, vigorously promote sludge stabilization, harmlessness and resource treatment and disposal, and achieves harmless treatment and disposal rate of municipal sludge at prefecture level at 90%, the Beijing-Tianjin-Hebei region reach 95%; the utilization rate of reclaimed water in the water-deficient city reaches more than 20%, and the Beijing-Tianjin-Hebei region reaches more than 30%; promote the construction of sponge city, which can reach the area of utilizing 70% of the rain more than 20% of the total area, and the water-deficient cities of the prefecture level and above all meet the national water-saving city standard requirements, Beijing-Tianjin-Hebei, the Yangtze River Delta and Pearl River Delta regions should complete one year ahead of schedule. The "13th Five-Year Plan" of ecological environmental protection water environment quality mainly includes the following indicators:

Indicators	2015	2020
The propotion of surface water quality Class I-III (%)	66	>70
The propotion of surface water quality Class inferior V ($\%$	9.7	<5
Water quality achievement rate of important rivers and lakes water function area (%)	70.8	>80
The propotion of groundwater quality Class V (%)	15.7	~15
The propotion of coastal water quality Class I&II (%)	70.5	~70

Table-2: Indicators of water quality in "13th Five-Year Plan"

Source: Phillip Securities (HK) Research, "13th Five-Year" Ecological Environmental Protection Plan

According to the "13th Five-Year Plan for Urban Wastewater Treatment and Recycling Facilities Construction" jointly prepared by the National Development and Reform Commission and the Ministry of Housing and Urban-Rural Development in December 2016, as of 2015, the national urban sewage treatment capacity has reached 217 million cubic meters/day, the urban sewage treatment rate reached 92%, and the county sewage treatment rate reached 85%. During the "13th Five-Year Plan" period, the newly added sewage pipe network was 125,900 kilometers, including 66,200 kilometers of city and 29,200 kilometers of county and 30,500 kilometers of town; the old sewage pipe network transformation is 27,700 kilometers, including 15,800 kilometers of city, 0.73 million kilometers of county, 0.46 million kilometers of town; 28,800 kilometers of merged pipe network, 17,000 kilometers of city, 11,700 kilometers of county seat. The newly-added sewage treatment facilities have a scale of 50.22 million cubic meters per day, of which the city has a scale of 28.56 million cubic meters per day, the county has 10.71 million cubic meters per day, and the town has 10.95 million cubic meters per day. the scale of the sewage treatment facilities was

upgraded to 42.2 million cubic meters per day, including 36.39 million cubic meters per day in the city and 5.81 million cubic meters per day in the county; new sludge (water-containing 80% wet sludge) has a harmless disposal scale of 60,100 tons/day, including 45,600 tons/day for the city, 9,200 tons/day for the county, and 5,300 tons/day for the town; The newly-added reclaimed water utilization facility has a scale of 15.05 million cubic meters per day, of which 12.14 million cubic meters per day of the city and 2.91 million cubic meters per day of the county.

In terms of investment, the "13th Five-Year" urban sewage treatment and recycling facilities construction has invested a total of about RMB 564.4 billion. Among them, the investment in various types of facilities construction was RMB 560 billion, and the investment in supervision capacity building was RMB 4.4 billion. In the construction investment, the newly-built supporting sewage pipe network was invested RMB 213.4 billion, the old sewage pipe network transformation investment was RMB 49.4 billion, the rain-sewage pipe network transformation investment was RMB 50.1 billion, and the newly added sewage treatment facility investment was RMB 150.6 billion. The investment in sewage treatment facilities was RMB 43.2 billion, and the investment in newly added reclaimed water production facilities was RMB 15.8 billion. During the "13th Five-Year Plan" period, the investment in construction of cleaning the black and odorous water body at the prefecture level and above was about 170 billion yuan, which has been included in the planned key construction task investment.

Table-3: Indicators of "13th Five-Year" urban sewage treatment and recycling facilities construction

Ind	icators	2015	2020	Add
Sewage treatment rate (%)	City	91.9	95 Among them: the prefecture-level and above urban built-up areas are basically fully collected and fully processed	3.1
	County	85	≥85 Among them: the eastern counties strive to reach 90	
	Town		70 Among them: the central and western towns strive to reach 50	
Sludge harmless disposal rate	City	53	75 Among them: prefecture-level and above cities 90	22
	County	24.3	Strive to reach 60	35.7
	Key town		Increase by 5 percentage points	5
Recycled water utilization	Beijing-Tianjin-Hebei region	35	≥30	
	Water shortage city	12.1	≥20	7.9
	Others	4.4	Strive to reach 15	11.6
Sewage pipe netwo	ork scale (10,000 km)	29.65	42.24	12.59
Sewage treatment faci	lity scale (10,000 m ³ /day)	21744	26766	5022
-	cility scale (10,000 tons/day)	3.74	9.75	6.01
Recycled water utilization	facility scale (10,000 m ³ /day)	2653	4158	1505

Source: Phillip Securities (HK) Research, "13th Five-Year Plan" for Urban Wastewater Treatment and Recycling Facilities Construction

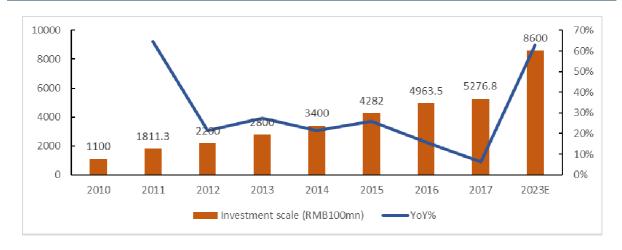
The water industry is less concentrated and the market capacity is still expanding

According to research by the Qianzhan Industrial Research, there are more than 4,000 waterworks in China, more than 3,500 sewage treatment plants, and many water

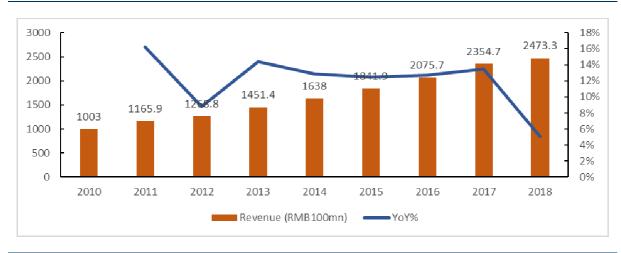
companies. However, the industry concentration is quite low: the operating scale market share of CR5 is 11%, and CR10 is 16.5%, and the market concentration in the water distribution is relatively low. In the sewage treatment industry, the market share of CR5 wastewater treatment enterprises is 19%, and the market share of CR10 is 27.2%. Compared with the water distribution market, the concentration of the sewage treatment market is relatively high. Excessive market fragmentation restricts the technological progress of the water industry and the intensification of services. It is expected that the industry leaders will carry out more mergers and acquisitions in the future, break the technical and geographical restrictions and form a competitive landscape dominated by several major water groups through the expansion.

As a weak cyclical industry, the water industry is highly correlated with factors such as economic growth level, population size and urbanization process. In recent years, the regulatory requirements for industry have been continuously strengthened, and the fields of black-odorous water treatment, construction of sponge cities, and township sewage treatment have grown rapidly. Overall, the scale of investment in the water industry has continued to increase, and there still have space for development in market capacity. According to Qianzhan Industrial Research, the annual growth rate of investment in the water industry during the "Twelfth Five-Year Plan" period was 24%. It is estimated that by 2023, the annual investment amount of water industry in China will exceed RMB860 billion.

Figure-10: 2010-2023 Water industry investment and growth



Source: Phillip Securities (HK) Research, Qianzhan Industrial Research





Source: Phillip Securities (HK) Research, Qianzhan Industrial Research

Company Analysis

Company Profile

The company which is listed on the Main Board of The Stock Exchange of Hong Kong Limited (Stock Code: 0371), is a large-scale group which provides a broad range of water services and environmental protection services in China. In 2008, Beijing Enterprises Holdings Limited (BEHL) acquired Shanghua Holdings Co., Ltd. and renamed it as Beijing Enterprises Water Group Ltd. (BEWG) and positioned it as the listing platform for Beijing Enterprises Water Business. The company has two main businesses, namely the water treatment services and construction services for the water environmental renovation. In terms of water treatment services, there are currently more than 900 water plants in the world, covering various water plant types, with a total contracted design capacity of 36.82 million tons/day. In terms of construction services for the water environmental renovation, the total signed contract of projects was more than RMB40.4 billion.

Currently, the company has owned and operated over hundreds of water supply plants and sewage treatment plants in China, Malaysia, and Portugal, with daily design water treatment capacity over thirty million tons per day. This represents the company has successfully accomplished its nationwide strategic layout and established a strong presence in the oversea market. Throughout the years, the company was consistently awarded "China Water Service Outstanding New Enterprises", "Best Water Business Enterprises in China", and consecutively ranked No.1 "Top 10 influential Enterprises in the Water Industry" in 2010-2013. The company is the flagship of BEHL (Stock Code: 0392) in the water service market. BEHL has been listed on the main board of The Stock Exchange of Hong Kong Limited since May 1997. Backed by the People's Government of Beijing Municipal, BEHL focuses its core businesses on urban natural gas distribution and infrastructure facilities. BEHL, a diversified utility conglomerate, spots a red-chip status in The Stock Exchange of Hong Kong Limited and is ranked No.1 in "Top 500 Public Utilities and Facilities Enterprises in China".

In 2018, the revenue of the company was HKD24.60 billion, with a YoY increase of 16%; net profit contributed to owners was HKD4.47 billion, an increase of 20% YoY. As of Dec 31, 2018, the new net processing scale of the company was 5.44 million tons/day, and the total design capacity was 36.82 million tons/day.

Figure-12: Key Milestones

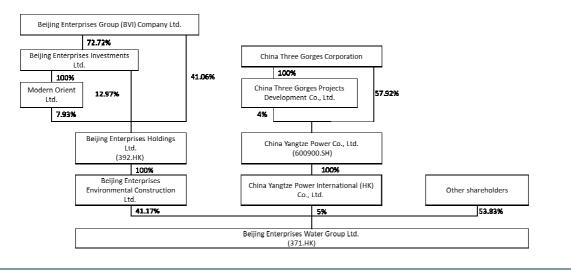
In Match 2013, BEWG acquired 6 100% stock 6 equity of two 1 wholly-owned 1 subsidiaries of a VEOLIA 7 VEOLIA 7 VATER 6 Portugal and opened the new 2 opened the new 2 ratil that the 7 Chinese-funded 1 water enterprise is successfully s acquired the 1 assets of foreign 1 water service 6 enterprises. 1	In Mar 2013, BEHL completed the work of injecting ninth, tenth water plant, Weifang water plant and BEWG (Hainan) into the company.	was ha selecte Kong's Index Stocks Seng M	rch 2014, it is been ed in Hong is Hang Seng of Chinese is, in Hang Main China dex (in May).	won th project Second and be Chines marchi	2014, it su e bidding o of Singapo l New Wate came only o e water ente ng into Sing rervice mark	f DBOO re Changi rr Plant one erprise gapore	in 2 of l Gre bill wa: of '	ring July to Nove 2016, it issued a s oonds, Panda Bor een Bonds exceed ion yuan in Chin: s titled with two a 'Green Bonds Pro uer with Most	eries ids and ling 10 a and iwards	Baotou U Improven Utilizatio construct network reservoir networks	on PPP Mo t the river a with "four s and three s in vertical	er Ecology Comprehensive de Project to and lake water lakes, four water	allocated a ta million share Yangtze Inte Kong) Co., I of China Yan Gorges Grou BEEC (a wh	es to China rnational (Hong Ltd. (a subsidiary ngtze Three pp Co., Ltd.) and olly-owned
	From Scpt to Oct 2013, 2.304 billion Hong Kong dollars was raised by the forcign allotment of shar in twice, including the share allotment of Khazanah Nasional of Malaysia government strategic investment company, fully reflectin the recognition of capita market.	awa Glo Con Wat For chi elec	April 2014, it w rded with Top bal Water Serv npanies in the ter Affairs Sum um as the only nese enterprise ted by GWI. 2011	Four rice Global mit one	In April 20 BEWG Sim Changi Net Project was with "The J Best Water Transaction appraised.	agapore w Water s awarded Annual Service	Bo	lucntial" and "Co nds Product Issue Largest Scale". 2014 In August 2017, China Life Insu billion yuan and integration of in	r with 20' the BEV rance wa . BEWG	Baotou C urban wa in water- China. 15 WG China is officially made a m	City becom ater ecology deficient c 2016 Life Insur- y establishe najor breakt	e a model of y improvement ities in western 2017 ance and Water ed with the total	a total of HK 2018 Service fund j fund scale ext	ceeding 24
2008 In Mar 2018, BE became a major shareholder of BEWG, and positioned it as a strategic platform the development water business.	HKD1,3/1 mill the acquisition of 88.4% of BEWC Environmetal, w had 13 sewage	vested on in of 3 thich in 1g	In Mar 2011, it issued 2.283 billion new shares and raised 3.391 billion Hong Kong dollars.	it off obtai Mala Kual Panta Sewa Treat	a Lumpur ai 2	In May 2 it establis Beijing Enterpris Clean En Group Limited t dedicated extending clean ene field.	hed es ergy o to ; the	In April 2017, 2.1 billion yuar notes and becar asset-backed nn asset securitiza In July, it al MYR medium attempt to cc financing mo businesses.	n green a me the fi ote in Ch tion inno so issue term no arry out	asset-back irst green nina to lea ovation. ed 0.4 bi ote to mak t the van	ed Fel stra d the op lca illion inf te an bus rious op reign Zec	ategy (asset mar eration manager ding profession	inching the "D nagement platf nent platform) al water and ci stment institut tent platform v g the Australia a April 2018, a	ouble-platform" form and to become a nvironment ion and a multi- vith excellent and New acquiring 100%





Source: Phillip Securities (HK) Research, Company Report

Figure-13: Shareholding Structure of Company (as of June 4, 2019)



Source: Phillip Securities (HK) Research, Company Report **Key Business Analysis**

The company is a flagship enterprise devoted to the recycling of water resources and the protection of water ecology subordinated to BEHL, the biggest urban investment, construction and operation service provider in China ranking 198 among China's top 500 enterprises. The company is a comprehensive and leading professional water and environment service provider with its business covering industrial investment, design, construction, operation, technical services and capital operation in full industrial chain. It ranks first in the industry in China in terms of total assets, total revenues and water treatment capacity. The main businesses of the company are water treatment services, construction services, technical services and sale of machineries for the water environmental renovation. Among them, water treatment services are including sewage and reclaimed water treatment services and water distribution services, construction services for the water environmental renovation are including comprehensive renovation projects and construction of BOT water projects.

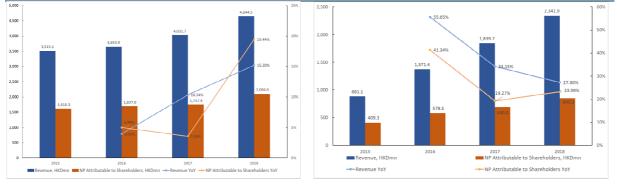
1. Water treatment services

As at 31 December 2018, the company had 274 sewage treatment plants and 10 reclaimed water plants in operation in Mainland China. Total daily design capacity in operation of sewage treatment plants and reclaimed water plants reached to 12,031,550 tons (2017: 11,059,750 tons) and 809,200 tons (2017: 617,200 tons) respectively. The average daily processing volume is 10,704,386 tons and average daily treatment rate is 87%. The actual average contracted tariff charge of water treatment was approximately RMB1.10 per ton (2017: RMB1.08 per ton) for water plants. The actual aggregate processing volume for the year was 3,799.8 million tons, of which 3,493.2 million tons was contributed by subsidiaries and 306.6 million tons was contributed by joint ventures. Total revenue for the year was HKD4,276.1 million. Net profit attributable to shareholders of the Company was HKD2,040.3 million, of which HKD1,894.0 million was contributed by subsidiaries and HKD146.3 million was contributed by joint ventures and associates. The company had 37 sewage treatment plants and 4 reclaimed water plants in Portugal, Macau, Singapore, Australia and New Zealand. Total daily design sewage treatment capacity in operation was 602,748 tons. The actual processing volume for the year is 160.1 million tons. Total revenue for the year was HKD368.4 million. Profit attributable to shareholders of the Company was HKD58.7 million.

For water distribution services, the company had 77 water distribution plants in operation as of 31 December 2018. Total daily design capacity in operation was 6,715,600 tons (2017: 6,555,600 tons). The actual average contracted tariff charge of water distribution is approximately RMB2.07 per ton (2017: RMB2.14 per ton). The aggregate actual processing volume is 1,441.5 million

tons, of which 794.2 million tons was contributed by subsidiaries, which recorded revenue of HKD1,839.3 million and 647.3 million tons was contributed by joint ventures. Imputed interest income of HKD25.5 million was recognized for the receivables under service concession arrangement of Plant No. 9 in Beijing. Profit attributable to shareholders of the Company was HKD723.5 million, of which profit of HKD590.7 million was contributed by subsidiaries and a profit of HKD132.8 million in aggregate was contributed by joint ventures. The company had 33 water distribution plants and a sea desalination plant which supplies drinking water in Portugal and Australia. Total daily design capacity in operation was 1,507,100 tons. The actual processing volume for the year is 103.5 million tons of which 69.8 million tons was contributed by joint ventures. Total revenue for the year was HKD502.6 million. Profit attributable to shareholders of the company was HKD125.8 million.

Fig-14: Revenue and NP attributable to shareholders of sewage and reclaimed water treatment services Fig-15: Revenue and NP attributable to shareholders of water distribution services



Source: Phillip Securities (HK) Research, Company Report

2. Construction services for the water environmental renovation

The company had 23 comprehensive renovation projects under construction during the year. Revenue from comprehensive renovation projects decreased by HKD728.4 million from last year of HKD7,335.3 million to HKD6,606.9 million this year. Revenue decreased was mainly due to the decrease in contribution work for Inner Mongolia during the year. Interest income from water environmental renovation projects attributable to shareholders of the company was HKD105.9 million for this year (2017: HKD52.6 million). Profit attributable to shareholders of the company for the comprehensive renovation projects increased by HKD353.4 million from last year of HKD1,045.5 million to HKD1,398.9 million this year.

The company entered into a number of service concession contracts on a BOT basis in respect of its water treatment business. In 2018, water plants under construction were mainly located in Shanxi, Shandong, Zhejiang, Guizhou, Hunan and Hebei provinces. Total revenue for construction of BOT water projects was HKD8,698.6 million (2017: HKD6,647.1 million) and profit attributable to shareholders of the company was HKD1,654.1 million (2017: HKD1,133.4 million).

NP Attributable to Shareholders, HKDm

-NP Attributable to Shareholders YoY



20%

0%

2.000

1,000

Revenue, HKDmi

Revenue YoY

398.9

2018

Fig-16: Revenue and NP attributable to shareholders of comprehensive renovation projects

Source: Phillip Securities (HK) Research, Company Report

2016

2017

Attributable to Sharel

NP Attributable to Shareholders YoY

1,000

2015

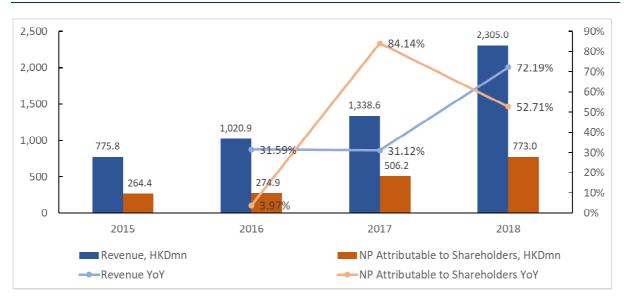
Revenue YoY

evenue, HKDr

3. Technical services and sales of machineries for the water environmental renovation

The Group has couples of qualifications in engineering for consulting and design of water treatment plants. Revenue from the provision of technical services and sales of machineries was HKD2,305.0 million (2017: HKD1,338.6 million), representing 9% of the company's total revenue. Profit attributable to shareholders of the company was HKD773.0 million (2017: HKD506.2 million).

Figure-18: Revenue and NP attributable to shareholders of technical services and sales of machineries for the water environmental renovation



Source: Phillip Securities (HK) Research, Company Report

Investing Highlights

Leading enterprise in water industry, the main businesses grow steadily

The principal businesses of the Company include operations in water treatment business, construction and technical services for the water environmental renovation. The coverage of the Company's water plants has extended to 21 provinces, 5 autonomous regions and 2 municipalities all across Mainland China. As at 31 December 2018, the Company entered into service concession arrangements and entrustment agreements for a total of 937 water plants including 771 sewage treatment plants, 139 water distribution plants, 25 reclaimed water treatment plants and 2 PhillipCapital

seawater desalination plants. Total daily design capacity for new projects secured for the year was 5,756,813 tons including Build-Operate-Transfer ("BOT") projects of 320,000 tons, Transfer-Operate-Transfer ("TOT") projects of 175,000 tons, Public-Private Partnership ("PPP") projects of 1,824,250 tons, entrustment operation projects of 958,656 tons, and 2,478,907 tons through mergers and acquisitions.

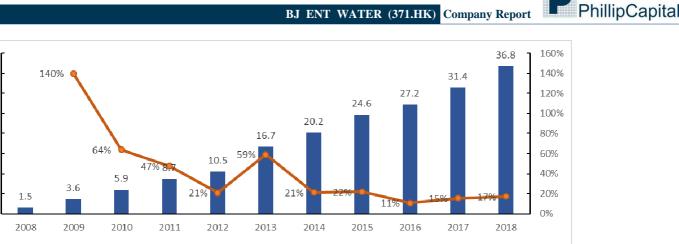
Year	Sewage treatment (tons)	Water distribution (tons)	Reclaimed water treatment (tons)	Seawater desalination (tons)	Total (tons)
2008	1,480,000	50,000	-	-	1,530,000
2009	1,662,500	100,000	212,000	-	1,974,500
2010	1,230,000	1,125,000	-	50,000	2,405,000
2011	1,405,250	1,239,200	175,000	-	2,819,450
2012	813,000	840,000	112,500	-	1,765,500
2013	3,591,700	2,521,000	101,000	-	6,213,700
2014	1,528,700	1,585,200	328,000	-	3,441,900
2015	855,900	2,297,100	109,200	-	3,262,200
2016	2,120,100	1,403,694	232,000	-	3,755,794
2017	3,017,776	697,500	504,500	-	4,219,776
Sub-total	17,704,926	11,858,694	1,774,200	50,000	31,387,820
2018	2,970,963	1,689,100	476,750	300,000	5,436,813
Total	20,675,889	13,547,794	2,250,950	350,000	36,824,633
其中:	12 257 5 49	7 022 700	1 195 050	300,000	21.000 100
In operation Not yet	12,257,548	7,922,700	1,185,950	300,000	21,666,198
commenced operation	8,418,341	5,625,094	1,065,000	50,000	15,158,435
Total	20,675,889	13,547,794	2,250,950	350,000	36,824,633
Not yet					
commenced operation:					
Not yet started	2,992,198	3,772,394	1,065,000	-	7,829,592
- Planned	490,200	172,000	335,000	-	997,200
In construction	3,214,743	1,322,700	-	-	4,537,443
Not yet transferred	2,211,400	530,000	-	50,000	2,791,400
Total	8,418,341	5,625,094	1,065,000	50,000	15,158,435

Table-4: Analysis of projects on hand of water treatment services

Source: Phillip Securities (HK) Research, Company Report

Due to different reasons such as expiration of projects, the Group exited projects with aggregate daily design capacity of 320,000 tons during the year. As such, the net increase in daily design capacity of the year was 5,436,813 tons. As at 31 December 2018, total daily design capacity was 36,824,633 tons. Since 2018, the CAGR of total daily design capacity is 37.71%.

Figure-19: Total daily design capacity of water treatment services (mn tons)



Daily Design Capacity in mn tons

BJ ENT WATER (371.HK) Company Report

Source: Phillip Securities (HK) Research, Company Report

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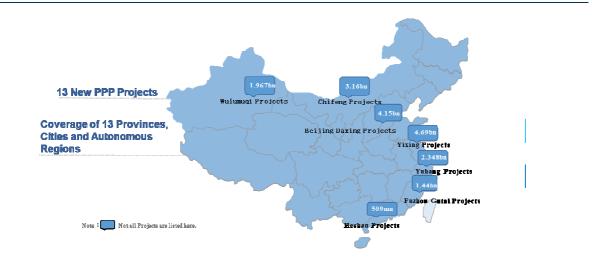
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The Company had 23 comprehensive renovation projects under construction during the year. The projects mainly located in Zhejiang Hangzhou, Zhejiang Taizhou, Chengdu Jianyang, Guangdong Heshan, Malaysia Terengganu, Inner Mongolia, Sichuan Luzhou and Beijing Liangshuihe.

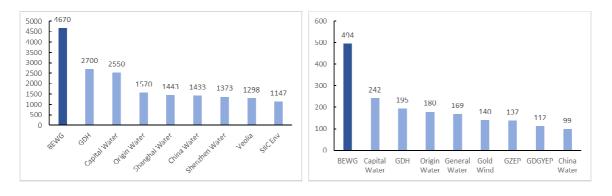
Figure-20: Overview of new comprehensive renovation projects in 2018

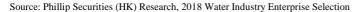


Source: Phillip Securities (HK) Research, Company Report

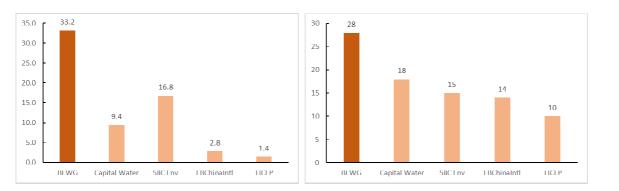
The company's water treatment scale and incremental capacity are leading the industry, with the largest water treatment capacity among Hong Kong-listed water companies. In addition, the coverage of company's projects is also the largest, a large number of high-quality projects throughout the country forms a national scale advantage. On March 23, 2019, 17th Water Industry Strategy Forum released 2018 annual water industry enterprises selection list, the Company ranked No.1 among top ten influential enterprises in the water industry in 2018 with 46.7mn tons/day of total water processing scale and 4.94 tons/day of total incremental processing scale.

Figure-21: Total processing scale of peers in 2018 (10 thousand tons/d) Figure-22: Incremental scale









Source: Phillip Securities (HK) Research, Company Report

"Dual Platform" Strategy Boosts Light Assets Transformation

In order to better cope with the new situation and challenges of the environmental protection industry, the company has determined the strategic direction of light assets transformation, and gradually turned itself into a light asset enterprise by building an asset management platform and an operation management platform - "dual platform". The company's asset management platform is to co-operate with third-party institutions to establish a fund management company - Beijing Enterprises Jinfu (Beijing) Investment Shareholding Co., Ltd. to provide financial supports for the company's projects through fund operations such as fund holdings and asset securitization for water environmental assets to address financing pressures and promote industrial development with new financial means. There are two wholly-owned shareholding platforms under Beijing Enterprises Jinfu: Beijing Enterprises South-South (Tianjin) Investment Management Co., Ltd. and Beijing Enterprises Hengshi (Tianjin) Investment Management Co., Ltd. The former one is the asset management platform of BEWG, and mainly provides organization, management and operation service for industrial funds related to PPP projects of BEWG. The latter one is the investment platform of BEWG and mainly takes part in the investment of the related PPP industrial funds of BEWG.

In terms of operation management platform, through the establishment of "Digital Research Institute", the company built up an intelligence water platform and a procurement center to improve operational management efficiency, reduce manpower and operating costs, and achieve value growth. At the same time, through acquiring asset-light technology companies, the company has invested heavily on research and development, including obtaining a 100% stake in Nanjing Municipal Design and Research Institute at cost of RMB 181 million in May 2014, and the acquisition of Huai`an City Water Survey & Design Institute in 2015. A number of special Grade A qualifications have been obtained to provide more technical and design services

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support for the company's integrated water environment management business, and to strengthen the company's comprehensive design capabilities for value chain integration. It's expected that the company's "dual platform" strategy will continue to promote each other, and the company's ability to transform from heavy assets to light assets will continue to strengthen.

Cooperation with China Three Gorges Corporation, Promising on "Yangtze River Protection"

China Yangtze Power Co., Ltd., a controlling subsidiary of China Three Gorges Corporation, subscribed for a 5% stake in BEWG through a wholly-owned subsidiary China Yangtze Power International (HK) Co., Ltd., with a total consideration of HKD 2.02 billion, of which approximately HKD 1.5 billion was spent on traditional water projects of BOT and TOT, and approximately HKD 500 million is used for a comprehensive renovation project. Yangtze Ecology and Environment Co. Ltd is a subsidiary of China Three Gorges Corporation and is positioned to undertake project implementation tasks for the Yangtze River protection-related undertakings, including coordinating the implementation of the Yangtze River Basin Hub Operation Management, implementation of major ecological restoration projects, ecological environmental management of the dam reservoir area, comprehensive environmental management, and water resources utilization projects in the basin.

In January 2019, the Ministry of Ecology and Environment and the National Development and Reform Commission jointly issued the "Action Plan for the Protection and Rehabilitation of the Yangtze River", which requires that by the end of 2020, the national control section ratio of the Yangtze River Basin with excellent water quality will reach over 85%, and the inferior V ratio will be less than 2%. The ratio of black odor elimination in the built-up areas of prefecture-level and above cities in the Yangtze River Economic Belt is over 90%, and the proportion of water quality in centralized drinking water sources at prefecture-level and above is higher than 97%. On May 29 2018, the National Development and Reform Commission held on-site meeting to promote the Yangtze River Economic Belt urban sewage treatment pilot spot in Jiujiang, indicating that China Three Gorges Corporation will lead the Yangtze River Protection.

In June 2019, the newly established joint venture company by BEWG, China Three Gorges Corporation and other companies was awarded the first PPP project in Yueyang City with a total investment of RMB 4.45 billion. The Company believes that the "Yangtze River Protection" is expected to have a market value of more than one trillion RMB, and with the company's rich experience in water treatment projects, operational advantages and sufficient technology precipitation, it can cooperate well with China Three Gorges Corporation to achieve a significant synergy effect.

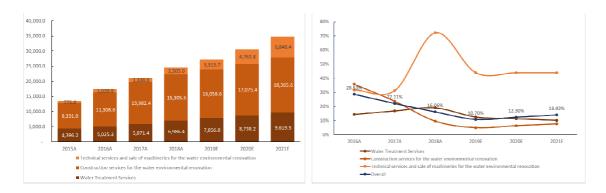
Financial Forecast and Valuation

Financial Performance

The company's revenue in 2018 was HKD 24.597 billion, representing an increase of 16.06% YoY; gross profit was HKD 8.776 billion, increasing by 35.75% YoY; gross profit margin was 35.68%, showing an increase of 5.18%; net profits attributable to shareholders was HKD 4.471 billion, increasing by 18.18% YoY. From the historical data, the company's overall revenue and gross profit maintained a relatively fast and steady growth. It's expected that as the company's light asset transformation continues, some business revenues may be affected, but the increase in gross profit margin and the light asset business will gradually raise the level of profitability for the company and bring high-quality cash flow. Through continuous mutual promotions of dual-platform strategy, the company will continue good results and profit growth.

Figure-25: Revenue breakdowns (mn HKD)

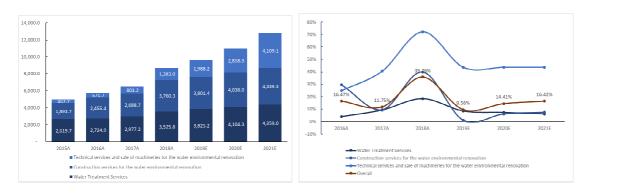
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Source: Phillip Securities (HK) Research, Company Report







Source: Phillip Securities (HK) Research, Company Report

 Table-5: Last four years` financial performance



HKD in million			2015A	2016A	2017A	2018A
		Revenue	3,515.1	3,653.9	4,031.7	4,644.5
		ΥοΥ		3.95%	10.34%	15.20%
	Sewage and reclaimed water	COS	1,340.7	1,596.6	1,898.7	2,204.2
	treatment services	GPM	61.86%	56.30%	52.90%	52.54%
ater Treatment Services onstruction services for re water environmental renovation echnical services and sal environme tal Revenue Y S adj M Attributable to Shareholc		NP Attributable to Shareholders	1,616.3			2,099.0
		NP Attributable to Shareholders Margin	45.98%		,	45.19%
	Services Ser					
		Revenue	881.1	1,371.4	4,031.7 10.34%	2,341.9
		YoY		55.65%	34.15%	27.30%
Inter Treatment Services		COS	435.8	703.8	995.5	1.256.4
	Water distribution services	GPM	50.54%	48.68%		46.35%
	Sewage and reclaimed water treatment services COS COS GPA * Treatment Services Water distribution services Rev O COS GPA Water distribution services Rev O COS GPA NP NP NP NP Sub-total Rev O COS GPA NP truction services for comprehensive renovation projects Rev NP Vater environmental renovation Construction of BOT water projects Rev NP Sub-total Construction of BOT water OCOS GPA COS COS COS COS inical services and sale of machineries for the water environmental renovation Rev NP Revenue Revenue NP dj tributable to Shareholders adj The second	NP Attributable to Shareholders	409.3	578.5	690.0	849.3
		NP Attributable to Shareholders Margin	46.45%	42.18%		36.27%
					53.9 4,031.7 95% 10.34% 96.6 1,898.7 .30% 52.90% 97.0 1,757.4 .44% 43.59% 71.4 1,839.7 .65% 34.15% 03.8 995.5 .68% 45.89% 78.5 690.0 .18% 37.51% 25.3 5,871.4 .31% 16.84% 00.4 2,894.2 .22% 50.71% 12.3 7,335.3 .08% 59.04% 97.6 6,308.4 .00% 14.00% 86.6 1,045.5 .05% 14.25% 96.3 6,647.1 .96% -0.73% 55.6 4,985.3 .52% 25.00% 13.3 1,133.4 .63% 17.05% 08.6 13,982.4 .74% 23.64% 53.2 11,293.7	
		Revenue	4,396.2	5,025.3		6,986.4
Sewage and recta treatment s Vater Treatment Services Water distribution Sub-tot Sub-tot Construction services for he water environmental renovation Fechnical services and sale of machineries for environmental renovation Sub-tot Sub-t		ΥοΥ	,	14.31%	16.84%	18.99%
	Sub-total	COS	1,776.5	2,300,4	2,894.2	3,460.6
			59.59%			50.47%
		Revenue	1,889.7	4,612.3	7,335.3	6,606.9
Construction services for the water environmental		YoY	,	144.08%	,	-9.93%
		COS	1,436.2	3,597,6	6,308,4	5,021.2
	•		24.00%	,	,	24.00%
	projects	NP Attributable to Shareholders	396.2			1,398.9
		NP Attributable to Shareholders Margin	20.97%	17.05%		21.17%
		Revenue	6,441.3	6,696.3	6,647.1	8,698.6
		ΥοΥ		3.96%	-0.73%	30.86%
	Construction of BOT water	COS	5,001.1	5,255.6	4,985.3	6,524.0
renovation	projects	GPM	22.36%	21.52%	25.00%	25.00%
		NP Attributable to Shareholders	894.7	1,113.3	1,133.4	1,654.1
		NP Attributable to Shareholders Margin	13.89%	16.63%	17.05%	19.02%
		Revenue	8,331.0	11,308.6	13,982.4	15,305.5
	Sub total	ΥοΥ		5.1 3, 553.9 4, 031.7 3.95% 10.34% 0.7 1, 596.6 1, 898.7 10.6% 56.30% 52.90% 6.3 1, 697.0 1, 757.4 10.8% 46.444% 43.59% 11.1 1, 371.4 1, 839.7 55.65% 34.15% 5.8 703.8 995.5 44% 48.68% 45.89% 9.3 578.5 690.0 155% 42.18% 37.51% 6.2 5,025.3 5,871.4 14.31% 16.84% 6.5 2,300.4 2,894.2 59% 54.22% 50.71% 9.7 4,612.3 7,335.3 144.08% 59.04% 50.04% 6.2 3,597.6 6,308.4 00% 22.00% 14.00% 6.2 7,596.6 1,045.5 17% 17.05% 14.25% 1.3 6,696.3 6,647.1 3.96% -0.7	9.46%	
Construction services for the water environmental renovation C Technical services and sale of environmental otal Revenue oy OS adj PM	Sub-total	COS	6,437.3	8,853.2	11,293.7	11,545.2
		GPM	22.73%	21.71%	19.23%	24.57%
		Revenue	775.8	1,020.9	1,338.6	2,305.0
		YoY		31.59%	31.12%	72.19%
Technical services and sale	e of machineries for the water	COS	318.1	449.2	535.4	922.0
environme	ntal renovation	GPM	59.00%	56.00%	60.00%	60.00%
		NP Attributable to Shareholders	264.4	274.9	506.2	773.0
		NP Attributable to Shareholders Margin	34.08%	26.93%	37.82%	33.54%
Total Revenue			13,503.0	17,354.8	21,192.4	24,596.9
YoY						16.06%
COS adj			8,536.1			15,820.9
GPM			36.78%		,	35.68%
NP Attributable to Sharehold	lers adj		2,455.4	3,227.0	3,717.2	4,471.3
	2		18.18%	,	,	18.18%

Source: Phillip Securities (HK) Research, Company Report

Financial Forecast

It is estimated that the company's revenue in FY19/FY20/FY21 will be HKD 27.23/30.58/34.83 billion, representing increases of 10.70%/12.30%/13.92% YoY; gross profit will be HKD 9.62/11.00/12.81 billion, representing increases of 9.56%/14.41%/16.42% YoY; net profit attributable to shareholders will be HKD 5.18/6.06/7.22 billion, representing increases of 15.80%/17.07%/19.07% YoY; corresponding EPSs are HKD 0.54/0.62/0.72. The company continued to promote the "Dual Platform" strategy and light asset transformation, and relying on the company's rich project experience and technology accumulation, it has strong alliance with China Three Gorges Corporation, complementing each other's advantages, and actively expanding the "Yangtze River Protection" trillion-yuan markets. We are optimistic about the future development of the company.

Table-6: Financial forecast



HKD in million	2015A	2016A	2017A	2018A	2019E	2020E	2021E
Revenue	13,503.0	17,354.8	21,192.4	24,596.9	27,229.1	30,577.3	34,833.6
cos	8,536.1	11,570.0	14,727.8	15,820.9	17,614.3	19,576.7	22,026.3
GP	4,966.9	5,784.8	6,464.5	8,775.9	9,614.8	11,000.6	12,807.3
Operating Profit	3,493.12	3,936.02	4,367.97	6,293.76	6,922.97	8,032.71	9,481.22
EBIT	4,376.49	5,842.20	6,492.32	8,461.29	9,390.61	10,861.69	12,747.27
NP	2,767.79	3,672.98	4,440.54	5,230.02	5,989.61	7,011.76	8,348.58
NP attributable to shareholders	2,455.37	3,227.01	3,717.23	4,471.27	5,177.62	6,061.20	7,216.80
EPS (Basic)	0.2817	0.3704	0.4242	0.4791	0.54	0.62	0.72
EPS (Diluted)	0.2750	0.3627	0.4153	0.4713	0.5348	0.6121	0.7126

Source: Phillip Securities (HK) Research, Company Report

Valuation

Based on our residual income valuation model, assuming the cost of equity is 9.66% and resistance factor is 0.2, we give a TP of HKD 5.81, corresponding to FY19/FY20/FY21 10.71x/9.36x/8.04x PER with a 22.57% potential upside compared with CP of HKD 4.74 as of July 8, 2019. Wind data shows that the company's expected PER of 8.96x in 2019 is attractive compared to the industry average PER 14.33x, we initiate coverage on BJ Ent Water and recommend "BUY" investment rating.

Table-7: Residual Income Valuation Model

HKD	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028
EPS	0.54	0.62	0.72	0.77	0.86	0.98	1.10	1.24	1.40	1.58
Dividend Payout Ratio	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%
DPS	0.21	0.24	0.28	0.30	0.33	0.38	0.42	0.48	0.54	0.61
Add R/E PS	0.33	0.38	0.44	0.47	0.53	0.60	0.68	0.76	0.86	0.97
BPST	3.00	3.32	3.69	4.16	4.69	5.29	5.96	6.72	7.58	8.55
BPSO	2.73	3.00	3.32	3.69	4.16	4.69	5.29	5.96	6.72	7.58
ROE0	20%	21%	22%	21%	21%	21%	21%	21%	21%	21%
Re	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
RI=BPS0*(ROE0-Re)	0.28	0.33	0.40	0.41	0.46	0.52	0.59	0.66	0.75	0.85
Persistent factor	0.20									
Terminal value	0.19									
PV	0.25	0.27	0.30	0.28	0.29	0.30	0.31	0.32	0.33	0.41
BPSO	2.73									
ТР	5.81									

Source: Phillip Securities (HK) Research, Company Report

Risk

- 1. Industry policy risk
- 2. Projects development fails expectations

Financials

 Table-8: Financial data

FYE DEC	FY17A	FY18A	FY19E	FY20E	FY21E	
Valuation Ratios						
P/E	11.17	9.89	8.74	7.64	6.56	
P/B	2.00	1.74	1.58	1.43	1.29	
Dividend Yield	3.36%	3.90%	4.41%	5.05%	5.88%	
Per Share Data in HKD				1		
EPS	0.42	0.48	0.54	0.62	0.72	
DPS	0.16	0.18	0.21	0.24	0.28	
BVPS	2.37	2.73	3.00	3.32	3.69	
Growth & Margins (%)	·		÷	· · · · · ·		
Growth				Ĩ		
Revenue	22.11%	16.06%	10.70%	12.30%	13 .92 %	
Operating Profit	10.97%	44.09%	10.00%	16.03%	18.03%	
Net Profit	20.90%	17.78%	14.52%	17.07%	19.07%	
Margins						
Gross Margin	30.50%	35.68%	35.31%	35 .98 %	36.77%	
Operating Profit Margin	20.61%	25.59%	25.42%	26.27%	27.22%	
Net Profit Margin	20.95%	21.26%	22.00%	22.93%	23 .97 %	
Key Ratios						
ROA	4.10%	3.94%	3.90%	4.21%	4.65%	
ROE	19.94%	19.33%	19.12%	19.85%	20.85%	
Income Statement in mn	HKD		÷	· · · · · ·		
Revenue	21,192.37	24,596.86	27,229.08	30,577.31	34,833.60	
Gross Profit	6,464.52	8,775.94	9,614.79	11,000.60	12,807.32	
EBIT	6,492.32	8,461.29	9,390.61	10,861.69	12,747.27	
EBT	5,315.32	6,778.91	7,540.68	8,827.53	10,510.53	
Net Profit	4,440.54	5,230.02	5,989.61	7,011.76	8,348.58	
Minority Interest	483.03	512.74	565.97	704.54	885.77	
Net Profit for Owners	3,717.23	4,471.27	5,177.62	6,061.20	7,216.80	

Source: Company, Phillip Securities (HK) Research Estimates (Financial data as of July 8)

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PHILLIP RESEARCH STOCK SELECTION SYSTEMS

Total Return	Recommendation	Rating	Remarks	
>+20%	Buy	1	>20% upside from the current price	
+5% to +20%	Accumulate	2	+5% to +20% upside from the current price	
-5% to +5%	Neutral	3	Trade within $\pm 5\%$ from the current price	
-5% to -20%	Reduce	4	-5% to -20% downside from the current price	
<-20%	Sell	5	>20% downside from the current price	

We do not base our recommendations entirely on the above quantitative return bands. We consider qualitative factors like (but not limited to) a stock's risk reward profile, market sentiment, recent rate of share price appreciation, presence or absence of stock price catalysts, and speculative undertones surrounding the stock, before making our final recommendation

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