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Devoted to Ecology and Environment for a Beautiful China

September 2020



China Everbright Environment Group Limited

(formerly known as "China Everbright International Limited")

China Everbright Environment Group Limited ("Everbright Environment"), founded in Hong Kong in 1993, is a backbone enterprise of China Everbright Group, and a Hong Kong Main Board-listed company (257.HK). As a state-owned and foreign company, Everbright Environment operates with higher efficiency and vitality than other state-owned enterprises, and demonstrates a stronger responsibility and stronger capability than its foreign peers.

Following over a decade's development, the company has become the largest environmental enterprise in China, a leading player in Asia's environmental protection sector, the world's largest waste-toenergy investor and operator, and a world-renowned environmental group. It has two listed subsidiary companies, China Everbright Water Limited (U9E.SG & 1857.HK) and China Everbright Greentech Limited (1257.HK). In the first half of 2020, Everbright Environment recorded a revenue exceeding HKD18 billion. As of 30 June 2020, its total assets was approximately HKD130 billion. As at now, the total number of employees is about 14,000.



Everbright Environment's projects are located in over **190** locations across **23** provinces, municipalities and autonomous regions in China. It has secured over **430** projects, with an aggregated investment exceeding RMB130 billion.



ENVIRONMENTAL ENERGY

The world's largest waste-to-energy investor and operator

As Everbright Environment's largest core business segment with the hightest business proportion, environmental energy covers waste-to-energy, food waste treatment, leachate treatment, fly ash treatment, methane-to-energy, sludge treatment and disposal, and the development of environmental protection industrial parks, etc. Currently, there are **177** invested projects with a total investment **of over RMB79 billion**.



All projects are constructed and operated in compliance with relevant **international standards**, with 12 of them having been evaluated as **the national AAA-rated waste-to-energy projects** in China, demonstrating company is the best player in dealing with the "Not in My Back Yard" (NIMBY) effect in China's waste-to-energy field.



Changzhou Waste-to-energy Project has been selected as a typical case in the Case Studies on Overcoming Difficulties Since the 18th CPC National Congress, which was issued by the Organization Department of the CPC Central Committee. It was also shortlisted in the first batch of "Primary Contact Points of the Key Projects of Central Commission for Guiding Cultural and Ethical Progress"



Vietnam Can Tho Waste-to-energy Project was specially reported by CCTV's "News Network", in the "Belt and Road", Xinwen Lianbo program.



Hangzhou Waste-to-energy Project has become a good example of quelling the NIMBY effect and having brought a positive impact to the neighboring communities.

GREENTECH

China's top investor and operator specialised in integrated biomass utilisation and hazardous waste treatment

China Everbright Greentech Limited ("Everbright Greentech"), is a Hong Kong Main Board-listed company (1257.HK) controlled by Everbright Environment. Everbright Greentech focuses on integrated biomass utilisation, hazardous waste and solid waste treatment, environmental remediation, among others. It has invested in **118 projects**, with a total investment **exceeding RMB30 billion**. It has also accumulatively undertaken **31** environmental remediation services, with a total contract value of **approximately RMB874 million**.



[#]Including urban-rural integration projects *As at 31 August 2020





ENVIRONMENTAL WATER

China's leading water environment management services provider

China Everbright Water Limited ("Everbright Water") is controlled by Everbright Environment, and listed on the main board of Singapore and Hong Kong (U9E.SG & 1857.HK). With a focus on water environment management, Everbright Water has a total daily water treatment capacity of **approximately 6.5 million m**³, with a total investment **exceeding RMB24 billion**, ranking among the top positions in the domestic industry.



[#]Including O&M projects * As at 31 August 2020



EQUIPMENT MANUFACTURING

China's backbone environmental protection equipment R&D and manufacturing provider

Headquartered in Changzhou City, Jiangsu Province, Everbright Environmental Technical Equipment (Changzhou) Limited represents Everbright Environment's equipment manufacturing sector, and has become a leading environmental protection equipment provider in China. The company has independently developed grate furnaces, with the processing capacity ranging from 300 tonnes/ day to 1,000 tonnes/day, the leachate treatment system and flue gas purification system, which have tapped into the first-tier of the environmental protection equipment manufacturing industry. The self-developed equipment of the company has been exported to countries and regions in Southeast Asia, South Asia and North Africa.



Everbright grate furnace series

- The self-developed grate furnaces with the daily processing capacity ranging from 300 tonnes/day to 1,000 tonnes/day have received the Technological Advancement Award by the Ministry of Ecology and Environment of the PRC.
- The 850 tonnes/day and 1,000 tonnes/day grate furnances have filled the void in the domestic market and also mark the world's largest grate furnaces.



Leachate treatment system

- The leachate treatment system is able to process leachate with COD level above 60,000mg/L.
- Through years of efforts in independent development and application, the leachate treatment technology has become systematic and is able to comply with standards for the discharge or reuse of leachate after treatment.



Flue gas purification system

- Gas emissions of wasteto-energy projects fully comply with relevant national standards.
- The daily average level of online monitored gas emissions of Everbright Environment's projects is superior to the EU 2010 Standard (the Industrial Emissions Directive (2010/75/EU)).

ECO-RECYCLING

Devoted to becoming China's first-class investor and operator dedicated to waste sorting and resource recycling

Everbright Environment's eco-recycling sector has developed a full industry chain from the waste sorting and collection to the end harmless disposal. It has developed three major business directions, namely waste sorting and zero-waste cities, environmental sanitation integration and resource recycling.

Eco-recycling has been gradually creating a "Five Points in One Line" process model, which includes sorting, transferring, selecting, recycling and incinerating of waste, aiming to apply relevant business models and technologies to a broader market. By leveraging such business models and technologies, eco-recycling targets to realise the harmless treatment, reduction and reuse of waste, as well as to facilitate the development of zero-waste cities.

Illustration of Everbright Environment's "Five Points in One Line" Process Model

Waste sorting	Waste transferring	Waste selecting centre	Resource recycling centre	End disposal centre
Intelligent waste sorting systems will be applied to achieve the full-process, automotive and intelligent management for waste sorting in communities.	 Waste transferring systems will transfer waste to different treatment platforms according to their types: Waste selection centres Hazardous waste disposal centres Waste transfer stations (pre-treated waste will be transferred to composting centres/ waste-to-energy plants) 	Multiple assembly lines will select waste according to different standards, supplemented by manual selection • Following this step, recycled materials will be delivered for sale or transferred to resource recycling centres	Recycled materials will be transformed into raw materials for production or recycled products	Waste that cannot be recycled will be delivered for end disposal • Waste-to-energy plants • Hazardous waste disposal centres • Waste landfill

Environmental Sanitation Integration

Eco-recycling are actively exploring investment of integrated sanitation projects, such as waste collection and transportation projects, in multiple provinces in China. Among them, Yunnan Yuxi Environmental Sanitation Integration Project marks Everbright Environment's first project in Yunnan Province, with a designed daily waste collection and transportation capacity of approximately 800 tonnes. The project is able to fulfill such service needs of the Hongta District of Yuxi City.



Zero-waste City Research Institute

In 2019, Everbright Environment set up the Zero-waste City Research Institute in Xiongan New Area. As an important component of eco-recycling, the institute marks China's first research institute dedicated to the "Zero-Waste City" theme within the area, with a focus on applicable technologies, business models and policies relating to waste sorting, resource recycling, and development of zero-waste cities. It aims to conduct in-depth researches of experience at home and abroad relating to the development of "zero-waste cities", so as to be fully engaged in the process of the development of waste sorting and zero-waste cities in China.

GREENERGY

Everbright New Sodium Lamp, lighting the way home

Everbright Environment's greenergy sector follows the development philosophy of "Healthy, Energy-saving and Intelligent Lighting". It focuses on the R&D and manufacturing of energy-saving street lamps, urban lighting projects and other types of energy-saving lighting products, with the aim of developing a full industry chain. By offering comprehensive lighting solutions for the users, greenergy targets to become a leading integrated service provider for energy-saving renovation.

At present, with Everbright New Sodium Lamp ("Lamp") as the core product, Everbright Greenergy provides customised energy-saving lighting services to customers, such as government authorities, enterprises, and individuals, through three major business models, namely energy management contract (EMC), engineering procurement and construction (EPC), as well as direct sales.

Advantages of the Lamp

- High light efficiency
- Good fog permeability
- Excellent lighting effect
 Healthy lighting features
- Low maintenance cost • Ease of replacement
- Independent intellectual property

As compared with high-pressure sodium lamp that is currently widely used for street lighting in China, the Lamp is

60% smaller in size Up to 50% lower in energy . consumption

Application scenarios

- Road Square
- Airport Railway
- Bridge
- Port
- Tunnel
- Factory
- Greenhouse

As at 30 June 2020, greenergy has secured three streetlight retrofitting projects in Ji'nan, Rizhao and Tengzhou cities, Shandong Province. These projects involve approximately 140,000 streetlights in total (approximately 120,000 for Ji'nan, 12,000 for Rizhao and 11,000 for Tengzhou). Based on the EMC model, these projects have replaced or would replace the existing high-pressure sodium lamps in the cities with the Lamp, in order to improve the streetlight lighting guality, and to reduce energy consumption by up to 50%.

ENVIROTECH

Innovation and Development Driven by Science and Technology

Everbright Environment's envirotech sector has further carried out optimisation and integration internally. It substantially established the **"Four-in-One"** technological innovation and R&D layout with platforms in Hong Kong, Shenzhen, Nanjing and Qingdao cities, to better promote Everbright Environment's strategic planning of pursuing development that is driven by technology and innovation, as well as to ensure the commercialisation of the R&D results.

As of 30 June 2020, Everbright Environment had obtained a total of 917 authorised patents, including 108 invention patents, 725 utility model patents, 79 software copyright licenses and 5 appearance patents.



- Upgraded its intelligent technologies that could start or stop relevant equipment with one single click, at Jiangyin Waste-toenergy Project Phase III
- Completed the identification process of the plasma melting technology for fly ash treatment
- Achieved smooth operation of the automatic combustion control (ACC) system at Boluo Waste-to-energy Project
- Completed the "72+24" hour trial run of its self-developed wet deacidification project, the first of this type in China, at Changzhou Waste-to-energy Project



Establishment of China Everbright Green Technology Innovation Research Institute in Hong Kong



Qingdao Institute of Technology and Environmental Technology was awarded a certificate of "Laboratory of Excellence" by the Environmental Resources Association's international proficiency testing, for its excellent water dioxin testing capability. This marks the institute's dioxin testing capability has reached the international standard.

ENVIRONMENTAL PLANING

Positioning first-class national planning and design institute

Everbright Environment's environmental planning sector leverages on the Everbright Ecological and Environmental Planning and Design Institute ("Environmental Planning and Design Institute") as the main platform. Aiming to become a first-class planning and design institute, it mainly focuses on the fields of environmental protection and energy, adopts a market-oriented approach, and is dedicated to optimising its design expertise. The Environmental Planning and Design Institute is striving to achieve breakthrough in the areas of design, efficiency, brand building and industry leadership.

Environmental Planning and Design Institute has a set of design and consulting qualifications in areas such as electric power, municipal administration and environment, in addition to the national qualification for pressure pipeline design. The institute has developed a team that consists of experts and senior technical staff with rich experience and excellent professional expertise. Focusing on providing professional integrated solutions on environmental governance, such as waste-to-energy, biomass power generation and food waste treatment, the institute is capable of designing incineration lines with the capacity ranging from 300 tonnes/day to 1,000 tonnes/day.

The institute has further expanded its consulting services in the areas of food waste treatment, sludge treatment and disposal, slag integrated utilisation and medical waste treatment, in order to provide strong support for the development of Everbright Environment's other business sesctors.

The institute will leverage on its advantages and engineering experience, and expand various consulting services, such as planning, supportive work relating to bidding, feasibility study, project application, report drafting, energy conservation assessment, industrial park planning, among others. It aims to gradually develop a service system that provides full-process engineering consultancy and full-cycle integrated services. The institute is also carrying out future oriented value-added businesses, such as 3D design, digital delivery, digital factory, engineering data centre, etc.



Rendering of the opening up and upgrading project of Everbright Environment Changzhou Waste-to-energy Project



Rendering of Everbright Environment Tianjin Beichen Waste-toenergy Project

Environment, awarded Asia's

Best CEO.



Silver Class and Bronze Class

distinctions by RobecoSAM.

- In 2018 and 2019, included in the Green Supply Chain CITI Index.
 - In 2020, received an award for the enterprise' actions on climate change.

Create Better Investment Value and Undertake More Social Responsibilities ³⁷

With a high sense of social responsibility and mission, Everbright Environment has actively taken part in social charitable activities relating to energy conservation, environmental protection education, charitable donations and environmental greening on a global scale.



- Took the lead in promoting and adopting the Euro 2000 Standard (Directive 2000/76/ EC) in developing waste-to-energy projects in China
- Took the lead in connecting with local environmental protection departments and sharing real-time project emission data
- Took the lead in disclosing the hourly average level of gas emissions of all its operating waste-to-energy projects
- Took the lead in opening up its operating waste-to-energy projects to the public, welcoming supervisions from the society
- Took the lead in opening up its environmental protection facilities from all business sectors for public visits

Since 2010,

Everbright Environment has been engaged in poverty relief activities for the Xinhua County of Hunan Province.

In September 2011,

Everbright Environment donated to establish the True Love School in Dangshan, Anhui Province.

In June 2013,

Everbright Environmental Protection Charitable Foundation was launched.

In August 2013,

Everbright Environment Charitable Foundation (the "Foundation") was set up in Hong Kong.

Since 2014,

the Foundation has become a Double Diamond Member of WWF-HK, and has supported the Earth Hour Hong Kong as lead sponsor for many consecutive years.

In 2015,

the Foundation supported Yan Oi Tong's Green City Exploration Tour.

From 2016 to 2019

the Foundation sponsored Heifer International Hong Kong's "Read to feed" charity program.

In November 2017,

Everbright Environment supported the planning and construction of sports facilities for children in Schönewalde, Germany.

Since 2018,

a number of projects under Everbright Environment, have jointly organised or participated in local environmental protection promotion activities relating to the World Environment Day on the 5th of June.

In November 2018,

Everbright Environment held a ceremony in Nanjing City of Jiangsu Province to announce the opening of its environmental protection facilities for public visits, with up to 77 such facilities from the company's various business sectors to be opened up for public visits in next three years.

In October 2019,

the Foundation partnered UNICEFHK and supported Adventure in the Wood activity, with the donation being used to help children and women in remote areas in China.



Lead sponsor of Earth Hour Hong Kong, part of the world's largest collective environmental movement, Earth Hour, for many consecutive years since 2014



Everbright Environment True Love School

Jiangsu Suzhou Waste-to-energy Project (3,550 tonnes/day) among the first batch of projects to be awarded as the national AAA-rated waste-to-energy projects.

Shandong Weifang Waste-to-energy Project (1,500 tonnes/day) awarded as the national AAA-rated

waste-to-energy project.

Featured Projects

Jiangsu Wujiang Waste-to-energy Project (1,500 tonnes/day) awarded as the national AAA-rated waste-to-energy project.

Shandong Rizhao Waste-to-energy Project (1,000 tonnes/day) awarded as

the national AAA-rated waste-to-energy project.

Jiangsu Changzhou Xinbei Waste-to-energy Project (1,500 tonnes/day) awarded as the national AAA-rated waste-to-energy project.

Hunan Yiyang Waste-to-energy Project (800 tonnes/day) awarded as the national AAA-rated waste-to-energy project. Guangdong Boluo Waste-to-energy Project (1,050 tonnes/day) awarded as the national AAA-rated waste-to-energy project

Anhui Ma'anshan Waste-to-energy Project (800 tonnes/day) awarded as the national AAA-rated waste-to-energy project.



Zhejiang Ningbo Waste-to-energy Project

 Zhejiang Ningbo Waste-toenergy Project (1,500 tonnes/ day) having been awarded as the national AAA-rated wasteto-energy project. It is also a benchmark green development project in China.



Jiangsu Changzhou Waste-to-energy Project

Jiangsu Changzhou Waste-to-energy Project (800 tonnes/day) having been awarded as the national AAA-rated waste-to-energy project. Located closest to residential communities in China, it is the country's first fenceless waste-toenergy project that is open for public visits. The project was shortlisted in the case studies on overcoming difficulties since the 18th CPC National Congress and also the Primary Contact Points of the Key Projects of Central Commission for Guiding Cultural and Ethical Progress.



Jiangsu Nanjing Waste-to-energy Project

 Jiangsu Nanjing Waste-toenergy Project (4,000 tonnes/ day) having been awarded as the national AAA-rated wasteto-energy project. It is the largest waste-to-energy project in operation at Everbright Environment.



Zhejiang Hangzhou Waste-to-energy Project

 Zhejiang Hangzhou Waste-toenergy Project (3,000 tonnes/ day) a demonstration project that has successfully solved the NIMBY effect. It is awarded the Luban Prize (National Quality Project) by the Ministry of Housing and Urban-Rural Development of the PRC.



Shandong Ji'nan Waste-to-energy Project

 Shandong Ji'nan Waste-toenergy Project (2,750 tonnes/ day) being awarded the Luban Prize (National Quality Project) by the Ministry of Housing and Urban-Rural Development of the PRC.



Hainan Sanya Waste-to-energy Project

 Hainan Sanya Waste-toenergy Project (1,050 tonnes/ day) having been awarded as the national AAA-rated wasteto-energy project, and been selected as a demonstration PPP (Public-private Partnership) project by the Ministry of Finance of the PRC.

Featured Projects

Anhui Dangshan Integrated Biomass and Waste-to-Energy Projects (Annual treatment capacity: 150,000 tonnes of household waste and 300,000 tonnes of straw)

China's first integrated biomass and waste-to-energy project.

Jiangsu Changzhou Hazardous Waste Incineration Project (Annual incineration treatment capacity: 30,000 tonnes)

Equipped with world-class technologies, the project is the first hazardous waste treatment foreign joint-venture project that is invested and established by Everbright Greentech and SUEZ NWS Limited.



Anhui Dangshan Urban-rural Integration Projects



Jiangsu Changzhou Hazardous Waste Incineration Project



Anhui Lingbi Urban-rural Integration Projects

- Anhui Lingbi Integrated Biomass and Waste-to-Energy Projects (Annual treatment capacity: 150,000 tonnes of household waste and 300,000 tonnes of straw)
 - The first demonstration integrated urban-rural project in China and the industry that has had its biomass treatment and waste-to-energy facilities constructed all at one time.



Jiangsu Binhai Hazardous Solid Waste Landfill Project

- Jiangsu Binhai Hazardous Solid Waste Landfill Project (Annual treatment capacity: 30,000 tonnes)
 - It has the largest capacity among all hazardous landfill sites that Everbright Environment has made one-off investment across China. The total landfill capacity of the project reaches 600,000 m³.



Shandong Zibo Hazardous Waste Integrated Treatment Project

 Shandong Zibo Hazardous Waste Integrated Treatment Project Phase I and II (Annual treatment capacity: 42,800 tonnes)

> It is Everbright Environment's first project adopting a marketoriented operation model. It is also the first project in China to utilise incineration technology in the hazardous integrated treatment process.

Featured Projects

Jiangsu Zhenjiang Sponge City Construction PPP Project

Among China's first batch of demonstration projects on both PPP model and sponge city development.



Jiangsu Zhenjiang Sponge City Construction PPP Project



Shandong Ji'nan Waste Water Treatment Project

- Shandong Ji'nan Waste Water Treatment Project (1,080,000 m³/day)
 - A municipal Gold Cup demonstration project. It was ranked the top for two consecutive years in a contest on municipal waste water treatment among 36 medium- and large-sized cities, which was launched by the Ministry of Housing and Urban-Rural Development of the PRC.
 - Huashan Waste Water Treatment Project, Everbright Water's first full-underground waste water treatment project and also Ji'nan's first large full-underground waste water treatment.



Beijing Daxing Tiantanghe Waste Water Treatment Project

- Beijing Daxing Tiantanghe Waste Water Treatment Project (80,000 m³/day)
 - China's first underground, fully-enclosed waste water treatment plant.

Jiangsu Jiangyin Waste Water Treatment Project (190,000 m³/day) A key demonstration project in

the restoration of Taihu Lake.



Jiangsu Jiangyin Waste Water Treatment Project



Shandong Zibo Waste Water Treatment Project

- Shandong Zibo Waste Water Treatment Project (250,000 m³/day)
 - China's first project located in a "heavy industrial city" that complies with the national Grade 1A standard. The project is also the first to have passed the clean production assessment with an excellent grading.



Nanjing Municipal Water PPP Project

Jiangsu Nanjing Municipal Water PPP Project

 Everbright Water's first river-basin ecological restoration project.

Featured Projects



Lighting effect of Everbright New Sodium Lamp, Rizhao Streetlight Retrofitting EMC Project

- Shandong Rizhao Streetlight Retrofitting Energy Management Contract (EMC) Project
 - It is greenergy's first EMC project, which has retrofitted over 12,000 street lamps of Rizhao City by transforming the existing high-pressure sodium lamps with Everbright New Sodium Lamps that are more energy efficient.
 - Everbright Environment will build up experience related to the EMC model and further promote this model, so as to boost the greenergy brand and market development momentum.



Lighting effect of Everbright New Sodium Lamp, Ji'nan Streetlight Retrofitting EMC Project

Shandong Ji'nan Streetlight Retrofitting EMC Project

- As greenergy's first project in a provincial capital city, the project is mainly responsible of retrofitting more than 120,000 street lamps in the urban districts of Ji'nan City. The project is based on the EMC model and therefore involves no fiscal expenses, making it a project in the public interest.
- The project is committed to becoming a demonstration project that is well recognised by the government authorities and the public, a benchmark in the field of energy-saving lighting, and a good example for the partnership between government authorities and enterprises.

CORE MANAGEMENT TEAM



Mr. An Xuesong Deputy General Manager Mr. Qian Xiaodong Deputy General Manager For more information, please follow us via website links/QR codes below



Everbright Environment official website **www.cebenvironment.com**



Everbright Greentech official website www.ebgreentech.com



Everbright Water official website www.ebwater.com



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