



**光大環境**  
EVERBRIGHT ENVIRONMENT

(STOCK CODE 股份代號: 257)

SUSTAINABILITY  
REPORT  
– 2020 –  
可持續發展報告

CHINA EVERBRIGHT  
ENVIRONMENT  
GROUP LIMITED  
中國光大環境（集團）有限公司

A scenic landscape featuring rolling hills, a sun rising over a valley, and a green text box in the center. The sun is positioned on the left side of the image, casting a bright glow over the landscape. The hills are covered in green grass and trees, and the sky is a clear blue. The text box is a solid green color and contains the following text:

*Devoted to*  
ECOLOGY AND  
ENVIRONMENT  
*for a*  
BEAUTIFUL CHINA

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情繫 生態環境  
築夢 美麗中國

## Contents 目錄

# 2020 Sustainability Report 可持續發展報告

2	About This Report 關於本報告	
4	Message from the Chairman of the Board 董事會主席致辭	
8	2020 Sustainability Highlights 二零二零年可持續發展摘要	
12	About Everbright Environment 關於光大環境	
32	Stakeholder Engagement 持份者參與	
42	Sustainable Operations Management 可持續的運營管理	
58	Environmental Protection 環境保護	
124	Talent Development 人才發展	
142	Safety Culture 安全文化	
156	Community Involvement 社區參與	
184	Together for the Sustainable Development Goals 攜手邁向可持續發展目標	
202	Key Statistics 主要數據	
214	Verification Statement 審核聲明	
216	Appendix I – Reporting Boundary 附錄I—報告邊界	
222	Appendix II – Main Corporate Memberships 附錄II—主要企業會籍	
225	Appendix III – GRI Content Index 附錄III—GRI內容索引	
234	Appendix IV – Stock Exchange ESG Reporting Guide Content Index 附錄IV—聯交所《環境、社會及管治 報告指引》內容索引	
238	Appendix V – Compliance with Relevant Laws and Regulations that have a Significant Impact on Everbright Environment 附錄V—對光大環境有重大影響的 相關法律及規例的遵守情況	

## About This Report 關於本報告

### Group Profile

China Everbright Environment Group Limited (“Everbright Environment” or the “Company”, together with its subsidiaries, the “Group”), a backbone enterprise of China Everbright Group Ltd (“China Everbright Group”), is listed on the Main Board of The Stock Exchange of Hong Kong Limited (the “Stock Exchange”) (stock code: 257). Everbright Environment has two listed subsidiaries<sup>(1)</sup>: China Everbright Greentech Limited (“Everbright Greentech”), which is listed on the Main Board of the Stock Exchange (stock code: 1257); and China Everbright Water Limited (“Everbright Water”), which is listed on the Mainboard of Singapore Exchange Securities Trading Limited (“SGX”) (stock code: U9E) and the Main Board of the Stock Exchange (stock code: 1857). After over a decade of development, the Company has grown into the largest environmental protection enterprise in China, a leading player in Asia’s environmental protection industry, the world’s largest waste-to-energy investor and operator, and a world-renowned environmental group.

### Reporting Scope

We believe reporting with clarity and transparency is key to managing corporate sustainability, therefore the Group’s ongoing performance in environmental, social and governance (“ESG”) aspects are disclosed to the stakeholders proactively. The sustainability report 2020 (the “Report”) is the Group’s ninth standalone sustainability report, which covers the Group’s main sustainability initiatives and performance from 1 January 2020 to 31 December 2020 (the “Reporting Period”).

The data and information disclosed in the Report were based on materiality assessment, stakeholder engagement and other relevant sustainability reporting guidelines, covering the sustainability performance of the Group’s headquarters in Hong Kong, management and representative offices<sup>(2)</sup>, Singapore office, projects under the Group’s operational control from construction<sup>(3)</sup> through operation phases, and other business activities of the Group during the Reporting Period<sup>(4)</sup>, <sup>(5)</sup>, <sup>(6)</sup>. The delineation of reporting boundary is provided in Appendix I. The relevant entities of the Group can be found in the Notes to Financial Statements of the Company’s annual report 2020 (the “Annual Report 2020”).

### Reporting Standard and Assurance

This Report has been prepared in accordance with the GRI Standards: Comprehensive option<sup>(7)</sup> as well as Rule 13.91 and Appendix 27 *ESG Reporting Guide of the Rules Governing the Listing of Securities on the Stock Exchange*. By these means, the material issues were covered in a more comprehensive manner. Besides, the Sustainable Development Goals of the United Nations (“SDGs”) have been fully integrated into the Group’s environmental and social management strategies to reflect its commitment to tackling the world’s most pressing issues.

Relevant guidelines or standards in international or local context were used as the basis for data collection and analysis of the Report, including the use of the Clean Development Mechanism (“CDM”) approved methodologies for the estimation of the projects’ greenhouse gas (“GHG”) emissions and offset. To more accurately reflect the operations of the Group, we have revised some of the calculation methods for greenhouse gas emissions and offset during the reporting period. The calculation principle is primarily based on CDM methodologies, however, some of the coefficients or emission factors have been changed to values that are more in line with

### 集團概覽

中國光大環境(集團)有限公司(「光大環境」或「本公司」, 連同其附屬公司統稱「本集團」)為中國光大集團股份有限公司(「光大集團」)骨幹企業, 香港聯合交易所有限公司(「聯交所」)主板上市公司(257.HK)。下轄兩家上市企業<sup>(1)</sup>: 於聯交所主板上市之中國光大綠色環保有限公司(1257.HK)以及於新加坡證券交易所有限公司(「新交所」)及聯交所主板上市之中國光大水務有限公司(U9E.SG及1857.HK)。經歷十多年的發展, 本公司現已成為中國最大環保企業、亞洲環保領軍企業、全球最大垃圾發電投資運營商及世界知名環境集團。

### 報告範圍

我們相信為持份者提供清晰透明的報告是企業可持續發展管理的關鍵, 因此本集團持續主動披露其在環境、社會和管治方面的表現。二零二零年可持續發展報告(「本報告」)為本集團第九份獨立的可持續發展報告, 涵蓋了本集團於二零二零年一月一日至二零二零年十二月三十一日(「報告期」)期間的主要可持續發展策略和表現。

本報告所披露的數據及信息是基於實質性評估、持份者參與和其他相關的可持續發展報告指引釐訂, 涵蓋了本集團在報告期內於香港總部、管理中心及代表處<sup>(2)</sup>、新加坡辦事處以及本集團擁有運營控制權從建設<sup>(3)</sup>到運營階段的項目以及本集團其他業務活動的可持續發展表現<sup>(4)</sup>、<sup>(5)</sup>、<sup>(6)</sup>。有關報告邊界的描述, 請參閱附錄I。本集團的相關實體資料可參閱本公司二零二零年年報(「二零二零年年報」)中的財務報表附註。

### 報告準則及審核

本報告是依循GRI準則: 全面選項<sup>(7)</sup>及《聯交所證券上市規則》第13.91條及附錄二十七所載的《環境、社會及管治報告指引》所編寫, 務求報告更全面涵蓋實質性議題。此外, 本集團將聯合國可持續發展目標(「SDGs」)全面融入環境及社會管理戰略中, 以展示應對全球最迫切議題的決心。

本報告的資料收集及分析乃根據相關國際或當地指引及準則進行, 包括使用清潔發展機制(「CDM」)核准的計算方法估算項目的溫室氣體排放及抵銷。報告期內, 我們修訂了部份溫室氣體排放及抵銷的估算方法, 以更準確地反映本集團的運營情況。估算的原則基本根據CDM的方法, 但其中部份常數或排放因子改為選用較符合國情的數值, 並在計算前預先扣除垃圾的含水率。因此, 溫室氣體排放資料與往年相比差距較大。有關計算方法的詳情, 請參閱本報告的

China's situation, and water content of waste has been deducted before calculation. Therefore, there are considerable discrepancies of GHG emissions and offset data when compared to previous years. Detailed description on the estimation method is available under "Environmental Protection" of this Report. All data included in the Report were rounded-off except integers and data already disclosed in the Annual Report 2020<sup>(8)</sup>.

The Group commissioned Hong Kong Quality Assurance Agency as the third-party verification institution to conduct an independent audit and verification on the content and data of the Report, and the corresponding verification statement is appended to the Report. The board (the "Board") of directors (the "Director(s)") of Everbright Environment reviewed and approved the content and scope of the Report to demonstrate that the Board had considered sustainability issues as part of its strategic formulation, determined the material ESG factors and overseen the management and monitoring of those factors.

## Accessibility and Feedback

The Report is available in both Chinese and English versions and has been uploaded onto the websites of Everbright Environment (<https://www.cebenvironment.com>) and the Hong Kong Exchanges and Clearing Limited ([www.hkex.com.hk](http://www.hkex.com.hk)). If there is any inconsistency or discrepancy between the Chinese version and the English version, the English version shall prevail; in the event of any inconsistency or discrepancy between the Report and the Annual Report 2020, the Annual Report 2020 shall prevail unless otherwise stated.

The Group welcomes all stakeholders and the public to provide valuable comments and suggestions to [info1@cebenvironment.com](mailto:info1@cebenvironment.com) on the content of the Report, the reporting approach as well as the Group's sustainability performance.

### Notes:

- (1) For detailed sustainability performance of the two listed subsidiaries of the Group (namely China Everbright Greentech Limited and China Everbright Water Limited), please refer to their standalone 2020 sustainability reports.
- (2) Includes management and representative offices located in Shenzhen, Beijing and Vietnam.
- (3) For environmental data of projects under construction, only electricity and water consumption and the associated greenhouse gas ("GHG") emissions are disclosed in the Report. Other data, such as fuel and materials consumption, is owned by contractors and/or subcontractors, and as such the Group does not have the relevant data.
- (4) Unless otherwise specified, data of contractors and/or subcontractors is not disclosed in the Report.
- (5) Since the assets related to the 14 projects undertaken by Everbright Environment under engineering, procurement and construction ("EPC") approach are owned by its customers, Everbright Environment has no right to access to the environmental data of such projects, including electricity consumption, water consumption, etc. As such, the environmental performance of these projects is not disclosed in the Report.
- (6) Majority of the operations of the Group's eco-recycling sector are operated by the outsourced service providers, therefore, the sector's environmental and social data in the Report only covers office operations.
- (7) GRI refers to Global Reporting Initiative.
- (8) The numbers stated in various tables of the Report may not add up to the total or 100% due to rounding off.

「環境保護」章節。除了整數數據及二零二零年年報已公佈的數據外，本報告所載的所有數據均已作捨入調整<sup>(8)</sup>。

本集團已委託香港品質保證局作為第三方核證審核機構，為本報告的內容及數據進行獨立審計及認證，其相關審核聲明已附載於本報告中。本報告的內容及範圍亦經過光大環境董事會（「董事會」）審閱及批准，以證明董事會已將可持續發展議題視為戰略制定的一部份，確定了主要的環境、社會及管治議題，並對該等議題的管理和監測進行了監督。

## 報告獲取及反饋

本報告備有中英文版本，並已上載至光大環境網站 (<https://www.cebenvironment.com>)及香港交易及結算所有限公司網站 ([www.hkex.com.hk](http://www.hkex.com.hk))供下載及閱覽。如中、英文版本有任何抵觸或不相符之處，應以英文版本為準；除非另有說明，若本報告和二零二零年年報有任何抵觸或不相符之處，應以二零二零年年報為準。

歡迎各持份者及公眾就本報告內容、報告方式和本集團在可持續發展方面的表現提供寶貴意見及建議，並電郵至 [info1@cebenvironment.com](mailto:info1@cebenvironment.com)。

### 附註：

- (1) 關於本集團旗下兩間上市附屬公司（分別為中國光大綠色環保有限公司及中國光大水務有限公司）的詳細可持續發展表現，請參閱其二零二零年的獨立可持續發展報告。
- (2) 包括位於深圳、北京及越南的管理中心和代表處。
- (3) 有關在建項目的環境數據，本報告僅披露其電力及水消耗量以及相關的溫室氣體排放。其他數據如燃料消耗量和物料使用量由承包商和/或分包商擁有，本集團並沒有有關數據。
- (4) 除非另有註明，承包商及分包商的數據不會於本報告中披露。
- (5) 由於光大環境以工程總包（「EPC」）的模式承接的14個項目所涉及的資產由其客戶擁有，光大環境無權存取其環境數據（包括電力消耗量及水消耗量等）。因此，這些項目的環境數據不會於本報告中披露。
- (6) 本集團的生態資源業務板塊的大部分運營均由外判服務商承包，故此本報告中涉及該板塊的環境和社會數據只涵蓋辦公室的運營。
- (7) GRI是指全球報告倡議組織。
- (8) 於本報告的各個表格與數字中，由於捨入關係，數值可能加起來不等於100%。

## Message from the Chairman of the Board 董事會主席致辭

In 2020, China achieved the goal of building a moderately prosperous society in all respects. It also marked the final year of China's "13th Five-Year Plan", and a decisive year in the battle against pollution. Despite the global challenges brought by COVID-19 pandemic (the "Pandemic"), the Pandemic has not hindered China from its strategic commitment to the ecological civilisation. The rolling out of policies, such as the *Solid Waste Pollution Prevention and Control Law of the People's Republic of China* (the "PRC"), the *Plan of Constructing the Treatment Facilities' Ability for Centralised Disposal of Medical Waste*, and the *Energy Law of the PRC (Draft for Solicitation of Comments)*, further reinforced the regulation in several aspects including environmental protection, environmental hygiene, resource utilisation, green energy development, etc. Moreover, the phased-in roll-out of the "zero-waste cities" development pilot programme, the transformation and upgrade of the green economy in the Guangdong-Hong Kong-Macau Greater Bay Area and the further implementation of the ecological and environmental protection plan for the Yangtze River Economic Belt have also created new opportunities for the environmental protection industry.

In 2020, despite the highly competitive market, with the focus on value creation, the Group overcame challenges and recorded consolidated revenue of HK\$42,926,426,000, with an increase of 14% comparing to 2019. Under the Pandemic, we achieved zero infection in the plant workplace and ensured full-speed operations of more than 200 environmental protection projects across over 100 cities in China. These projects safeguarded the environmental safety and public health of over 100 million residents by treating household waste and waste water, as well as enhancing the treatment and disposal of medical waste. The Group continued its commitment to the corporate pursuit of "Creating Better Investment Value and Undertaking More Social Responsibility" and progress towards sustainable development by focusing on the aspects of "Promoting Green Development", "Excelling in Talent Management", "Driving Technological Innovation", and "Engaging Communities".

During the Reporting Period, Everbright Environment's efforts in sustainable development were once again recognised by the industry, winning multiple national and international awards and honours, including the top among the "Top Ten Influential Solid Waste Treatment Enterprises in China" for the tenth consecutive year, being included in the Hang Seng Corporate Sustainability Index (also simultaneously in the Hang Seng (Mainland and HK) Corporate Sustainability Index) for the seventh consecutive years, and being included in the Dow Jones Sustainability Indices for the fifth consecutive year, as well as topping the list of "Top 50 Chinese Environmental Enterprises" of the China Environment Chamber of Commerce for the second consecutive year.

零二零年是國家全面建成小康社會和「十三五」規劃收官之年，亦是打贏污染防治攻堅戰的決勝之年。在新冠肺炎疫情(「疫情」)下，世界各地面臨前所未有的挑戰，但這無阻中國對生態文明建設的戰略定力。《中華人民共和國固體廢物污染環境防治法》、《醫療廢物集中處置設施能力建設實施方案》及《中華人民共和國能源法(徵求意見稿)》等政策的出台進一步加強了對環境保護、環境衛生、資源利用、綠色能源等領域的監管，而「無廢城市」建設試點有序開展、粵港澳大灣區綠色經濟轉型升級、長江經濟帶生態環境保護規劃的進一步落實，亦為環保行業帶來新的發展機遇。

二零二零年，本集團在競爭激烈的市場環境下，以價值創造為核心、凝心聚力、開拓奮進，錄得綜合收益港幣42,926,426,000元，較二零一九年增長14%。面對疫情，我們實現工作廠區「零感染」，並確保國內100多個城市的200多個環保項目全速運營，保障生活垃圾、污水處理，強化醫療廢棄物處置，守護了過億居民的環境安全與健康。本集團亦繼續秉承「創造更好投資價值，承擔更多社會責任」的企業追求，圍繞「推動綠色發展」、「精於人才管理」、「引領科技創新」及「積極聯繫社區」四大方針，向可持續發展不斷邁進。

報告期內，光大環境再次在可持續發展領域上獲得業界肯定，取得多個國內外獎項和榮譽，包括連續第十年榮居「中國固廢行業十大影響力企業」的榜首；連續第七年獲納入恒生可持續發展企業指數(並自動被納入恒生內地及香港可持續發展企業指數)；連續第五年獲納入道瓊斯可持續發展指數；連續第二年在全國工商聯環境商會發佈「中國環境企業50強榜單」中名列首位。

## Promoting Green Development

On 10 September 2020, Everbright Environment officially completed the change of its name from “China Everbright International Limited” into “China Everbright Environment Group Limited” to further cement its original aspiration and mission to the ecological environment, and to enhance the brand value. In the same year, President Xi Jinping pledged that China would strive to peak carbon emissions by 2030, and achieve carbon neutral by 2060. Currently, Everbright Environment has already successfully become a “Carbon-negative Enterprise”. We will continue our established development strategy, enhancing our policy, research, development and innovation related to peak carbon emissions and carbon neutral, so as to help achieve green and low-carbon development and contributing to national environmental protection cause.

During the Reporting Period, the Group processed approximately 31,545,000 tonnes of household waste, 6,708,000 tonnes of agricultural and forestry waste and 182,000 tonnes of hazardous and solid waste. The Group’s projects generated around 17,078,231,000 kWh of green electricity and offset 15,273,840.27 tonnes of carbon dioxide (CO<sub>2</sub>) equivalent emissions<sup>(1)</sup>. The Group also treated around 1,559,096,000 m<sup>3</sup> of waste water and 7,094,000 m<sup>3</sup> of leachate, reducing chemical oxygen demand (COD) discharge by approximately 579,000 tonnes in total.

While the Group focuses on the high-quality development of its businesses including waste-to-energy, it also proactively expands its presence in new business areas such as waste sorting, resource recycling and energy-saving lighting. During the Reporting Period, the Group secured 56 new projects and signed 2 supplementary agreements for the existing projects, commanding a total investment of approximately RMB16.5 billion. The Group’s Changzhou Waste-to-energy Project has become China’s first fenceless community-friendly plant and an “urban public living room”, benefitting the nearby neighbourhood with the ecological civilisation progress. In addition, the Group’s greenergy sector leverages on its core product Everbright New Sodium Lamp to promote the green energy-saving lighting industry, with the first streetlight retrofitting project based on an energy management contract (“EMC”) model being successfully completed during the Reporting Period.

## Excelling in Talent Management

Human Resources are the key strategy of a company’s development, with talents being the core for the implementation of relevant strategies. Everbright Environment highly values its human resources management. The Group continuously optimises the management structure, provides diverse training opportunities and builds a talent training base through the Ecological Environment Institute, so that employees can unleash their potentials and demonstrate their strength. The Group also continues to recruit talents from the society, overseas and campuses to strengthen its talent pool.

## 推動綠色發展

於二零二零年九月十日，光大環境正式完成更名，將公司名稱由「中國光大國際有限公司」變更為「中國光大環境(集團)有限公司」，更加堅定其聚焦生態環境領域的初心和使命，延續並提升品牌價值。同年，國家主席習近平在聯合國大會上承諾中國將力爭在二零三零年前實現碳達峰、爭取在二零六零年前實現碳中和。目前，光大環境已成功發展成為「負碳企業」。我們將繼續按照既定發展戰略，加大碳達峰、碳中和的政策研究與發展創新，助力實現綠色低碳發展，為國家環保事業作出貢獻。

報告期內，本集團處理了約31,545,000噸生活垃圾、6,708,000噸農林廢棄物及182,000噸危廢及固廢，項目合共產生綠色電量約17,078,231,000千瓦時，並抵銷了二氧化碳當量排放15,273,840.27噸<sup>(1)</sup>。污水及滲濾液處理量分別為約1,559,096,000立方米及約7,094,000立方米，合共減少了約579,000噸化學需氧量(COD)排放。

本集團專注於推動垃圾發電等業務的高質量發展的同時，亦積極佈局垃圾分類、資源再生利用、節能照明等新興業務，於報告期內共落實了56個新環保項目及簽署2份現有項目的補充協議，涉及總投資額約人民幣165億元。本集團的常州垃圾發電項目更成為中國首個沒有圍牆的「鄰利」工廠和「城市客廳」，讓鄰近居民享受生態文明建設所帶來的福利。此外，本集團的光大照明板塊以光大新鈉燈為主打產品，推動綠色節能照明產業，首個路燈節能改造合同能源管理(「EMC」)項目亦在報告期內順利完工。

## 精於人才管理

企業發展的關鍵是人才，實施人才戰略的核心是人。光大環境一向高度重視人力資源管理，不斷優化管理架構，積極提供多元化的培訓機會，更通過生態環境學院打造人才培訓基地，讓員工發揮潛能、盡展所長。本集團亦繼續通過社會招聘、海外招聘、校園招聘等不同方式不斷加強人才隊伍建設。

Given the impact brought by the Pandemic, we provided new form of online trainings for employees. We also organised comprehensive training activities to provide a wide range of learning opportunities and development plans for our employees, so as to align the Group's development with its employees' personal growth, and to further improve the management level and staff's all-rounded capabilities. Currently, the Group has 797 backup management personnel, who will be the major talents to support the future development of the Group.

### Driving Technological Innovation

In order to improve its core competitiveness, Everbright Environment continuously allocates resources to technology research and development ("R&D"). During the Reporting Period, the Group was granted a total of 235 patents (including 208 utility models, 15 software copyrights, 11 invention patents and 1 appearance patent) and published 17 major scientific papers. It has achieved technology R&D progress and results in several areas, including solid waste treatment, flue gas treatment, water treatment and intelligent control. Besides, the Group's envirotech sector has substantially established the "Four-in-One" technological innovation and R&D layout with platforms in Hong Kong, Shenzhen, Nanjing and Qingdao, becoming a first-class scientific and technological innovation and R&D platform which covers all of China and connects the country with the overseas. The Group also built the Greenergy Intelligent Industrial Park in Ji'nan City of Shandong Province, to boost relevant emerging industries and build a national technological innovation base.

### Engaging Communities

During the Reporting Period, the Group maintained its full support for charitable activities across the fields of environmental protection education, community care and ecological conservation. The Group was the lead sponsor of the "Earth Hour" event hosted by the World Wide Fund for Nature (WWF) Hong Kong for the seventh consecutive year. In respect of the prevention and control of the Pandemic, the Group united with the local government authorities and communities. It proactively raised resources, donated funds and supplies to relevant local healthcare and anti-pandemic departments, charity foundations, hospitals, etc.

因疫情影響，我們以全新的線上形式為員工展開培訓，更開設全方位的培訓活動，為員工提供廣泛的學習機會及發展計劃，旨在將本集團的發展和個人成長融為一體，進一步提升管理層及員工的綜合能力。目前本集團已有797名後備管理人員，作為未來企業發展的主力軍和生力軍。

### 引領科技創新

為提升企業的核心競爭力，光大環境持續大力投放資源推動技術研發。報告期內，本集團共獲授權專利235項，包括實用型專利208項、軟件著作專利15項、發明專利11項、外觀專利1項，發表重要技術論文17篇；於固廢處置、煙氣處理、水處理、智能控制等領域均取得技術研發進展和成果。此外，本集團綠色科創板塊亦完成於香港、深圳、南京、青島的「一院四城」技術創新與研發體系佈局，成為覆蓋全中國、聯通海內外的一流科技創新研發平台。我們亦於山東省濟南市設立光大照明智業園項目，著力推動相關新興產業發展，打造全國重要科技產業創新基地。

### 積極連繫社區

報告期內，本集團繼續全力支持環保教育、社區關懷及生態保育等方面的慈善公益活動，其中包括連續第七年成為世界自然基金會香港分會「地球一小時」活動的首席贊助機構。針對疫情防控，本集團與各地政府部門及民眾共克時艱，積極籌措物資，向有關地區衛生防疫部門、慈善基金會、醫院等單位捐款捐物。



During the Reporting Period, the Group, being a leader of the opening-up initiative in China's environmental protection industry, as well as a role model showcasing high-quality construction and operations continued to open its environmental protection facilities of all business sectors for public visits. Although certain opening up activities were postponed or cancelled due to the Pandemic, the Group made flexible arrangements and launched "online open-up" activities, allowing the public to experience immersive "Cloud Tours", aiming to increase their knowledge in environmental protection and motivate them to be more environmentally conscious. More than 110,000 domestic and foreign visitors from all social circles were received during the Reporting Period.

## Our Way Forward

Stepping into 2021, the Pandemic is yet to be over, domestic and international economic outlooks and the environmental protection industry are filled with opportunities and challenges. Year 2021 marks not only the commencement of China's "14th Five-Year Plan", but also an acceleration stage, which is considered to be the first step of Everbright Environment's realisation of its "Two-Step" strategy. The Group will continue to cement its original aspiration and mission to the ecological environment, accelerate its strategic transformation and high-quality development with a focus on the areas of "environment, resources and energy", relentlessly pursue technological innovation, give back to the society, and move towards the goal of becoming a world-leading ecological and environmental group.

**WANG TIANYI**  
*Chairman of the Board*

5 July 2021

Note:

- (1) Due to revision of the calculation method, there may be some discrepancies between the data reported and those stated in our Annual Report 2020.

報告期內，本集團作為中國環保行業公眾開放領跑者、高品質建設運營模範，繼續堅定不移地推動旗下各業務板塊環保設施向公眾開放。雖然項目的實體公眾開放活動因疫情放緩或者暫停，本集團靈活調整，開展全新的線上「雲開放」活動，帶給公眾身臨其境的「雲參觀」體驗，提高公眾的環保知識及參與環保的自覺性。報告期內共接待國內外各界人士參觀考察超過110,000人次。

## 展望將來

踏入二零二一年，疫情尚未過去，國內外經濟形勢及環保行業發展趨勢仍充滿機遇與挑戰。二零二一年是我國「十四五」規劃的開局之年，也是實現光大環境「兩步走」戰略中第一步戰略的提速階段。本集團將堅定聚焦生態環境領域的初心和使命，加快推動「環境、資源、能源」三位一體的戰略轉型與高質量發展，不斷實踐技術創新、回饋社會，朝著建設成為全球領先生態環境集團的目標不斷邁進。

**王天義**  
*董事會主席*

二零二一年七月五日

附註：

- (1) 由於估算方法的修訂，部分數據與我們的二零二零年年報內所註或有出入。

## Board Statement 董事會聲明

The Board has reviewed the material environmental, social and governance issues, and will manage and monitor these issues and take them into consideration in determining the Company's business directions and strategies.

董事會已審閱有關環境、社會及管治的重大議題，並會將管理和監督這些議題，且在制定本公司經營方針及戰略時將該等議題列入考慮範圍。



## Economy 經濟

As at 31 December 2020

截至二零二零年十二月三十一日

環保項目數目達**458**個  
**458** environmental protection projects

### In 2020 二零二零年

Revenue amounted to HK\$**42,926,426,000**  
收益為港幣**42,926,426,000**元

Integrated biomass utilisation projects directly and/or indirectly created over **41,000** jobs and increased farmers' income by RMB**1.48** billion, benefiting over **5.24** million farmers

生物質綜合利用項目直接及／或間接提供工作崗位逾**41,000**個，帶動農民增收約人民幣**14.8**億元，逾**524**萬名農民受益

## Environment 環境

### In 2020 二零二零年

Environmental protection projects generated approximately **17,078,231,000** kWh of green electricity, offsetting approximately **15,273,840.27** tonnes of CO<sub>2</sub> equivalent emissions<sup>(1)</sup>  
環保項目合共產生綠色電量約**17,078,231,000**千瓦時，抵銷了二氧化碳當量排放約**15,273,840.27**噸<sup>(1)</sup>

These projects treated approximately **1,559,096,000** m<sup>3</sup> of waste water and approximately **7,094,000** m<sup>3</sup> of leachate, reducing COD discharge by approximately **579,000** tonnes in total  
處理污水約**1,559,096,000**立方米及滲濾液約**7,094,000**立方米，合共減少了約**579,000**噸COD排放

## Employee 員工

As at 31 December 2020  
截至二零二零年十二月三十一日

員工總數為**12,732**人  
**12,732** employees in total

### In 2020 二零二零年

Rate of work-related injuries: **0.08**  
(employees) and **0.04** (third-party  
contractors and subcontractors working  
on-site)  
工傷率：**0.08** (員工) 及  
**0.04** (第三方承包商及分包商駐場工人)

(Rate of work-related injuries = (Total number of  
work-related injuries/Total working hours) x 200,000)  
(工傷率 = (工傷個案總計/工作總小時數) x 200,000)



Note:

- (1) Due to revision of the calculation method, there may be some discrepancies between the data reported and those stated in our Annual Report 2020.

## Community 社區



### In 2020 二零二零年

Environmental protection projects received  
over **110,000** domestic and foreign visitors  
from all social circles  
環保項目共接待國內外各界人士參觀考察  
逾**110,000**人次

Donations amounted to  
HK\$**14,184,000**  
捐款總金額為  
港幣**14,184,000**元

As at 31 December 2020  
截至二零二零年十二月三十一日  
**102** environmental protection facilities had  
been opened up to the public  
向公眾開放**102**個環保項目

Anhui Dangshan No.5 High School (formerly  
known as “Everbright International True  
Love School”) had accumulatively provided  
educational opportunities for **5,760** students  
安徽碭山縣第五中學(原「光大國際愛心學  
校」)已累計為**5,760**學生提供教育機會

“Everbright Environmental Protection  
Charitable Fund” had accumulatively  
supported a total of **1,778** beneficiaries, with  
a total of over RMB**8.5** million delivered as  
ex-gratia funds and financial aids  
「光大環保愛心基金」已累計產生**1,778**名  
受益者，共計已發放超過人民幣**850**萬元  
慰問金及救助金

附註：

- (1) 由於估算方法的修訂，部分數據與我們的二零二零年年報內所註或有出入。

Member of  
**Dow Jones  
Sustainability Indices**  
Powered by the S&P Global CSA

Dow Jones Sustainability Indices  
道瓊斯可持續發展指數系列成份股



**恒生可持續發展企業  
指數系列** 2020 - 2021成份股

Hang Seng Corporate Sustainability Index (also included in Hang Seng  
(Mainland and Hong Kong) Corporate Sustainability Index)

恒生可持續發展企業指數成份股  
(並自動納入恒生內地及香港可持續發展企業指數)

Hang Seng Corporate Sustainability Benchmark Index  
恒生可持續發展企業基準指數成份股



**FTSE4Good Index**  
富時社會責任指數成份股

**CITI Green Chain Index**  
綠色供應鏈CITI指數成份股

China Environment Chamber of Commerce  
全國工商聯環境商會

- First place in the 2020 Top 50 Environmental Protection Enterprises in China  
「2020中國環境企業50強榜單」榜首



The Environmental Protection and Resources  
Conservation Committee of the National People  
Congress and six other Chinese government  
authorities

全國人大環境與資源保護委員會等六部門

- 2018-2019 Green China Person of the Year  
– Mr. Wang Tianyi  
「2018-2019綠色中國年度人物」– 王天義先生



**2020 Annual Solid Waste Enterprises Ranking**  
2020年度固廢企業評選

- First place in the Top 10 Influential Solid Waste Treatment Enterprises in China  
「中國固廢十大影響力企業」榜首

### Institutional Investor – All-Asia Executive Team Ranking

《機構投資者》全亞洲最佳管理團隊



- Most Honored Company  
「最受尊崇企業」
- Asia's Best CEO – Mr. Wang Tianyi  
「亞洲最佳CEO」 – 王天義先生
- Asia's Best CFO – Mr. Raymond Wong  
「亞洲最佳CFO」 – 黃錦聰先生
- Top positions in the following categories:  
Best IR Team, Best IR Program, Best IR Professionals and Best ESG  
「最佳投資者團隊」、「最佳投資者項目」、  
「最佳投資者專員」、「最佳ESG指標」等評選中躋身前列

### Corporate Governance Asia – The Tenth Asian Excellence Award 《亞洲企業管治》— 第十屆亞洲卓越大獎

- Asia's Best CEO – Mr. Wang Tianyi  
「亞洲最佳CEO」 – 王天義先生
- Best Environmental Responsibility  
最佳環境責任



### The Hong Kong Institute of Directors 香港董事學會

- Shortlisted in the Top 10 Firms with  
Highest Corporate Governance Index  
Scores  
十大企業管治最佳上市公司



### CDP 全球環境信息研究中心(CDP)

- Outstanding Enterprise Award in  
Response to Climate Change  
應對氣候變化企業優秀獎

### UNESCO HK Association Global Peace Centre and other institutes 香港聯合國教科文組織協會和平中心等機構

- InnoESG Prize 2020

### China Charity Festival

中國公益節

- Social Responsibility Brand of the Year  
年度責任品牌獎

### Environmental Resources Association

環境資源協會

- Everbright-Qingdao University of Technology Research Institute of Environmental Technology recognised as the "Laboratory of Excellence"  
光大青島理工環境技術研究院獲得「卓越實驗室」榮譽認證

### Tianjin Municipal People's Government

天津市人民政府

- The technologies and application in relation to the efficient incineration of bulky household waste and control of sensitive secondary pollutants awarded the first prize of the Tianjin Technology Invention Award  
「大型生活垃圾高效焚燒與敏感性二次污染物控制技術與應用」獲得天津市技術發明一等獎

### China Construction Science and Technology Award Committee

華夏建設科學技術獎勵委員會

- The technologies and application in relation to ecological recycling of urban reusable water awarded the first prize of the China Construction Science and Technology Award  
「城鎮再生水生態紐聯循環利用技術與應用」獲得華夏建設科學技術一等獎

Promoting  
CLEAN ENERGY  
and implementing  
LOW-CARBON DEVELOPMENT

推動潔淨能源  
落實低碳發展

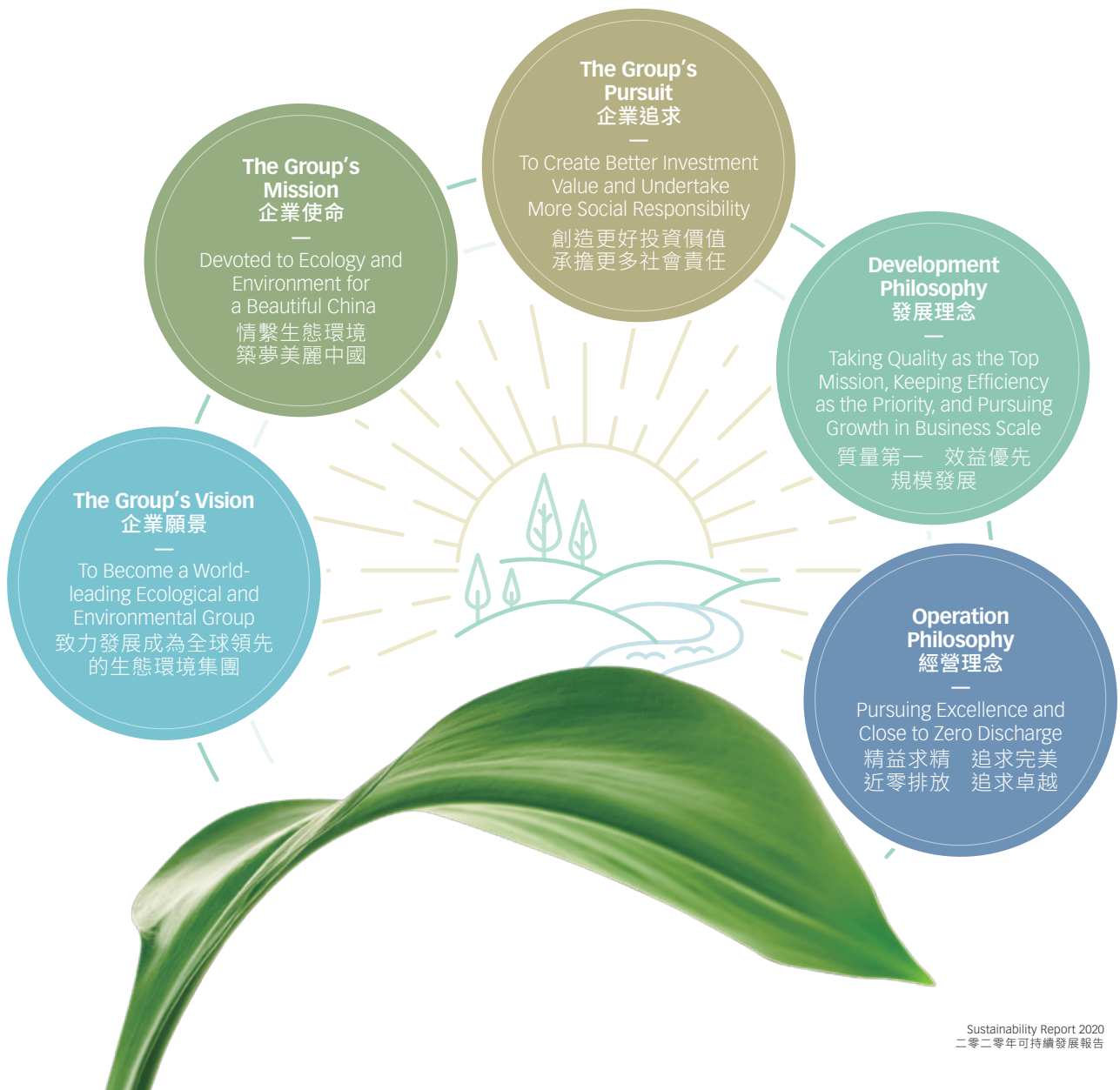


ABOUT EVERBRIGHT  
ENVIRONMENT  
關於光大環境

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**E**verbright Environment is the first one-stop, comprehensive and integrated environmental solution provider in China, with a focus on the three areas of environment, resources and energy. Its main businesses cover waste-to-energy and integrated waste treatment, integrated biomass utilisation, hazardous and solid waste treatment, environmental remediation, water environment management, equipment manufacturing, waste sorting, environmental sanitation integration, resource recycling, development of zero-waste cities, energy-saving lighting, analysis and testing, R&D relating to green technologies, ecological and environmental planning and designing, as well as environmental protection industrial parks. Everbright Environment is a strategic partner of the International Coalition for Green Development on the Belt and Road and the Ecological Protection and Green Development of the Yangtze River Economic Belt.

**光**大環境是中國首個一站式、全方位的環境綜合治理服務商，在環境、資源、能源三大領域全面佈局，主營業務包括垃圾發電及協同處理、生物質綜合利用、危廢及固廢處置、環境修復、水環境綜合治理、裝備製造、垃圾分類、環衛一體化、資源循環利用、無廢城市建設、節能照明、分析檢測、綠色技術研發、生態環境規劃設計、環保產業園等。光大環境現為「一帶一路」綠色發展國際聯盟和長江經濟帶生態大保護的戰略合作夥伴。



## Vitalised Development of the 8 Business Sectors 八大業務競相發展



### 1. Environmental Energy 環保能源

Waste-to-energy and integrated waste treatment, and environmental protection industrial parks  
垃圾發電及協同處理和環保產業園



### 2. Greentech 綠色環保

Integrated biomass utilisation, hazardous and solid waste treatment, environmental remediation, solar energy and wind power  
生物質綜合利用、危廢及固廢處置、環境修復、光伏發電及風電



### 3. Environmental Water 環保水務

Raw water protection, water supply, municipal waste water treatment, industrial waste water treatment, reusable water, river-basin ecological restoration, and sludge treatment and disposal  
原水保護、供水、市政污水處理、工業廢水處理、中水回用、流域治理及污泥處理處置







## Equipment Manufacturing .4 裝備製造

Expanding equipment categories and integrating development with different business sectors of the Group  
擴大裝備產品類別，與本集團各業務板塊協同發展



## Eco-recycling .5 生態資源

Waste sorting, environmental sanitation integration, development of zero-waste cities and resource recycling  
垃圾分類、環衛一體化、無廢城市建設和資源循環利用



## Greenergy .6 光大照明

R&D and manufacturing of energy-saving streetlights, urban outdoor lighting projects and energy-saving lighting products  
節能路燈、城市亮化工程、節能照明產品研發及製造



## Envirotech .7 綠色科創

Analysis and testing, and R&D relating to green technologies  
分析、檢測及綠色技術研發



## Environmental Planning .8 環境規劃

Ecological and environmental planning and designing  
生態環境規劃設計



## Business Footprint

As at 31 December 2020, the Group's projects were located in over 200 locations across 23 provinces, municipalities and autonomous regions in China, as well as Germany, Poland and Vietnam.

It had secured **458** projects with an aggregated investment of approximately **RMB140.386 billion**

## 業務分佈

截至二零二零年十二月三十一日，本集團項目分佈全國23個省(市)、自治區，遍及200多個區縣市，海外市場涉足德國、波蘭及越南。

已落實**458**個項目，累計總投資人民幣**1,403.86**億元



Investment by Business Sector  
業務板塊劃分的投資額



59.21%

Environmental Energy  
環保能源

0.64%

Other  
其他

17.58%

Environmental Water  
環保水務



22.57%

Greentech  
綠色環保

Total investment of approximately  
總投資約

RMB 人民幣 **140.386** billion 十億元

## Environmental Energy 環保能源

### World's largest waste-to-energy investor and operator

As a core business sector of Everbright Environment with the largest scale, environmental energy has the largest business scale of the Group. The sector covers waste-to-energy, food and kitchen waste treatment, sludge treatment and disposal, leachate treatment, fly ash treatment, methane-to-energy, construction and decoration waste treatment, development of environmental protection industrial parks, etc. It is the world's largest waste-to-energy investor and operator, as well as one of the best players in resolving the Not-In-My-Backyard (NIMBY) effect in the PRC's waste-to-energy industry.

### 全球最大垃圾發電投資運營商

環保能源是光大環境旗下規模最大的核心業務板塊，其業務範疇涵蓋垃圾發電、餐廚及廚餘垃圾處理、污泥處理處置、滲濾液處理、飛灰處理、沼氣發電、建築裝潢垃圾處理及環保產業園開發等，為全球最大的垃圾發電投資運營商，亦是中國垃圾發電領域鄰避效應化解最好的企業之一。



As at 31 December 2020  
截至二零二零年十二月三十一日

**141** Waste-to-energy projects  
(including 2 operation and management (“O&M”) projects)  
垃圾發電項目  
(包括2個委託運營項目)

**31** Food and kitchen waste treatment projects  
餐廚及廚餘垃圾處理項目

**7** Sludge treatment and disposal projects  
污泥處理處置項目

**3** Leachate treatment projects  
滲濾液處理項目

**2** Methane-to-energy projects  
沼氣發電項目

**5** Fecal treatment/fly ash treatment/  
animal carcass harmless treatment projects  
糞便處理／飛灰處理／  
病死動物無害化處理項目

**2** Medical waste treatment projects  
醫療廢物處理項目

**2** Waste sorting and integration projects  
垃圾分類及一體化項目

**1** Construction and decoration waste  
treatment project  
建築裝潢垃圾處理項目

**1** Solid waste treatment project  
固廢處置項目

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### Total Designed Capacities 設計總規模

approximately 約 **47,212,750** tonnes 噸

Annual household waste processing capacity  
年處理生活垃圾量

approximately 約 **1,543,950** tonnes 噸

Annual food waste treatment capacity  
年處理餐廚垃圾量

approximately 約 **248,200** tonnes 噸

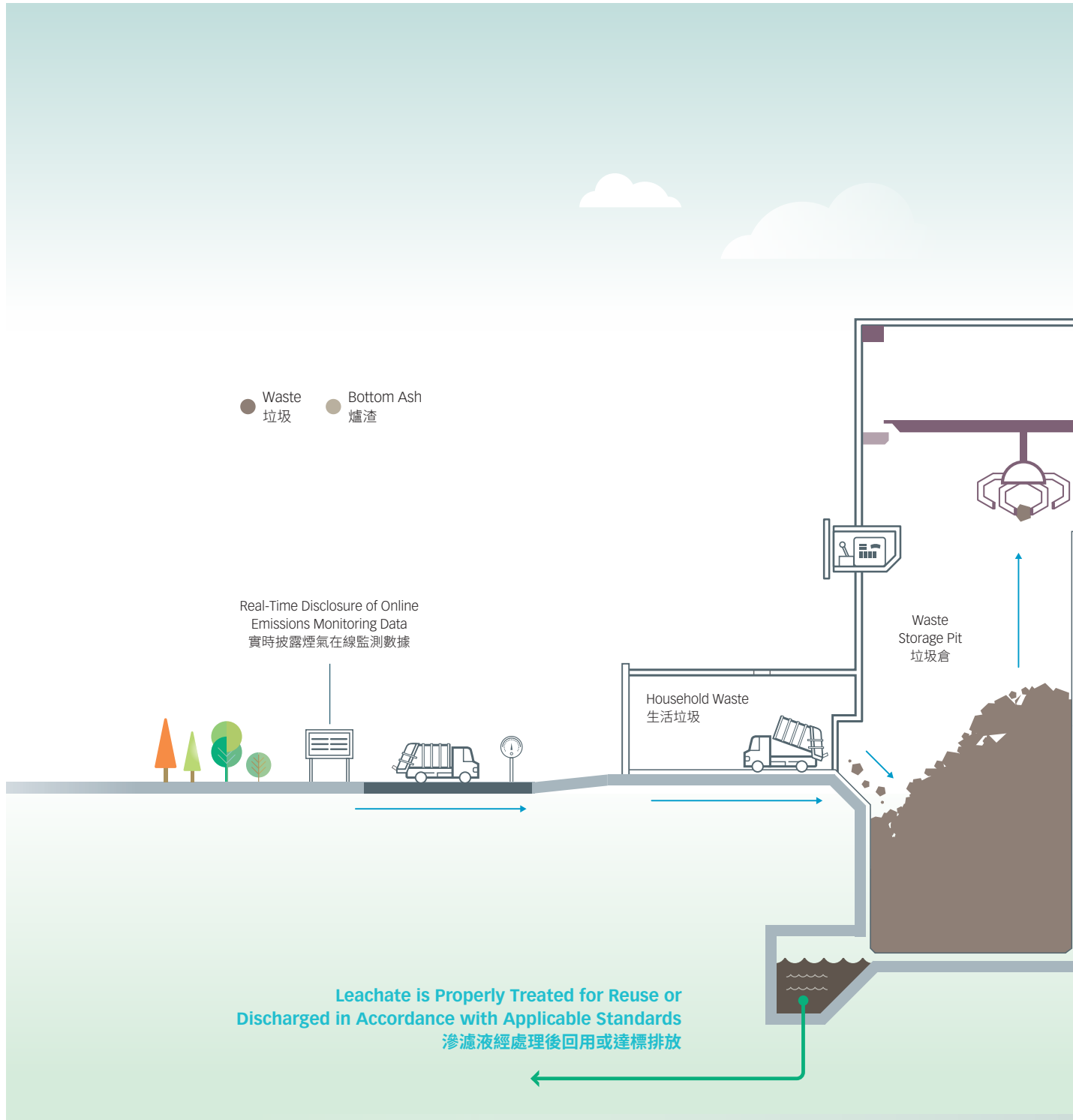
Annual sludge treatment capacity  
年處理污泥量

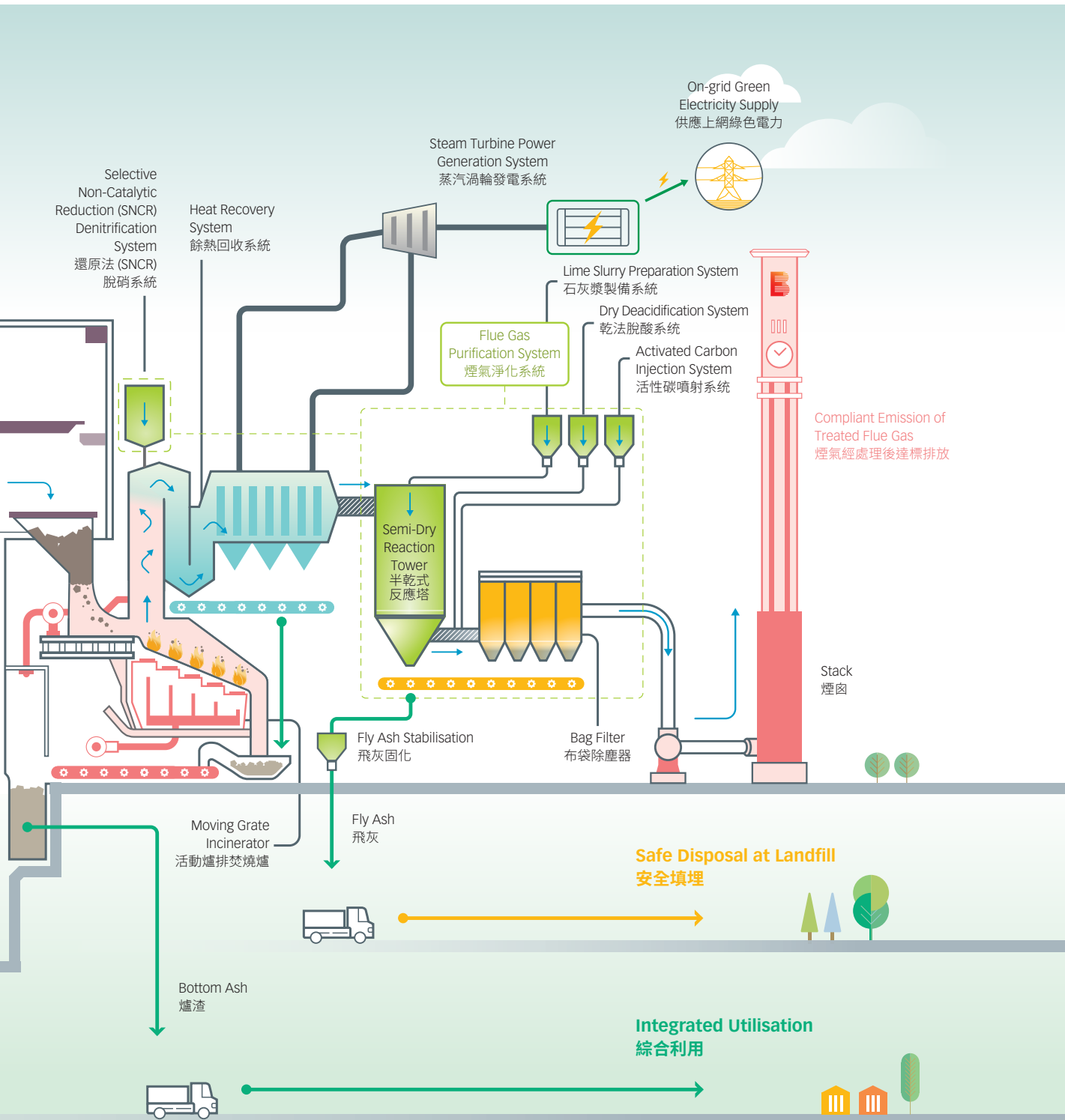
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**195** **Total Contracted Projects**  
(including 3 overseas environmental protection projects which are located in Poland and Vietnam)  
**總簽約項目**  
(包括3個海外環保項目，分別位於波蘭及越南)

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Waste-to-Energy Project – Typical Process Flow Diagram  
垃圾發電項目—典型工藝流程圖





## Greentech 綠色環保

**One of the China's leading investors and operators specialised in integrated biomass utilisation, harmless treatment of hazardous and solid waste**

Everbright Greentech, with its controlling shareholder being Everbright Environment, is a company listed on the Main Board of the Stock Exchange (stock code: 1257.HK). It focuses on integrated biomass utilisation, hazardous and solid waste treatment, environmental remediation, solar energy and wind power, among others.

全國領先的生物質綜合利用、危廢及固廢無害化處置投資運營商之一

光大綠色環保是由光大環境控股，及為聯交所主板上市公司（股份代號：1257.HK），專注於生物質綜合利用、危廢及固廢處置、環境修復、光伏發電、風電等業務領域。





**As at 31 December 2020**  
截至二零二零年十二月三十一日

**4** Biomass direct combustion projects  
生物質直燃發電項目

**11** Biomass electricity and heat cogeneration/heat supply projects  
生物質熱電聯供／供熱項目

**35** Urban-rural integration projects  
城鄉一體化項目

**60** Hazardous and solid waste treatment projects  
危廢及固廢處置項目

**36** Environmental remediation projects  
環境修復項目

**9** Solar energy and wind power projects  
光伏發電及風電項目

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**155** **Total Contracted Projects**  
總簽約項目

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**Total Designed Capacities**  
設計總規模

approximately 約 **8,089,800** tonnes  
噸

Annual processing capacity of biomass raw materials  
年處理生物質原材料量

approximately 約 **3,595,250** tonnes  
噸

Annual household waste processing capacity  
年處理生活垃圾量

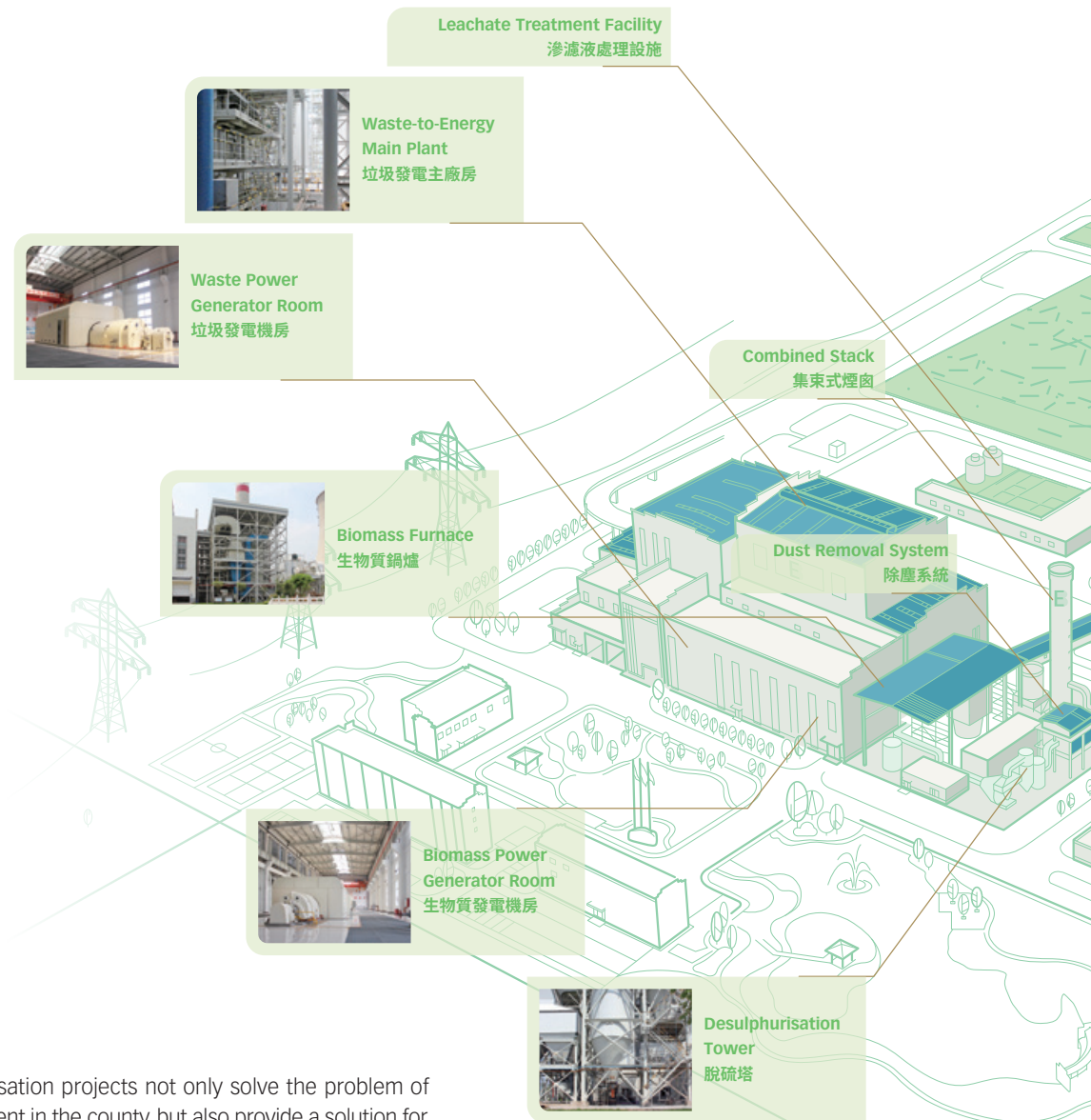
approximately 約 **2,841,900** tonnes  
噸

Annual hazardous and solid waste treatment capacity  
年處置危廢及固廢量

approximately 約 **4,519,000** tonnes  
噸

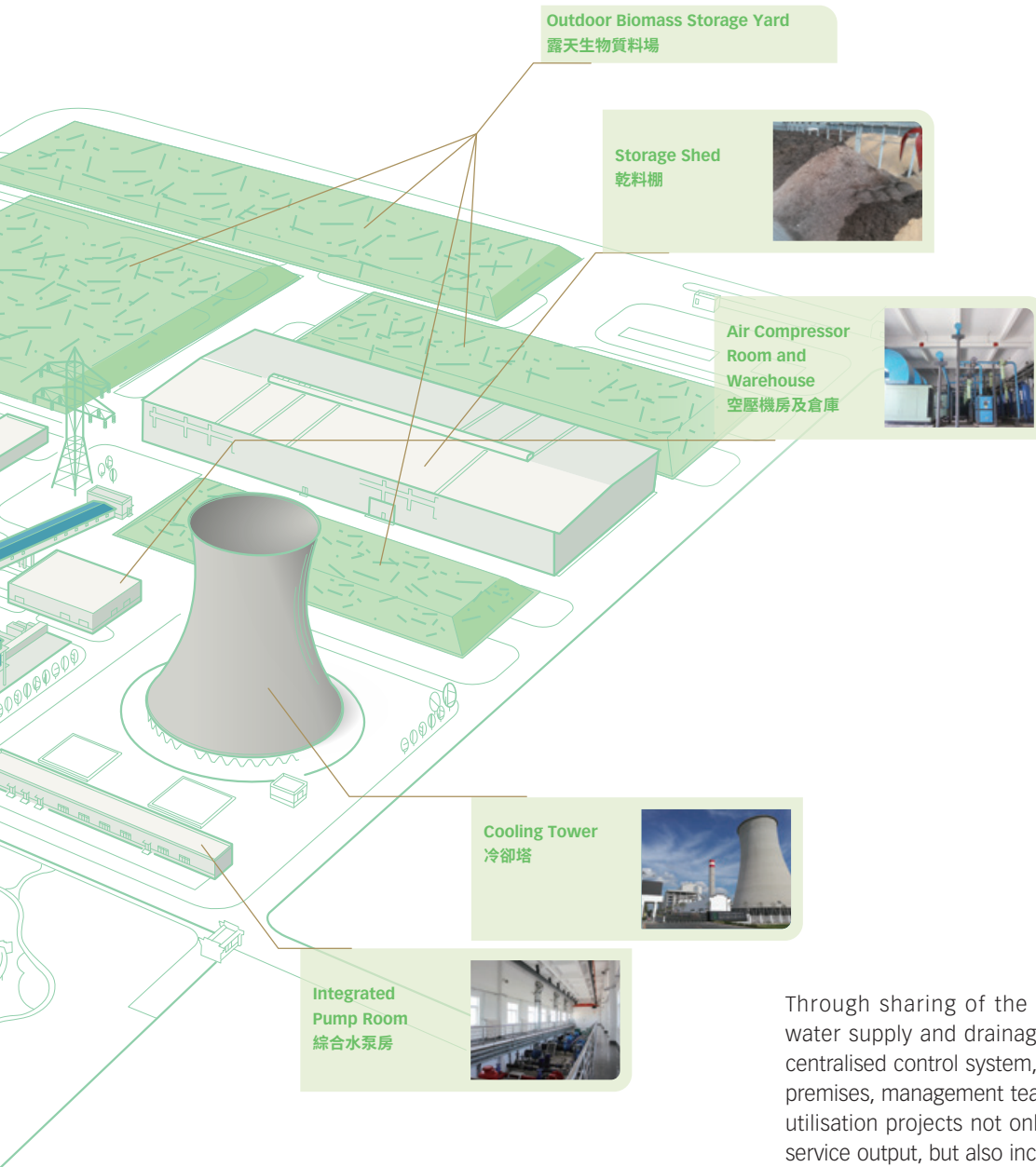
Annual steam supply capacity  
年供蒸汽量

## Integrated Biomass Utilisation Project – Overview 生物質綜合利用項目—概覽



Integrated biomass utilisation projects not only solve the problem of household waste treatment in the county, but also provide a solution for the treatment of rural household waste. Such projects can completely solve problems associated with soil and groundwater contamination caused by landfilling and leachate, and reduce the amount of land needed for landfill. At the same time, such projects have greatly changed the current practices of burning straw in open space and have reduced smog formation.

生物質綜合利用項目不僅可以解決縣城內的生活垃圾問題，還可以為農村生活垃圾處理提供出路，徹底解決生活垃圾填埋及滲濾液污染土壤及地下水問題，可節約因填埋垃圾佔用的大量土地，同時極大程度上改變農村露天焚燒秸稈的現狀，減少霧霾的形成。



Through sharing of the main plant, grid system, water supply and drainage system, cooling system, centralised control system, office and accommodation premises, management team, etc., integrated biomass utilisation projects not only maximise environmental service output, but also increase the overall returns on investment of the projects, and enhance the Group's competitiveness.

生物質綜合利用項目通過共用主廠房、電網系統、給排水系統、冷卻系統、中控系統、辦公住宿場所及管理團隊等，既能提高環境服務產出，也能增加項目整體投資回報並提升本集團的競爭力。

## Environmental Water 環保水務

### Water environment management integrated services provider

Everbright Water, with its controlling shareholder being Everbright Environment, is a company listed on the Mainboard of SGX and the Main Board of the Stock Exchange (stock codes: U9E.SG and 1857.HK). It has developed a full-fledged business coverage, which includes raw water protection, water supply, municipal waste water treatment, industrial waste water treatment, reusable water, river-basin ecological restoration, sludge treatment and disposal, etc. It also specialises in the areas of project investment, planning and design, technology R&D, engineering construction, operations management, etc.

### 水環境治理綜合服務提供商

光大水務是由光大環境控股，並為新交所及聯交所主板上市公司（股份代號：U9E.SG及1857.HK），目前已實現原水保護、供水、市政污水處理、工業廢水處理、中水回用、流域治理、污泥處理處置等全業務覆蓋，精專於項目投資、規劃設計、技術研發、工程建設、運營管理等業務領域。



As at 31 December 2020  
截至二零二零年十二月三十一日

**107** Municipal waste water treatment projects  
(including 1 O&M project)  
市政污水處理項目  
(包括1個委托運營項目)

**13** Industrial waste water treatment projects  
(including 1 O&M project)  
工業廢水處理項目  
(包括1個委托運營項目)

**7** Reusable water projects  
中水回用項目

**6** River-basin ecological restoration projects  
流域治理項目

**3** Water supply projects  
供水項目

**2** Waste water source heat pump projects  
污水源熱泵項目

**1** Raw water protection project  
原水保護項目

**1** Leachate treatment project  
滲濾液處理項目

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**140** **Total Contracted Projects**  
(In addition to 3 EPC projects)  
**總簽約項目**  
(另承接3個EPC項目)

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**Total Designed Capacities**  
設計總規模

approximately 約 **1,997,134,000** m<sup>3</sup> 立方米

Annual waste water treatment capacity  
年污水處理

approximately 約 **71,759,000** m<sup>3</sup> 立方米

Annual reusable water supply capacity  
年供中水

approximately 約 **310,250,000** m<sup>3</sup> 立方米

Annual water supply capacity  
年供水

Area served by waste water source heat pump projects' heating and cooling supply  
污水源熱泵項目可提供供熱及製冷服務的面積

approximately 約 **295,000** m<sup>2</sup> 平方米

## Equipment Manufacturing

Our equipment manufacturing sector rides on the philosophy of “accelerating marketisation and satisfying market demands” to further promote the brand image. It focuses on strengthening its full-process service system that covers R&D, manufacturing and maintenance, and improving its sustainability.

Everbright Environment has currently established a comprehensive waste-to-energy system with a full set of intellectual property rights, covering grate furnaces, flue gas purification systems, leachate treatment and automatic control systems. A series of cutting-edge products were launched to demonstrate Everbright Environment’s technological strengths in the area of environmental protection equipment manufacturing in the PRC. Equipment manufacturing has not only commanded a top-tier position in the domestic environmental protection technology industry, but has also successfully strengthened its influence in the global market.

## 裝備製造

裝備製造板塊圍繞「加快市場化轉型，貼近市場需求」進一步推廣品牌，強化從研發、製造到維護的全流程服務體系，提升可持續發展水平。

目前光大環境已建立具有全面自主知識產權的垃圾發電整體技術體系，包括焚燒爐排爐、煙氣淨化、滲濾液處理及自動化控制，亦在國內推出了一系列代表光大環境環保裝備製造領域核心技術的領先產品，不僅佔據國內環保行業的技術制高點，其國際行業影響力也日漸提升。

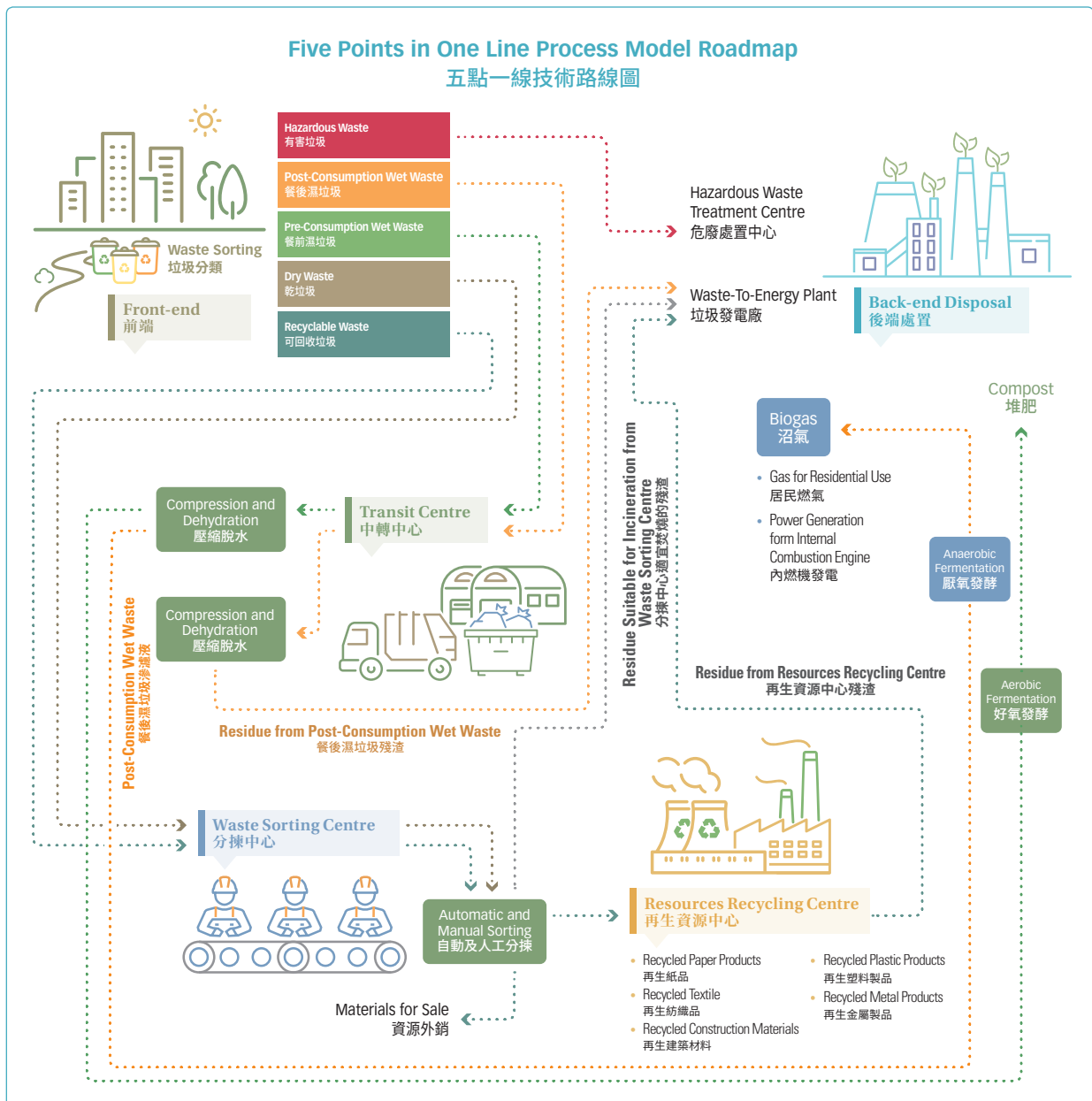


## Eco-recycling

The development strategy of the Group's eco-recycling sector is "light assets, new technologies, high returns". It focuses on three main business areas, namely waste sorting and zero-waste cities, environmental sanitation integration and resource recycling, and has established the "Five Points in One Line" full-chain business regime, which covers waste sorting and collection, sanitary transfer, intelligent sorting, resources utilisation and end disposal. Eco-recycling leverages on "Five Points in One Line" process model for waste sorting, which includes sorting, transferring, selecting, recycling and incinerating of waste, and proactively explores synergistic opportunities with other business sectors of the Group.

## 生態資源

生態資源板塊的發展戰略為「輕資產、新技術、高回報」，聚焦垃圾分類及無廢城市、環衛一體化、再生資源回收三大主營業務領域，構建從垃圾分類收集、清潔轉運、智能分揀、資源化利用到末端處置的「五點一線」全產業鏈業務體系。生態資源圍繞垃圾「分、轉、揀、用、燒」全過程「五點一線」技術路線，積極與本集團旗下相關業務板塊實現業務聯動。



## Greenergy

The Group's greenergy sector is commissioned based on a subsidiary (Everbright Greenergy and Lighting (Shenzhen) Limited) as the main business platform, and leverages on its core product Everbright New Sodium Lamp. The sector adheres to the development philosophy of "Healthy, Energy-saving and Intelligent Lighting", and focuses on building a full industry chain that includes R&D and manufacturing of energy-saving street lamps, urban outdoor lighting projects and other types of energy-saving lighting products. Greenergy provides integrated lighting solutions to users based on three major business models, namely EMC, EPC and direct sales.

During the Reporting Period, greenergy's first streetlight upgrading project based on an EMC model in Rizhao, Shandong was completed. It mainly involves replacement of more than 12,000 high-pressure sodium streetlights in Rizhao with the Everbright New Sodium Lamps that are more energy-efficient. Everbright Environment is committed to expanding its force in the energy-saving lighting market by gaining experience through adopting the EMC model.

## Envirotech

Envirotech is the technology R&D sector of Everbright Environment, focusing on solving technical process challenges and pursuing international cutting-edge technologies in the environmental protection industry. Envirotech is Everbright Environment's engine for technology R&D and innovation. During the Reporting Period, envirotech substantially established the "Four-in-One" technological innovation and R&D layout with platforms in Hong Kong, Shenzhen, Nanjing and Qingdao cities, in order to better promote the Group's strategic planning of pursuing development that is driven by technology and innovation, as well as to ensure the commercialisation of the technology R&D results.

## 光大照明

光大照明板塊依託附屬公司(光大節能照明(深圳)有限公司)為主要業務平台,以光大新鈉燈為核心產品,以「健康照明、節能照明、智慧照明」為發展理念,專注節能路燈、城市亮化工程、其他節能照明產品研發及製造等全產業鏈佈局,通過EMC、EPC及產品直銷三種主要業務模式,為使用者提供照明綜合解決方案。

報告期內,光大照明首個位於山東的日照路燈節能改造EMC項目已順利完成,項目主要涉及對日照超過1.2萬盞路燈進行改造,將原有的高壓鈉燈更換為更加節能高效的光大新鈉燈。光大環境通過累積EMC業務模式相關經驗,致力打造於節能照明市場拓展新動力。

## 綠色科創

綠色科創是光大環境旗下的技術研發板塊,專注於環保工藝技術難點攻關,瞄準國際環保前沿技術,是光大環境實現技術研發創新的引擎。綠色科創於報告期內進一步優化整合,實質性完成於香港、深圳、南京、青島的「一院四城」科技創新研發體系佈局,更好地推動本集團科技創新引領發展的戰略構想,保障科技研發的實效產出。





**As at 31 December 2020**  
截至二零二零年十二月三十一日

The Group had been granted **1,008** patents in total, including **116** invention patents, **796** utility models, **91** software copyrights and **5** appearance patents.

本集團獲授權專利合共**1,008**項，其中發明專利**116**項、實用專利**796**項、軟件著作專利**91**項及外觀專利**5**項。



Everbright — Qingdao University of Technology Research Institute of Environmental Technology (“Qingdao Institute”) was recognised by the Environmental Resources Association as a “Laboratory of Excellence” in an international proficiency test

光大理工環境技術研究院(「青島研究院」)通過環境資源協會組織的國際檢測能力驗證獲評「卓越實驗室」

## Environmental Planning

Environmental planning sector leverages on Everbright Ecological and Environmental Planning and Design Institute as the main platform, with a focus on the fields of environmental protection and energy. It strives to build core technological capabilities, expand the business scope and achieve technological strength, to become a first-class planning and design institute in China.

## 環境規劃

環境規劃板塊依託光大生態環境設計研究院為主要平台，確立以環保和能源領域業務為主要發展方向，深度打造核心技術能力，拓展業務寬度，攻堅技術深度，定位一流國家級規劃設計院。

For details of our businesses and prospects, please refer to the Annual Report 2020.  
有關我們業務表現和展望的詳情，請參閱我們的二零二零年年報。



We draw on  
COLLECTIVE WISDOM,  
ADVICE  
and SUGGESTIONS

集思廣益  
建言獻策

STAKEHOLDER  
ENGAGEMENT  
持份者參與

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**M**aintaining regular communication with stakeholders is an essential part of the Group's daily operations. In the life cycle of every project of the Group, we listen to the opinions of our stakeholders and respond to their concerns through different channels to better understand their expectations, which enables us to formulate and adjust our current and future sustainable development strategies.

**與**持份者保持定期的溝通是本集團日常運營中不可或缺的一部分。在本集團每個項目生命週期，我們均透過不同途徑聆聽持份者的意見並回應他們所關注的議題，以更有效地了解他們的期望，從而幫助我們確立及調整當前及未來的可持續發展策略。

The Group's business involves a wide range of stakeholder groups, including investors, shareholders, governments, customers, employees, villagers, local communities, business partners, suppliers, media, investment analysts and non-governmental organisations. The Group identifies stakeholders based on the following five principles:

本集團的業務廣泛涉獵多個持份者組別，包括投資者、股東、政府、客戶、員工、村民、當地社區、業務夥伴、供應商、媒體、投資分析員及非政府組織。本集團對持份者的識別基於以下五個原則：

Responsibility 責任	Influential Power 影響力	Proximity 鄰近性	Dependency 倚靠性	Representativeness 代表性
Stakeholders connected to the Group through legal, financial, operational procedures, contracts and/or policies 通過法律、財務、運營規則、合約及／或政策與本集團聯繫的持份者	Stakeholders with formal decision-making power or informal influence on the Group 對本集團具有正式決策權或非正式影響力的持份者	Stakeholders who live closely to the Group's operating plants and who interact closely with the Group's operations 居於本集團運營廠房附近及與本集團日常運營關係密切的持份者	Stakeholders who are highly dependent on the Group's business operations 在很大程度上倚靠本集團業務運營的持份者	Stakeholders who are the representatives of the sectors that are closely connected with the Group 來自與本集團聯繫最緊密的業界代表的持份者



During the Reporting Period, we continued to maintain close communication with various stakeholders through diversified channels:

報告期內，我們繼續透過多元化的渠道與各持份者保持緊密聯繫：

Stakeholder Group 持份者組別	Channel of Engagement or Communication 參與或溝通途徑	Frequencies or Time of Engagement 頻率或時間
<b>Investors, Shareholders</b> 投資者、股東  	Annual/extraordinary general meeting 股東週年／特別大會  Press release/announcement/circular 新聞稿／公告／通函  Results presentation 業績發佈會  Interim report/annual report 中期報告／年報  Roadshow 路演  Meeting/teleconference 會議／電話會談  Site visit 現場考察	Annually/as needed 每年／根據需要  Regularly/as needed 定期／根據需要  Half-yearly/annually 每半年／每年  Half-yearly/annually 每半年／每年  Regularly/as needed 定期／根據需要  Regularly/as needed/upon request 定期／根據需要／根據要求  As needed/upon request 根據需要／根據要求
<b>Governments</b> 政府  	Progress report 進度報告  Site visit 現場考察  Meeting 會議  WeChat and QQ 微信及QQ  Phone or email 電話或電郵聯繫  Customer satisfaction survey 客戶滿意度調查	Weekly/monthly/quarterly 每週／月／季  Weekly/monthly/quarterly 每週／月／季  Weekly/monthly/quarterly 每週／月／季  As needed 根據需要  Weekly/monthly/quarterly 每週／月／季  Annually 每年



<b>Stakeholder Group</b> 持份者組別	<b>Channel of Engagement or Communication</b> 參與或溝通途徑	<b>Frequencies or Time of Engagement</b> 頻率或時間
<b>Villages, Local Communities</b> 村民、當地社區  	Project visit/site visit 項目參觀／現場考察  Survey 意見調查  Public hearing 公聽會	Before construction/open day on the first weekend of every month/upon request 工程施工前／每月第一個週末之公眾開放日／根據要求  Before construction/as needed 工程施工前／根據需要  Before construction/as needed 工程施工前／根據需要
<b>Investment Analysts</b> 投資分析員  	Project visit/site visit 項目參觀／現場考察  Meeting 會議  Press release/announcement 新聞稿／公告  Results presentation 業績發佈會  Interim report/annual report 中期報告／年報	As needed/upon request 根據需要／根據要求  As needed/upon request 根據需要／根據要求  Regularly/upon request 定期／根據要求  Half-yearly/annually 每半年／每年  Half-yearly/annually 每半年／每年
<b>Business Partners, Suppliers</b> 業務夥伴、供應商  	Pre-tender meeting 採購招標會  Phone interview 電話回訪  Questionnaire 調查問卷  WeChat and QQ 微信及QQ	Every tender event 每次招標活動  As needed 根據需要  Ad hoc 不定期  As needed 根據需要

Stakeholder Group 持份者組別	Channel of Engagement or Communication 參與或溝通途徑	Frequencies or Time of Engagement 頻率或時間
<b>Customers</b> 客戶 	Meeting 會議  Phone or email 電話或電郵  Customer satisfaction survey 客戶滿意度調查	Weekly/monthly/quarterly 每週/月/季  Weekly/monthly/quarterly 每週/月/季  Annually 每年
<b>Employees</b> 員工 	Work meeting/project meeting 工作會議/專題會議  Performance review meeting 表現評估會議  Everbright Internal publication 光大報刊  Charitable activity 公益活動  Face-to-face meeting/teleconference 當面會談/電話會談  Email to CEO and/or the Chairman of the Audit Committee 電郵至總裁及/或審核委員會主席	Regularly 定期  Interim/year-end 年中/年末  Monthly 每月  As needed 根據需要  As requested by employees 根據員工要求  As needed 根據需要
<b>Media</b> 媒體 	Project visit/site visit 項目參觀/現場考察  Press release/announcement 新聞稿/公告  Management interview 管理層採訪  Results presentation 業績發佈會	As needed/upon request 根據需要/根據要求  Regularly/as needed 定期/根據需要  Regularly/as needed/upon request 定期/根據需要/根據要求  Half-yearly/annually 每半年/每年
<b>Non-Governmental Organisations (NGOs)</b> 非政府組織 	Charitable activity 公益活動  Site visit 現場考察  Meeting 會議	As needed 根據需要  Regularly/as needed 定期/根據需要  As needed 根據需要



## Materiality Assessment

The Group conducts a comprehensive materiality assessment annually to identify the economic, environmental and social issues with priority, set the scope and boundaries for the sustainability report, as well as to foster the Group's involvement on sustainable development.

The materiality assessment in 2020 was conducted in four stages as follows:

## 實質性評估

本集團每年均會進行一次全面的實質性評估，以識別最優先的經濟、環境和社會議題及確立可持續發展報告範圍和邊界，並進一步推動本集團的可持續發展工作。

二零二零年的實質性評估分為下列四個階段：

### Stage 1 第一階段

#### Identification of Sustainability Topics 識別可持續發展議題

The Group engaged an external sustainability consultant to identify and review the sustainability topics that were most relevant to the Group's business (refer to "List of Sustainability Topics"). To ensure the topics identified could truly reflect the business nature of the Group as well as the results of communication with stakeholders, these topics were determined from extensive sources of information, including the GRI Standards, SDGs, opinions from stakeholders, opinions from the Board and management, internal publications, media information analysis, etc.

本集團委聘外部可持續發展顧問全面識別及檢視與本集團業務最密切的可持續發展議題（見「可持續發展議題列表」）。這些議題乃透過廣泛來源所得，包括GRI準則、SDGs、持份者意見、董事會及管理層建議、內部刊物及媒體信息分析等，以確保識別出來的議題充分反映本集團的業務性質及與持份者溝通的結果。

### Stage 2 第二階段

#### Collection of Opinions from Stakeholders, Establishment of Materiality Matrix 收集持份者意見，繪製實質性矩陣

A stakeholder engagement survey was conducted by the external sustainability consultant to obtain the order of priority of the material topics identified in Stage 1 from the 9 key stakeholder groups. The findings were then quantitatively analysed by the consultant in the form of materiality matrix based on two parameters: perceived importance to the stakeholders and significance of impacts to Everbright Environment. The prioritised topics perceived by both the stakeholders and the Group with the highest importance become the focus of disclosure of the Report.

外部可持續發展顧問對九個重點持份者組別進行持份者參與調查，依據調查結果為第一階段識別到的可持續發展議題作優先排序。顧問隨即根據持份者對議題的重要性的和議題對光大環境的重要性這兩個參數評分，對這些議題的實質性作量化分析，並將分析結果以矩陣形式表達，從而確定在兩個層面最為重要的議題。於持份者和本集團層面最為重要的議題即為本報告的披露重點。

### Stage 3 第三階段

#### Validation of Material Topics and Data Analysis 驗證實質性議題及數據分析

The prioritised material topics and boundaries were validated by the Board to ensure the reasonableness, balance and completeness of the Report. Following this process, the Group's external sustainability consultant reframed the material topics into the GRI Standards for reporting purpose. The established systematic data collection and monitoring mechanisms managed by the Operations Management Department of the Group ensures that all project companies provide accurate and comprehensive sustainability data on a regular basis.

董事會對經優先排序的實質性議題及其邊界作驗證，以確保本報告的合理性、平衡性及完整性。隨後，外部可持續發展顧問將實質性議題轉換為GRI準則，外作報告之用。本集團運營管理部透過系統化的數據收集和監測機制，確保所有項目公司定期提供準確、全面的可持續發展數據。

### Stage 4 第四階段

#### Materiality Review 檢視實質性

Prior to the preparation of the Report, the Group reviewed the material topics and disclosure practices of its previous reports, and collected stakeholders' opinions through stakeholder survey on Everbright Environment's sustainability performance in 2020. All opinions and data were reported in the Board meeting, and reviewed and verified by the Board. The materiality review engages stakeholders in the sustainable development management and disclosure process comprehensively, and is beneficial to the Group in accomplishing long-term sustainable development goals.

在準備本報告之前，本集團對過往報告的實質性議題和披露工作進行了回顧及審閱，並通過持份者參與調查收集持份者對光大環境於二零二零年可持續發展表現的意見。所有意見及數據皆於董事會會議中匯報，並由董事會檢視及核實實質性，以助持份者更全面地參與可持續發展的管理和披露過程，同時有利於本集團實踐長遠的可持續發展目標。





List of Sustainability Topics

可持續發展議題列表

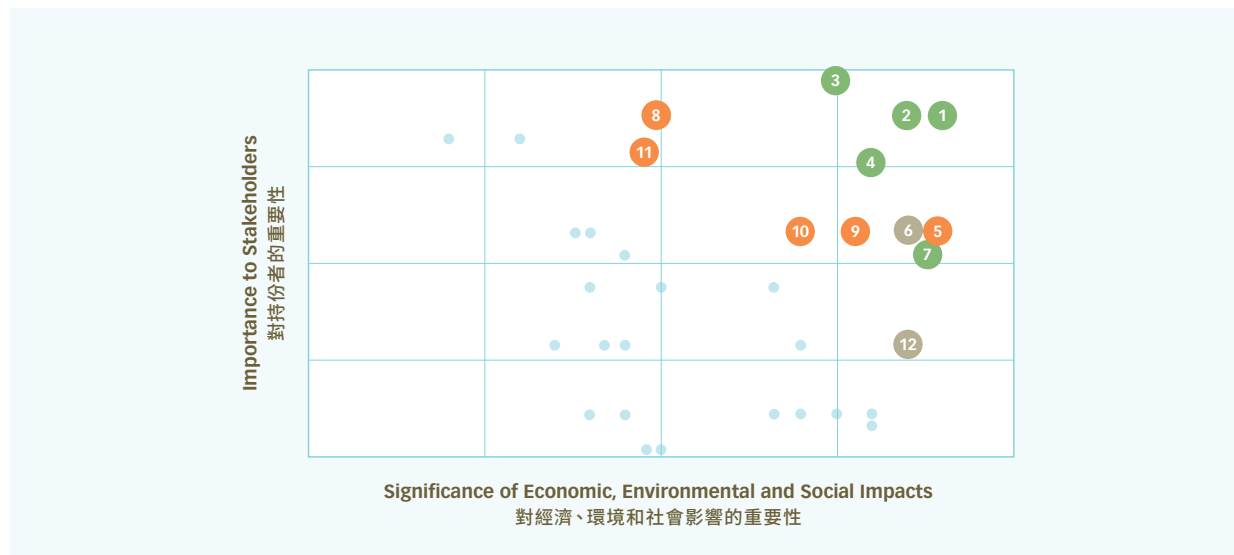
Economic 經濟	Environmental 環境	Social 社會
<ul style="list-style-type: none"> <li>Economic Performance 經濟績效</li> <li>Market Presence 市場地位</li> <li>Indirect Economic Impacts 間接經濟衝擊</li> <li>Procurement Practices 採購行為</li> <li>Technology R&amp;D 技術研發</li> <li>Anti-Corruption 反貪腐</li> <li>Anti-Competitive Behaviour 反競爭行為</li> </ul>	<ul style="list-style-type: none"> <li>Materials Usage 物料使用</li> <li>Energy Efficiency 能源效益</li> <li>Water Resources Consumption 水資源消耗</li> <li>GHG Management and Climate Change Mitigation 溫室氣體管理及氣候變化的應對</li> <li>Waste Water Treatment 污水處理</li> <li>Waste Management 廢物管理</li> <li>Biodiversity 生物多樣性</li> <li>Environmental Compliance 環境合規</li> <li>Suppliers' Environmental Assessment 供應商環境評估</li> <li>Construction Management 在建項目施工管理</li> <li>Environmental Protection Education 環保教育</li> </ul>	<ul style="list-style-type: none"> <li>Employee Welfare 員工福利</li> <li>Occupational Health and Safety 職業健康與安全</li> <li>Employee Training 員工培訓</li> <li>Diversity and Equal Opportunity 多元化及平等機會</li> <li>Internal Communication 內部溝通</li> <li>Protection of Human Rights and Freedom 保障人權及自由</li> <li>Poverty Alleviation 扶貧</li> <li>Social Assessment of Suppliers 供應商社會評估</li> <li>Rights of Indigenous Peoples 原住民權利</li> <li>Health and Safety of Communities 社區健康及安全</li> <li>Child Labour and Forced Labour 童工與強制勞工</li> <li>Disaster and Emergency Planning and Response 災難及應急預案規劃</li> <li>Participation of Community 社區參與</li> <li>Social Compliance 社會合規</li> <li>Third-Party Privacy 第三方私隱</li> </ul>

Materiality Matrix

實質性矩陣

Based on the results of the materiality assessment, the material topics are ranked in the matrix below according to their priority, while impacts and boundaries of the concerned impacts, the corresponding GRI Standards as well as the SDGs that are most relevant to the Group are identified.

我們基於實質性分析的結果，識別與本集團最具關連的重要議題，按優先次序按矩陣圖排列如下，並識別相關議題的影響力及範圍、其相應的GRI準則及相關的聯合國可持續發展目標。

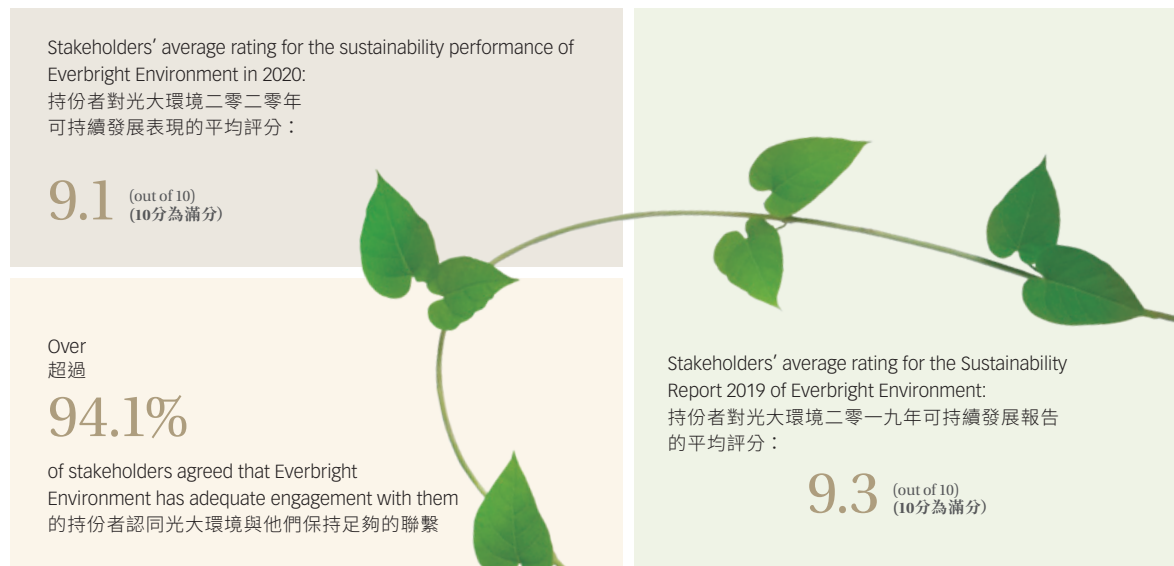




Material Topics/ Stakeholders' Concerns 實質性議題/ 持份者的關注	Impacts and Boundaries 影響及範圍										GRI Standards GRI準則	Key Relevant SDGs 主要相關的 可持續 發展目標					
	Investors, Shareholders	Employees	Governments	Villagers, Local Communities	Customers	Business Partners, Suppliers	Investment Analysts	Media	NGOs	投資者、股東			員工	政府	村民、當地社區	客戶	業務夥伴、供應商
1 Environmental Compliance 環境合規	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	GRI 307 Environmental Compliance 有關環境保護的法規遵循	16. PEACE, JUSTICE AND STRONG INSTITUTIONS					
2 Waste Management 廢物管理	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	GRI 306 Waste 廢棄物	15. LIFE ON LAND					
3 Waste Water Treatment 污水處理	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	GRI 303 Water and Effluents 水資源與污水	6. CLEAN WATER AND SANITATION 14. LIFE BELOW WATER					
4 GHG Management and Climate Change Mitigation 溫室氣體管理及氣候變化的應對	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	GRI 305 Emissions 排放	13. CLIMATE ACTION					
5 Occupational Health and Safety 職業健康與安全	✓	✓	✓						✓	✓	GRI 403 Occupational Health and Safety 職業安全衛生	3. GOOD HEALTH AND WELL-BEING					
6 Economic Performance 經濟績效	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	GRI 201 Economic Performance 經濟績效	8. DECENT WORK AND ECONOMIC GROWTH					
7 Energy Efficiency 能源效益	✓	✓		✓	✓						GRI 302 Energy 能源	12. RESPONSIBLE CONSUMPTION AND PRODUCTION					
8 Child Labour and Forced Labour 童工及強制勞動	✓	✓							✓	✓	GRI 408 Child Labour 童工 GRI 409 Forced or Compulsory Labour 強迫或強制勞動	16. PEACE, JUSTICE AND STRONG INSTITUTIONS					
9 Disaster and Emergency Planning and Response 災難及應急預案規劃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not Applicable 不適用	11. SUSTAINABLE CITIES AND COMMUNITIES					
10 Social Compliance 社會合規	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	GRI 419 Socioeconomic Compliance 社會經濟法規遵循	16. PEACE, JUSTICE AND STRONG INSTITUTIONS					
11 Rights of Indigenous Peoples 原住民權利	✓	✓	✓	✓				✓	✓		GRI 411 Rights of Indigenous Peoples 原住民權利	10. REDUCED INEQUALITIES					
12 Technology R&D 技術研發	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not Applicable 不適用	9. INDUSTRY, INNOVATION AND INFRASTRUCTURE					

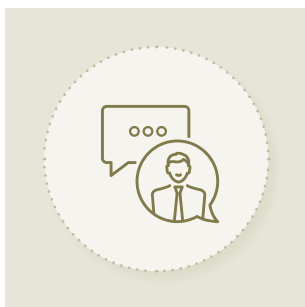


## Voices of Stakeholders 持份者聲音



### Supplier 供應商

"Everbright Environment has great communication with the suppliers and is able to deal with problems in a fair and proper manner. Also, the staff act with integrity and friendliness. We had a pleasant experience working together."  
「光大環境與供應商的溝通非常到位，出現問題能公平公正處理，而且相關人員廉政從業，平易近人，我們合作得非常愉快。」




### Employee 員工

"Everbright Environment is developing rapidly that its influence in the industry continues to increase. Meanwhile, the Company attaches great importance to the cultivation of talents, and adheres to the operation philosophy of pursuing excellence and close of zero discharge, so that it can maintain rapid and healthy development."  
「光大環境發展迅速，在行業中的影響力不斷增加，同時本公司非常注重人才隊伍的培養，並堅持精益求精、追求完美、近零排放、追求卓越的經營理念，使本公司可以保持快速、健康發展。」



### Local Community 當地社區

"Everbright Environment demonstrates great performance in environmental management with advanced technology while strictly enforces emissions standards. The Group's operating plants have a nice scenery."  
「光大環境在環境管理方面做得非常好，技術先進，排放嚴格執行標準，廠區環境優美。」



Upholding  
CORPORATE INTEGRITY  
and fulfilling  
SOCIAL RESPONSIBILITY

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秉持**企業誠信**  
善盡**社會責任**

SUSTAINABLE  
OPERATIONS MANAGEMENT  
可持續的運營管理

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**A**dhering to the management philosophy of “Pursuing Excellence and Close to Zero Discharge” and the principle of “People-Oriented, Pragmatism, Creativity and Systematic Management”, the Group has established a mature organisational management structure and identified responsibilities and obligations of employees at all levels. Through the monthly Management Decision Committee meetings, the Group summarises and reviews its business operations and management in a timely manner, so as to continuously improve its sustainable development capabilities.

The Group fully observes all relevant national and regional laws, regulations and standards, actively upholds corporate social responsibilities, and strives to minimise the adverse business impacts on the environment and society.

### Business Principles

The Group persists in carrying out the management principle of integrity and pragmatism, sticks to ethics, and strives to strengthen and promote the corporate culture of sincerity. The Group has formulated and has been improving the *Employee Code of Conduct* to provide employees with clear guidelines and instructions on equal opportunity, anti-discrimination, prevention of bribery and extorting, anti-fraud, anti-money laundering, prevention of conflict of interest, use of confidential and proprietary information, safeguarding employees’ benefits and welfare and other relevant issues, so as to strengthen employees’ awareness of rules and ethics and create a healthy and orderly corporate atmosphere.

The bonuses of executive Directors and the senior management of the Company are linked to metrics such as operating profit, leadership, safety and environmental performance, etc., to ensure the alignment of long-term interests between the Directors and the management and the Company together with its shareholders. Details of the Directors’ remuneration information can be found in the Company’s Annual Report 2020.

### Prevention of Corruption and Anti-Competitive Behaviour

To promote the anti-corruption practice and improve employees’ awareness on conflict of interests and integrity issues, the Group continues to provide all kinds of anti-corruption trainings for the Directors and employees, such as “Training on Upholding and Implementing Probity”, “Lecture on Probity”, etc. Besides, trainings related to the Group’s *Employee Code of Conduct*, corporate culture, policies, and management systems were also actively organised to further promote morality and discipline, and to enhance the integrity culture within the Group.

**本**集團秉承著「精益求精、追求完美，近零排放、追求卓越」的管理理念，以及「以人為本、求真務實、開拓創新、規範管理」的理念，建立了一套完善的管理組織架構，不僅明確了各職級責任與義務，更通過每月的管理決策委員會會議及時總結檢討業務運營及管理情況，從而不斷提高本集團的可持續發展能力。

本集團全面遵守所有相關的國家和地方法規、規則和標準，並積極承擔企業社會責任，努力降低業務對環境和社會帶來的不良影響。

### 營商原則

本集團在各業務運作中始終貫徹落實誠信與務實的管理方針，堅守道德操守，致力於營造並推廣誠信為本的企業文化。為此，本集團制定並完善內部《員工守則》，在平等機會、反歧視、防止賄賂、防止勒索、反欺詐、反洗黑錢，防止利益衝突、使用機密及獨有資料以及員工待遇和福利保障等各方面為員工提供清晰的指引與說明，以增強員工的規則意識與道德規範，從而營造健康有序的良性企業氛圍。

本公司執行董事及高級管理人員的花紅以經營活動所得盈利、領導才能及安全和環境績效等指標以釐定，確保董事和管理層與本公司及股東的長遠利益一致。有關各董事的薪酬資料，可參閱本公司的二零二零年年報。

### 防止貪腐及反競爭行為

為深入推進反貪實踐、提高員工對利益衝突及誠信事宜的警覺性，本集團堅持為董事和員工提供各種形式的反貪腐培訓，如「廉政建設及執行力培訓」和「廉潔工作講座」等，並積極舉辦本集團《員工守則》、企業文化、政策及管理體系的相關培訓，以進一步營造誠信守紀的公司氛圍，加強本集團誠信文化建設。

In addition, the Group holds various forms of educational activities and trainings for the management to strengthen their integrity and self-discipline and promote the spirit of sincerity. The Group also strives to deepen reform of relevant systems and regulation to avoid abuse of power, enhance discipline supervision, and stringently enforce discipline accountability, and thus implement the practice of preventing corruption and anti-competitive behaviour at all business levels.

### Protection of Third-Party Privacy and Intellectual Property

The Group is committed to protecting the personal information and privacy of the third parties. In compliance with the laws and regulations, the *Privacy Policy* of the Group clearly sets out the privacy scope of the third parties, and strictly stipulates a series of procedures and standards for employees and suppliers in processing the privacy data, requiring employees to collect, possess, process, disclose and use personal data of the third parties in accordance with relevant laws. In addition, the *Privacy Policy* also contains the rules of preventing the infringement of intellectual property rights, devoted to protecting intellectual property rights and respecting knowledge and talents.

### Policy for Whistleblowing

The Group adheres to operating its businesses with transparency and integrity, continues to improve the accountability and supervision mechanism, striving to maintain a consistently high standard of corporate governance. In this connection, the Group has put in place the *Internal Whistleblowing and Investigation Policy* and *External Whistleblowing and Investigation Policy*, aiming at providing a safe, confidential and legal channels for employees and related persons to report the actual or suspected misconducts and illegal activities in corporate financial reporting, internal control or other areas so that the Group could pay attention to and effectively investigate the related issues while ensuring that employees have no fear of retaliation. The valid whistleblowing approaches are posted on the Group's website. During the Reporting Period, 6 reports were received through the whistleblowing channels and all such cases had been properly handled.

此外，本集團通過多種形式開展針對管理層的教育活動及培訓，促使各級管理人員嚴格廉潔自律，弘揚清風正氣，同時亦努力強化制度改革與權力約束，增強紀律監督，嚴肅執紀問責，致力於在各業務層面貫徹落實防止貪腐及反競爭行為。

### 保護第三方私隱及知識產權

本集團致力於保護相關第三方的個人資料及私隱。本集團的《私隱政策》在遵守法律規定的基礎上，清楚列明相關第三方的私隱範圍，並嚴格規定了員工及供應商在處理相關資料時的一系列程序及標準，要求員工依法收集、管有、處理、披露及使用第三方個人資料。此外，《私隱政策》亦包含了防止侵犯知識產權的條款，務求各方尊重知識、尊重人才，依法保護相關知識產權。

### 舉報政策

本集團始終堅持各項業務的透明廉潔運作，不斷完善問責監督機制，致力保持企業管治一貫的高標準。為此，本集團制訂了《內部舉報及調查辦法》和《外部舉報及調查辦法》，旨在為員工及其往來人士就本集團財務匯報、內部監控或其他各個方面可能或已發生的不正當或不合法行為進行舉報提供安全、保密且合法的渠道，從而使本集團能夠關注事件並有效跟進調查，同時確保員工毋須畏懼報復。有效之舉報方法已載列於本集團網站。於報告期內，本集團通過舉報渠道收到6個個案報告，全部個案均已妥善處理。

#### Whistleblowing Channels

##### 舉報方式

Chairman of the Audit Committee  
CEO

審核委員會主席  
總裁

ac@cebenvironment.com  
ceo@cebenvironment.com

## Sustainability Approach

The Group actively integrates the principles and considerations related to sustainability into the governance framework and daily operations, commits to creating long-term values and benefits for its stakeholders.

## Sustainable Development Policies and Systems

The Group has established a comprehensive *Environmental and Social Management System* (“ESMS”) in accordance with the *Safeguard Policy Statement* of the Asian Development Bank (“ADB”) and other best practices worldwide. The ESMS covers the entire project cycle from the early-stage planning and design to the final-stage operation and contains requirements in the fields of environmental and social impact screening and categorisation, resettlement, indigenous peoples, environmental impact assessment, information disclosure, public participation, gender equality, due diligence and review, and monitoring and reporting. The system ensures the Group’s operating activities comply with the international environmental and social safeguard principles and requirements.

The Group has fully implemented the Environmental, Safety, Health and Social Responsibility (“ESHS”) Management System (“ESHS Management System”) since 2016 to further improve the implementation of supervision system in business operation. The system comprises management standards to provide procedural guidelines on significant ESHS issue identification, auditing, incident investigation and reporting, occupational injury treatment, and contractor ESHS management. The implementation of the system has not only promoted sustainable development within the Group, but also extended its safety culture and relevant policies to the whole supply chain. In addition, the Group has also implemented the *Points-Based ESHS Management Rules* to encourage employees and outsourced personnel to participate in safety management and supervise one another, so as to accelerate the standardisation of safety management and further improve the safety management proficiency.

The Board and the senior management review sustainability policies of the Group on an annual basis and revise the policies when appropriate.

## 可持續發展方針

本集團積極地將可持續發展原則及考慮融入管治框架及日常運營中，致力為持份者創造長遠價值及利益。

## 可持續發展政策和體系

本集團已根據亞洲開發銀行（「亞發行」）的《保障政策聲明》及國際慣例建立了一套完善的《環境與社會管理制度》。該制度涵蓋由前期規劃到最終運營的項目全週期管理，包括涉及環境和社會影響篩選和分類、搬遷安置、原住民、環境影響評估、信息披露、公眾參與、性別平等、盡職調查和審查，及監測和報告等範疇的要求，以確保本集團的經營活動能滿足國際上關於環境及社會保障的原則和規範。

本集團已於二零一六年起全面實施環境、安全、健康及社會責任（「ESHS」）管理體系（「ESHS管理體系」），以進一步完善監管機制在運營中的有效實踐。該體系包括重要ESHS議題的識別、審核、事故調查及匯報、工傷處理及承包商ESHS管理方面等指導程序的管理標準，不僅促進本集團內部的可持續發展，更將安全文化和相關政策延伸到供應鏈中。此外，本集團亦積極推行《ESHS積分管理制》，致力於推動員工及外協隊伍全員參與安全管理，互相監督，共同推進安全管理規範化，進一步提升安全管理水平。

董事會和高級管理層每年檢視本集團可持續發展政策，並會在適當時作出修訂。

### Corporate Governance Structure for Sustainable Development

The Board is responsible for reviewing and supervising the Group's plans, activities, and performance in relation to sustainability. Besides, the Group has established an ESHS Management Committee under Everbright Environment's Management Decision Committee, which provides practical guidelines and support to the Group's sustainable development and ensures the appropriate decision-making and arrangement of sustainability strategies.

The independent non-executive Directors provide the Group with diversified expertise and experience. Apart from meeting the independence guidelines set out in Rule 3.13 of the Listing Rules, each of the independent non-executive Directors has confirmed that:

1. he has not been employed by the Company in an executive capacity within the last year;
2. he has not been a partner or employee of the Company's outside auditor during the last year;
3. he is not a family member of an individual who is employed by the Company or by any parent or subsidiary of the Company as an executive officer;
4. he has no conflict of interest that the Board itself determines to mean they cannot be considered independent;
5. he has not been (and has not been affiliated with a company that is) an adviser or consultant to the Company or a member of the Company's senior management;
6. he has not been affiliated with a significant customer or supplier of the Company;
7. he has no personal services contract(s) with the Company or a member of the Company's senior management;
8. he has not been affiliated with a not-for-profit entity that receives significant contributions from the Company.

### 可持續發展管治架構

董事會負責審視及監督本集團可持續發展的計劃、活動及表現。本集團於管理決策委員會下亦設有ESHS管理委員會，為企業的可持續發展工作提供領導和實質的支持，並確保本集團在可持續發展方面作出適當的決策和部署。

董事會中獨立非執行董事為本集團帶來多元化的專業知識及經驗。除符合《上市規則》第3.13條所載之獨立性指引外，各獨立非執行董事已確認：

- (一) 在過去一年內未曾以行政人員身份受僱於本公司；
- (二) 在過去一年內未曾受僱於本公司外部核數師或出任其合夥人；
- (三) 現時沒有家屬以行政人員身份受僱於本公司或其任何母公司或附屬公司；
- (四) 現時沒有任何董事會認為會影響其獨立性的利益衝突；
- (五) 現時非本公司或本公司高級管理人員的顧問或諮詢人（也不與作為公司顧問或諮詢人之公司有關聯）；
- (六) 現時與本公司主要客戶或供應商並無關聯；
- (七) 現時與本公司或本公司高級管理人員沒有簽訂個人服務合同；
- (八) 現時與從本公司獲得可觀的捐獻之非營利性實體組織並無關聯。





## Risk Management

The documents of the Group including the *Risk Management Policy*, *Risk Management Operation Manual* and the *Insider Information Reporting Policy* stipulate the Group's detailed workflows and specific implementation requirements of the risk management and internal control. In order to improve the overall risk management of investment projects, our Project Advisory Committee has developed a review system of full-time and part-time committee members respectively. We have also amended and issued the *Project Review Organisation and Review Workflow*, in an effort to strengthen the risk management of investment projects in advance and in process, as well as enhancing the quality and efficiency of the project review.

## 風險管理

本集團的《風險管理制度》、《風險管理操作手冊》及《內幕消息報告政策》等文件規定了本集團在風險管理與內部監控的詳細工作流程和具體執行要求。為加強投資項目的整體風險管理，我們的項目評審委員會已建立項目評審專職委員及兼職委員評審制度，修訂並下發了《項目評審組織及評審流程》，以強化投資項目事前及事中的風險管理，提高項目評審質量及效率。

During the Reporting Period, the Group continued to enhance major risk prevention and internal control compliance management, and revised the list of risk factors, aiming to constantly improve the systematisation and normalisation level of risk management.

In addition, the Group conducts the identification and evaluation of its major risks on an annual basis, and continuously analyses the effectiveness of control methods and follows up specific control results.

報告期內，本集團持續加強重大風險防範和內控合規管理工作，並對風險要素清單進行了修訂，旨在持續提升風險管理系統化和常態化水平。

此外，本集團每年對主要風險進行識別和評估，分析管控措施的有效性，並對具體的管控成效持續跟進。

### Risk Management Framework

A risk management hierarchy, comprising three lines of defence, has been developed to achieve risk management and internal control at all levels:

### 風險管治框架

我們建立了由三道防線構成的風險管理和內部監控組織體系，實現風險的逐級管理：



Everbright Environment strives to strengthen all employees' risk awareness and considers the construction of risk management culture as a significant part of the Group's development strategies. The Group has established effective control measures that are responsive to all kinds of risks. Besides, through various forms of risk education through case studies and trainings on the Group's systems and procedures, we help employees consolidate a sound risk management conception which motivates them to follow a good code of conduct and ethics that facilitate the transformation of risk management awareness into conscious action, and encourage them to integrate such conception into daily work.

光大環境致力於增強全體員工的風險意識，並將風險管理文化建設視為本集團發展戰略的重要組成部分。本集團針對各項風險均制定了有效的管控措施，並透過各類風險案例教育和集團制度流程培訓，幫助員工樹立正確的風險管理觀念，引導員工遵循良好的行為準則和道德規範，進一步將風險管理意識轉化為自覺行動，並將這種意識融入到日常工作當中。

For details of the Group's corporate governance, risk management and internal control, please refer to the Annual Report 2020.

有關本集團的企業管治、風險管理及內部監控的詳情，請參閱二零二零年報。



## Supply Chain Management

The Group has adopted a stringent supplier selection and management system and maintained close cooperation and communication with suppliers to reduce procurement risks and promote responsible procurement. The Group has also made full use of its electronic transaction platform for tendering and procurement, starting a new mode of online bidding, strengthened the supervision and management of bidding, and strived to avoid violation of the rules and regulations.

## 供應鏈管理

本集團實施了嚴格的供應商選擇和管理制度，並與供應商緊密合作和溝通，以減輕採購風險並推動負責任採購，同時充分利用光大環境招標採購電子交易平台，開啟線上招標新模式，並且加強招投標監督管理，杜絕違規違紀行為。



We actively extend the Group's excellent ESHS management practice to the whole value chain and make sure the environmental, social and governance considerations can be applied fairly and thoroughly at different steps. The ESHS department of each regional centre conducts regular ESHS audits for the project companies under its respective regions, which review the project companies' supplier screening records, and evaluate the suppliers' performance and their corresponding environmental and social risks in terms of service quality, safety measures, environmental performance, social responsibility, etc. In order to encourage suppliers to support sustainable development, the audit results serve as the basis for the project companies to select suppliers in the coming year, and to choose environmentally and socially responsible suppliers as many as possible, such as suppliers of reusable and renewable products, contractors who adopt low-emissions construction processes, etc. Besides, the Group gives priority to suppliers in the same province when developing business all over the country in order to create employment opportunities for local communities and fulfill corporate social responsibility.

During the Reporting Period, the Group's electronic transaction platform for tendering and procurement received the "Triple Stars" certification issued by the China Cybersecurity Review Technology and Certification Center, becoming the first of its kind in the domestic solid waste management industry to attain this certification. This indicated that the platform had met the national standards in operation management, security and confidentiality, system development and other aspects and satisfied the various requirements of the Certification Supervision and Management Department under Certification and Accreditation Administration of the PRC, providing reliable technical support and security guarantee for the compliance of the Group's bidding and procurement.

As at the end of the Reporting Period, the Group engaged a total of 14,980 suppliers. Major services provided by these suppliers include equipment fitting, installation and construction. In addition, the Group outsourced services such as environmental monitoring, equipment maintenance, cleaning, security and landscaping, involving 10,945 on-site outsourced workers.

我們更積極地將本集團優秀的ESHS管理實踐延伸到整條價值鏈，確保環境、社會及管治的考量能公平和全面地應用在不同階段。各區域中心的ESHS主管部門會為轄屬項目公司定期進行ESHS審核，期間會檢視項目公司的供應商篩選記錄，從服務質量、安全措施、環保表現、社會責任等各方面分析、評估各供應商的表現及其相應的環境和社會風險。項目公司需要以審核結果作為來年選擇供應商的依據，盡可能選擇對環境及社會負責的供應商，例如優先選購可重用或再生產品、聘用採用低排放的建設過程的承建商等，以鼓勵供應商支持可持續發展。此外，本集團於全國各地發展業務時，會優先選用位於同省份的供應商合作，為當地創造就業機會，履行企業社會責任。

報告期內，本集團的招標採購電子交易平台更獲得中國網絡安全審查技術與認證中心頒發的「三星」認證證書，成為國內固廢管理行業首個獲得該權威認證的電子招採平台。這標誌著該平台在運行管理、安全保密、制度建設等各方面均達到國家標準，滿足國家認證認可監督管理委員會認證監管部的各項要求，為本集團招標採購的合規性提供了可靠的技術支撐和安全保障。

截至報告期末，本集團共有14,980個供應商，主要服務包括裝備配置、建安工程等。此外，本集團的外判服務包括環境監測、裝備維護、清潔、保安和綠化等，共涉及10,945名駐場外判工人。

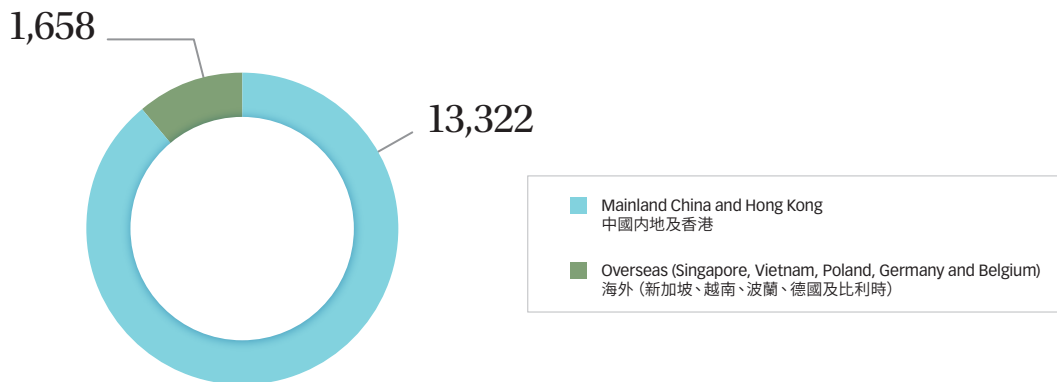
As at 31 December 2020  
截至二零二零年十二月三十一日

Number of Suppliers by Geographical Region  
按地區劃分的供應商數目

Unit: people  
單位：人

Mainland China and Hong Kong 中國內地及香港	Overseas (Singapore, Vietnam, Poland, Germany and Belgium) 海外 (新加坡、越南、波蘭、德國及比利時)
13,322	1,658
<b>Total 總數</b>	
14,980	

Number of Suppliers by Geographical Region  
按地區劃分的供應商數目



Number of On-site Outsourced Workers in 2020  
二零二零年駐場外判工人數目

Unit: people  
單位：人

Environmental monitoring 環境監測	Equipment maintenance 裝備維護	Cleaning 清潔	Security 保安
2,660	4,493	1,879	982
Landscaping 綠化	Catering 食堂	Others 其他	
167	466	298	
<b>Total 總數</b>			
10,945			

## Supplier Management Measures

The Group has set a fair and transparent code for the selection and management of suppliers and contractors, aiming at selecting enterprises who possess standardised management, complete qualifications and share similar corporate culture or value with Everbright Environment as partners. We conduct a strict screening and fully investigate the ability of performing contractual duties, environmental and social performance, service quality, management philosophy of the outsourced units at the early stage so as to establish sustainable partnership with the high-quality service providers.

Everbright Environment has specially formulated and applied the following supplier management guidelines covering all suppliers of the Group on environmental and social management in all processes of the supply chain:

### **Code of Conduct for Suppliers**

- Standardising the behaviour of suppliers in the economic, environmental and social fields in a systematic way, in order to encourage suppliers to fulfil and jointly improve the sustainability performance of the supply chain. The *Code of Conduct for Suppliers* also encourages the Group's suppliers to treat their subordinate suppliers with the same standards, so as to enhance the sustainability of the overall supply chain.
- In the economic aspect, suppliers are required to conduct business activities with ethics and integrity and are obliged to comply with relevant local and international laws; in the environmental aspect, suppliers are required to strengthen the supervision in their operations to minimise pollution and other adverse impacts on environment; in the social aspect, suppliers are required to comply with national labour policies and regulation, including avoiding any forms of slavery, forced and bonded labour, child labour and abusive employment practices. Suppliers are also obliged to safeguard human rights of their staff and take due considerations of public welfare.
- All suppliers shall comply with this code when conducting business with the Group or participating in any activities related to the Group.

## 供應商管理準則

本集團為供應商及承包商的選擇及管理訂立了公正和透明的守則，致力於選擇管理規範、資質齊全且與光大環境有相近企業文化或價值觀念的企業作為合作夥伴，通過前期充分考察外協單位履約能力、環境與社會表現、服務質量、管理理念等，經過嚴格篩選，引進優質服務商及建立可持續的合作夥伴。

光大環境特別制定並落實以下涵蓋本集團所有供應商的供應商管理準則，在供應鏈的各個流程中落實環境與社會管理：

### **《供應商行為準則》**

- 以系統性的方式規範供應商在經濟、環境及社會領域的行為，旨在鼓勵供應商履行並共同提高供應鏈的可持續發展表現。《供應商行為準則》更鼓勵本集團的供應商以相同的標準對待他們的從屬供應商，以提升整體供應鏈的可持續性。
- 在經濟層面，規定供應商進行商業活動時需要從道德角度出發，誠實地進行經營，並遵守當地及國際的相關法律；在環境層面，要求供應商在其運營中加大監控力度，盡量減少對環境的污染及負面影響；在社會層面，要求供應商遵守國家的勞工政策和法規，當中包括避免任何奴役、強迫勞動、抵押勞工、使用童工或虐待行為，維護員工的基本人權，並考慮公眾福利。
- 所有供應商在與本集團進行業務往來或參與任何與本集團有關的活動時都應遵守此準則。

### **Supplier Management Measures**

- Covers various topics such as the responsibilities of various suppliers on equipment, main materials, construction units, design units and operation centres, ranking and evaluation of suppliers, engagement of new suppliers, ongoing management of suppliers, management of unqualified suppliers, and disciplinary actions on non-compliance.
- Suppliers are categorised into four grades, namely A, B, C, and D based on the continuous evaluation of their professional proficiency, financial status and compliance records. Business relationships may be terminated if the suppliers with the lowest grade fail to prove that they are capable of fulfilling the Group's requirements.

### **Contractor ESHS Management Standard**

- Aims to identify and control the environmental, social and safety risks in the process of outsourcing by examining the contractors in the aspects of background, qualification, construction operation and environmental protection performances.
- Contractors need to fill in the *Contractor ESHS Questionnaire* and provide relevant ESHS information to assist the Group in sorting out the list of qualified contractors and ensuring that the suppliers and contractors comply with environmental and social responsibility management regulations, as well as any applicable national and local government regulations.
- The information required to be submitted includes whether the contractor has ISO 14001 and other international environmental management standards certification, whether it has conducted ESHS training and assessment, whether it has provided appropriate protective equipment for its staff, etc.

The Group provides further guidance to its business partners to enhance their sustainability performance by issuing various policies and guidelines, including *Procurement Management System and Management Measures*, *Tender Management Measures* and *Management Measures for Appraisal Expert Database for Project Construction Procurement*.

### **《供應商管理辦法》**

- 涵蓋包括裝備、主材料、施工單位、設計單位、運營中心等供應商之職責分工、供應商等級及評價、新供應商的僱用、供應商動態管理、不合格供應商的管理和違規處罰等在內的詳細規定和要求。
- 按照供應商的專業水平、財務狀況及合規記錄等對現有供應商進行持續評估，將供應商劃分為A、B、C、D四個等級，最低等級的供應商若未能證明能夠達到本集團的要求，本集團或會終止與其合作。

### **《承包商ESHS管理標準》**

- 旨在透過審視承包商在背景、資質、施工作業及環保等方面的表現，藉此識別和控制外包過程中產生的與環境、社會和安全相關的風險。
- 承包商需要填寫《承包商ESHS問卷調查表》，提供相關的ESHS資料，以協助本集團整理達標承包商名單，並確保供應商和承包商遵守環境和社會責任的管理條例和法規，以及適用國家和地方政府的規定。
- 要求提交的信息包括承包商是否擁有ISO 14001等國際環境管理標準認證、是否進行ESHS培訓與考核、是否為員工提供適當的保護裝備等。

本集團的《採購管理制度及辦法》、《招標管理辦法》及《工程建設採購評審專家庫管理辦法》等相關制度亦進一步引領業務夥伴提升其可持續發展表現。

### Supplier Sustainability Risk Assessment

The Group commissions a third-party independent consultant to conduct sustainability risk assessments for the Group's suppliers every year, in order to understand the ESHS performance of suppliers of all categories. In 2020, 248 suppliers, whose businesses cover electrical equipment, construction, lifting machinery, pumping equipment, air system technology and water treatment equipment, participated in the survey. The scope of the assessment mainly included the qualifications of suppliers in terms of production, operation and safety, etc., as well as their management systems related to quality, environment and society, etc.

The overall result of the risk assessment was satisfactory and reflected the effectiveness of the Group's guidance and the requirement on suppliers' ESHS performance over the years. None of the assessed suppliers indicated that they had any ongoing commercial litigation, prosecution or fine on environmental and social issues made by relevant authorities. Over 58% of the surveyed suppliers had obtained the internationally certified ISO 9001 Quality Management System, ISO 14001 Environmental Management Systems and OHSAS 18001/ISO 45001 Occupational Health and Safety Management System, or were currently undergoing related certifying process. Around 55% had established occupational health and safety policies and provided related trainings for employees. None of the surveyed suppliers had any reported safety accident in the past 3 years. We did not identify any risks associated with child labour and forced labour in this risk assessment.

### 供應商可持續發展風險評估

本集團每年會委託第三方獨立顧問為本集團供應商進行可持續發展風險評估，以了解各類型的供應商於ESHS方面的表現。二零二零年，共計248家供應商受訪參與評估，其業務範圍涵蓋了電力裝備、工程施工、起重機械、泵類設備、空氣系統技術、水處理裝備等。評估的範圍主要包括供應商之生產、運營及安全方面的資質，以及質量、環境和社會方面的管理體系等。

本次風險評估的結果整體令人滿意，顯示出本集團多年來對供應商ESHS表現的指引和規範所作努力卓有成效。所有被評估供應商均在評估中表示企業無任何正在進行中的商業訴訟，且無任何由有關部門就環境及社會問題作出的檢控或罰款。超過58%的受訪供應商已獲取國際認證的ISO 9001質量管理體系、ISO 14001環境管理體系及OHSAS 18001/ISO 45001職業健康和安全管理體系或現正進行相關的認證工作。約55%的受訪供應商制定了職業健康與安全政策，並為員工提供了相關培訓。所有受訪供應商均表示在過去三年沒有發生過安全事故。在是次風險評估中我們未有辨識到與童工和強制勞動相關的風險。

Suppliers participated in the 2020 supplier sustainability risk assessment accounted for approximately **23.63%** of the annual purchasing amount of the Group.

參與二零二零年供應商可持續發展風險評估的供應商佔本集團全年總採購金額約**23.63%**。





To review suppliers' performance and effectiveness of taking corporate social responsibility, the Group categorised suppliers into low-, medium-, and high-risk levels based on their assessment results. In this assessment, 58% of surveyed suppliers were classified as low-risk level and the rest were medium-risk level. No suppliers fell into the high-risk level category. In order to assist the suppliers with higher risks to improve their management, the Group actively investigated their situations and provided suggestions, so as to ensure that their risks could be effectively controlled. In the future, the Group will continue to monitor the performance of suppliers and maintain close communication with each other to ensure the sustainability of the supply chain.

### Customer Satisfaction

The Group adheres to the customer-oriented service principle and strives to integrate excellent customer services into daily operation and management, solve key problems of customer and industry development with the times, contribute to build a cleaner environment and more effective resource utilisation mode, so as to meet the needs of customers, facilitate the development of the industry, and benefit the whole society. As one of the Group's short-term goals in sustainable development at the social level, the Group commissioned a third-party consultant to conduct an annual customer satisfaction survey during the Reporting Period, aiming to collect customers' comments on our work and thus further improve our service quality.

為了檢視供應商在企業社會責任方面的表現與績效，本集團以風險評估結果為參考，將相應供應商分別歸入低、中、高三個風險等級。在本次評估中，58%的受訪供應商處於低風險等級，其餘均處於中風險等級，沒有供應商落入高風險等級區間。為了協助較高風險供應商改善其管理，本集團對此積極探討並提出建議，確保其風險可被有效控制。未來，本集團會持續監察供應商的表現，保持各方的緊密溝通，促進供應鏈的可持續發展。

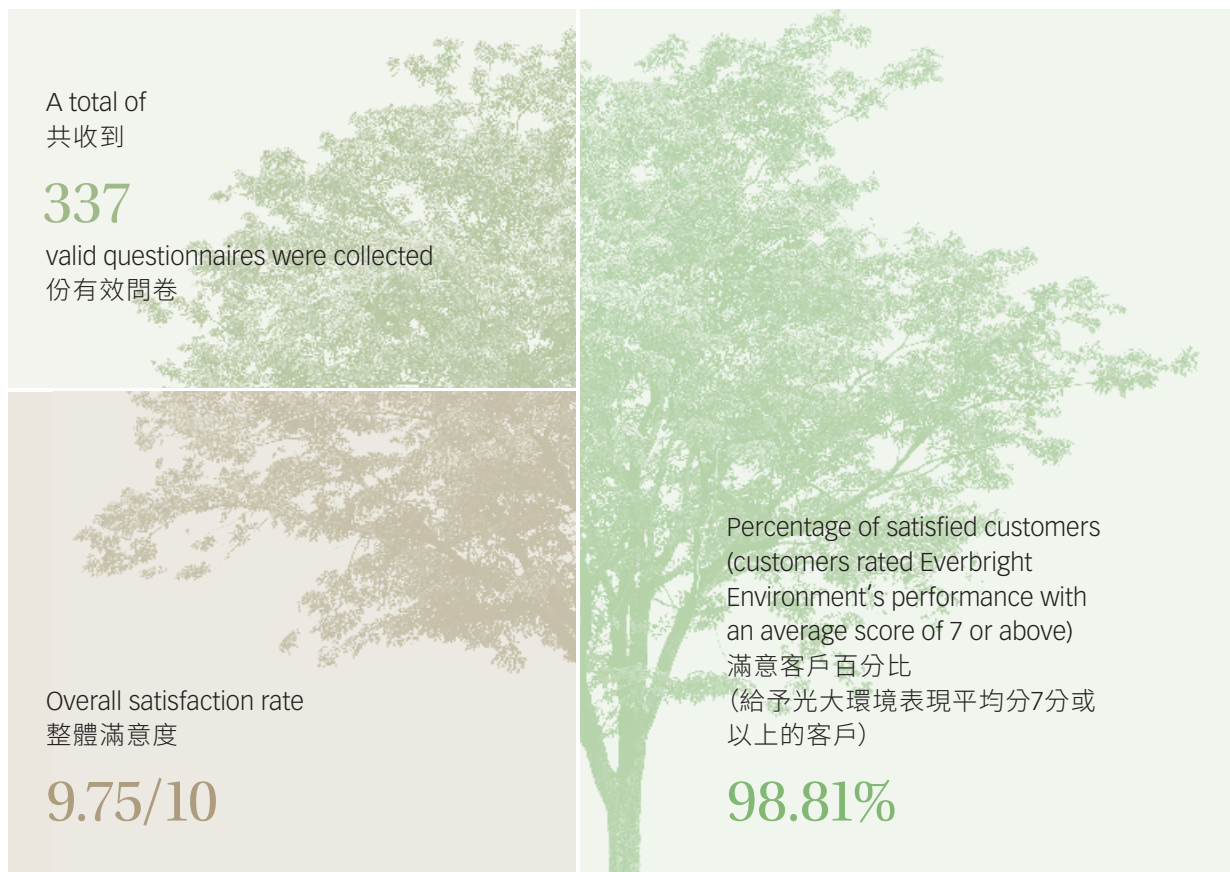
### 客戶滿意度

本集團堅持以滿足客戶需求為中心的服務理念，致力於將卓越的客戶服務融入日常運營管理中，與時俱進地解決客戶乃至行業發展的關鍵問題，協助建設更清潔的環境和更有效的資源利用模式，從而滿足客戶、促進行業發展，並為社會造福。作為集團在社會層面的可持續發展短期目標之一，報告期內，我們委託了第三方獨立顧問為本集團進行年度客戶滿意度調查，旨在了解客戶對我們工作的評價，從而進一步提升我們的服務品質。



## Results of the Customer Satisfaction Survey in 2020

### 二零二零年客戶滿意度調查結果



		<b>Average score</b> (out of 10) <b>平均分</b> (滿分10分)
Experience and professionalism of project teams	項目團隊的經驗及專業程度	9.74
Environmental and safety health risk management	環境及安全健康風險管理	9.74
Outcome and quality of work	工作成果及質量	9.73
Effectiveness and timeliness in communication	有效和及時的溝通	9.77
Adherence to agreed project schedules	遵守商定的項目進度	9.75
<b>Overall satisfaction rate</b>	<b>整體滿意度</b>	<b>9.75</b>

A total of 337 valid questionnaires were collected in this survey, with the overall customer satisfaction rate of 9.75 (out of 10) and the percentage of satisfied customers (customers who rated Everbright Environment's performance with an average score of 7 or above) was 98.81%. Majority of the customers highly recommended Everbright Environment and would be happy to work with the Group again.

The strong growth of the Group's market expansion each year depended on its exploration of and attention to new customers. Among 337 surveyed customers, 119 customers, accounting for 35.3%, were working with the Group for the first time. Among these new customers, 99.2% rated the Group with an average satisfaction score of 8 or above. Customers' affirmation is the motivation driving the Group to move forward. In the future, the Group will continue to adhere to the customer-oriented philosophy and maximise the added value of projects to achieve win-win outcomes.

是次調查共收集到337份有效問卷，客戶整體滿意度達9.75分（滿分10分），滿意客戶（給予光大環境表現平均分7分及以上的客戶）佔比98.81%。絕大部分客戶表示非常願意推薦光大環境並樂意與本集團再次合作。

本集團的市場拓展勢頭每年得以保持強勁增長有賴於本集團對新客戶的發掘和重視。在337個受訪客戶中，首次與本集團合作的客戶有119人，佔總受訪客戶的35.3%。其中，平均滿意度為8分及以上的客戶佔99.2%。本集團會把客戶的肯定作為繼續前進的動力，在未來繼續秉承以客戶為中心的理念，最大程度發揮項目的附加價值，實現互利共贏。



Implementing  
GREEN OPERATION,  
protecting BLUE SKY  
and  
LUSH WATER

實行綠色運營  
保護藍天碧水

ENVIRONMENTAL  
PROTECTION  
環境保護

Since the Company transformed its major business to environmental protection in 2003, Everbright Environment has been focusing on this sector for more than a decade. It has gradually set up a development layout that focuses on the areas of environment, resources and energy, with main businesses covering waste-to-energy and integrated waste treatment, integrated biomass utilisation, hazardous and solid waste treatment, environmental remediation, water environment management, equipment manufacturing, waste sorting, environmental sanitation integration, resource recycling, development of zero-waste cities, energy-saving lighting, analysis and testing, R&D relating to green technologies, ecological and environmental planning and designing, as well as environmental protection industrial parks.



自二零零三年確立以環保為主營業務方向後，光大環境經歷十餘年潛心耕耘，已逐步構建起環境、資源、能源「三位一體」的發展格局，主營業務涉足垃圾發電及協同處理、生物質綜合利用、危廢及固廢處置、環境修復、水環境綜合治理、裝備製造、垃圾分類、環衛一體化、資源循環利用、無廢城市建設、節能照明、分析檢測、綠色技術研發、生態環境規劃設計、環保產業園等。



While focusing on the development of environmental business, Everbright Environment also actively adopts measures to reduce impacts on the environment and natural resources arising from its operations. Currently, Everbright Environment has already successfully become a “Carbon-negative Enterprise”. We will continue our established development strategy, enhancing our policy, research, development and innovation related to peak carbon emissions and carbon neutral, while at the same time strive to better cope with climate change through working with parties from all social circles, thus committing to the construction of an ecological civilisation, achieving green and low-carbon development, as well as contributing to national environmental protection cause.

在聚焦環境業務發展的同時，光大環境亦積極採取各項措施減低其運營對環境及自然資源造成的影響。目前，光大環境已成功發展成為「負碳企業」，我們將繼續按照既定發展戰略，加大碳達峰、碳中和的政策研究與發展創新，同時持續與各界攜手更好地應對氣候變化，致力於生態文明建設、實現綠色低碳發展，為國家環保事業作出貢獻。

## 2020 Highlights

## 二零二零年亮點

### Everbright Environment has been Included in the Dow Jones Sustainability Indices for the Fifth Year Running

#### 光大環境連續第五年入選道瓊斯可持續發展指數

Member of  
**Dow Jones Sustainability Indices**  
Powered by the S&P Global CSA

The Group has been included in the Dow Jones Sustainability Emerging Markets Index for the fifth consecutive year, as a result of its excellent performance in sustainability over the past year. It is one of the three companies from Mainland China that have been included in the emerging markets index this time.

本集團再度憑藉過去一年在可持續發展領域的出色表現，連續第五年獲納入道瓊斯可持續發展新興市場指數，成為入選的三家中國內地企業之一。

## Equipment Manufacturing Sector and Eco-recycling Sector Jointly Participated in the National On-site Meeting on “Zero-waste Cities”

裝備製造與生態資源板塊攜手亮相「無廢城市」全國現場會



From 12 to 14 September 2020, the National On-site Meeting on “Zero-waste Cities” and the Special Environmental Equipment Industry Exhibition were held at the Shaoxing Olympic Sports Centre in Zhejiang province. With the theme of “Green Equipment, Smart Future”, the exhibition attracted more than 100 environmental protection companies from 14 provinces and municipalities nationwide to participate. Everbright Environment’s equipment manufacturing sector and eco-recycling sector participated in the events together.

二零二零年九月十二日至十四日，「無廢城市」全國現場會、特色環保裝備產業博覽會在浙江省紹興市奧運體育中心隆重舉行。本次展會以「綠色裝備、智領未來」為主題，共吸引了全國14個省市的100餘家環保企業參展。光大環境的裝備製造及生態資源板塊攜手亮相。

During the exhibition, Everbright Environment’s team presented with an integrated form of panels and videos, vividly demonstrated Everbright Environment’s first-class environmental protection technologies and the advanced “Five Points in One Line” technical process; systematically explained the one-stop integrated service model which covers investment, consultancy, design, construction and operation; and introduced the Group’s independently developed core technologies on waste sorting, waste transfer and transportation, as well as resource recycling. The Vice Minister of the Ministry of Ecology and Environment (“MEE”) of the PRC expressed his commendation and encouraged Everbright Environment to continue to promote the effective integration of economic and social developments with environmental protection, contributing to the development of “zero-waste cities” nationwide.

展會期間，光大環境參展團隊以「活動展板+宣傳視頻」融合形式，生動呈現了光大環境一流的環保技術及先進的「五點一線」技術路線，系統闡釋了集投資、諮詢、設計、建設、運營為一體的全方位一站式服務模式，亦介紹了本集團垃圾分類、環衛收轉運、資源循環利用的自主研發核心技術，獲得了國家生態環境部副部長的高度讚賞，鼓勵光大環境繼續推動經濟社會與環境保護有機結合，助力全國「無廢城市」建設。

### Multiple Projects of Everbright Environment Approved for the Central Government's Special Fund for Ecological Civilisation

#### 光大環境多個項目獲批中央生態文明建設專項資金

During the Reporting Period, a number of Everbright Environment's projects were approved for the special fund of "Investment in Ecological Civilisation within the Central Government's Budget 2020", which demonstrated that the construction capability and management proficiency of Everbright Environment's projects had been recognised by government authorities. The funds were supported by the Ministry of Finance of the PRC in the form of investment subsidies for eligible projects, thus guided and supported social capital to invest in ecological civilisation, and to promote the protection and improvement of the ecological environment.

報告期內，光大環境多個項目獲批「二零二零年中央預算內投資生態文明建設」專項資金，體現出光大環境項目的建設和管理水平得到政府機構認可。該資金由中央財政部採用投資補助方式對符合條件的項目予以支持，引導支持社會資本參與生態文明建設，促進生態環境的保護和改善。

As an integrated environmental management solution provider, the approved projects of Everbright Environment cover both "resource conservation and recycling" and "environmental pollution control", including various waste-to-energy projects, integrated biomass utilisation projects, and food waste treatment projects. Each project ensured the effective use of funds so as to make positive contributions to the environmental governance and sustainable development across different regions through the development of environmental infrastructures.

作為全方位的環境綜合治理服務商，光大環境的獲批項目覆蓋「資源節約循環利用」及「環境污染治理」兩方面，包括多個垃圾發電項目、生物質綜合利用項目及餐廚垃圾處理項目等。各項目將確保有效利用資金，透過建設環境基礎設施，為各地的環境治理及可持續發展作出積極貢獻。

### Everbright Environment Recognised as "Enterprise of Model Cases for Green Development 2020"

#### 光大環境榮獲「二零二零年度綠色發展典型案例企業」稱號



Everbright Environment was recognised as the "Enterprise of Model Cases for Green Development 2020" in the "First Annual Conference of Environmental Economy", for its innovative model of Changzhou Waste-to-energy Project.

光大環境在「首屆環境經濟年會」中憑藉常州垃圾發電項目的創新實踐案例榮獲「二零二零年度綠色發展典型案例企業」稱號。

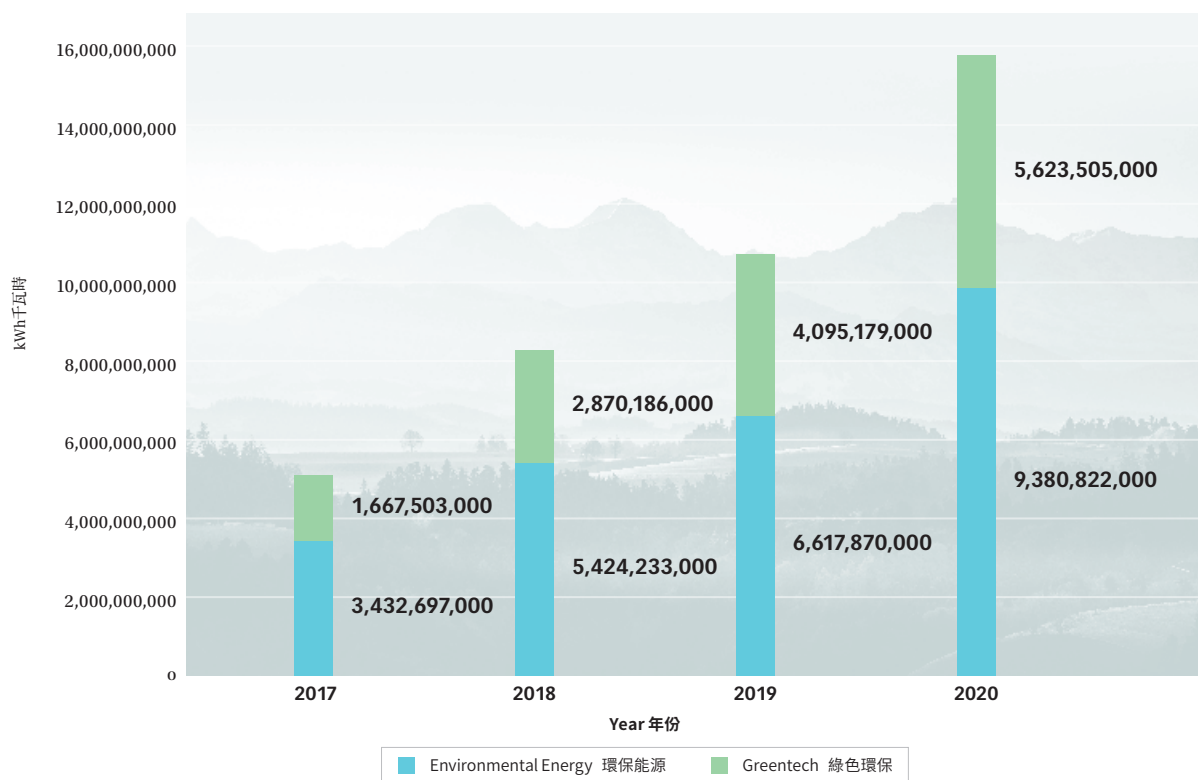
The collection and selection of model cases of corporate green development in 2020 was initiated by the China Environment News Agency, with an aim to identify green development model enterprises with outstanding economic, environmental, social and resource efficiencies, and to deepen the understanding of green development among enterprises, thus effectively enhance the sense of urgency and responsibility for green development. Over 200 companies across the country participated in the selection, and a total of 50 companies, including Everbright Environment, were finally shortlisted.

二零二零年度企業綠色發展典型案例徵集評選活動由中國環境報社發起，旨在發掘一批經濟效益、環境效益、社會效益、資源效益突出的綠色發展典範企業，深化企業對綠色發展的思想認識，切實增強綠色發展的迫切感和責任感。全國共200餘家企業參加評選，最終包括光大環境在內共50家企業入圍。

Since the commissioning of the Group's first environmental protection project in 2005  
自二零零五年本集團首個環保項目運行以來



On-Grid Green Electricity Supplied by Business Sector  
按業務板塊分類的綠色上網電量





## Environmental Management Overview

The Group upholds its mission of being “Devoted to Ecology and Environment for a Beautiful China” and its core value of “To Create Better Investment Value and Undertake More Social Responsibility”. We pay close attention to the environmental impacts brought by our operations and keep an eye on the environmental management of all projects.

The Group’s *Corporate Policy on Environmental Management* provides an important framework for the implementation of the Group’s environmental management, striving to minimise the burden on the environment and natural resources imposed by the Group. The policy also provides detailed guidance on the management of environmental impacts arising from the Group’s operations. We have also developed various procedural documents, including *Notice on Further Enhancing Environmental Management, Eliminating Operational Risk and Improving Operational Quality*, *Notice on Improving Relevant Information of Operating Projects Disclosed on the Online Environmental Monitoring Platform*, *Regulations on the Filing and Assessment Management of Safety and Environmental Management Institutions and Personnel*, *Regulations on the Management of Safety, Environmental Accidents and Incidents*, *Internal Reporting System for Environmental and Safety Accidents and Incidents*, etc., in order to standardise environmental management performance at the operation level.

## 環境管理概覽

本集團以「情繫生態環境，築夢美麗中國」為使命，以「創造更好投資價值，承擔更多社會責任」為企業追求，高度重視自身運營所帶來的環境影響，為所有項目的環境管理把關。

本集團的《環境管理企業政策》為本集團環境管理的深入落實提供了重要綱領，爭取最大程度減輕本集團對環境及自然資源造成的負擔。政策亦對管理本集團運營中所涉及的環境影響提供了詳細指引。我們亦制定了多項程序文件，包括《關於進一步強化環境管理，化解運營風險，提升運營品質的通知》、《關於完善運營項目環保線上監控平台相關資訊的通知》、《關於安全與環境管理機構及人員備案、考核管理的規定》、《關於安全、環境事故事件管理規定》與《環境、安全事故事件內部報告制度》等，進一步規範運營層面的環境管理表現。

## Six Key Areas of the Corporate Policy on Environmental Management

## 《環境管理企業政策》的六大核心範圍



**Compliance**  
合規



**Risk management and due diligence**  
風險管理和  
盡職調查



**Environmental protection**  
環境保護



**Health and safety**  
健康和  
安全



**Supply chain management**  
供應商管理



**Monitoring and communication**  
監測和  
溝通

Air and GHG emissions  
廢氣及溫室氣體  
排放

Discharges into water and land  
向水及土地的  
排污

Generation and treatment of hazardous and non-hazardous waste  
有害及無害廢棄物的  
產生及處置方法

Energy  
能源

Water resources  
水資源

Use of raw materials  
原材料使用

To fully implement environmental monitoring, the Group continues to thoroughly enforce the ESHS Management System, ISO 14001 Environmental Management System and other environmental and safety systems, and extensively utilises technology to enhance the operational effectiveness of the entire systems. The Group also set up the Safety and Environmental Management Committee, in order to further enhance the efficiency and reliability of environmental monitoring work.

為落實執行環保監察工作，本集團繼續全面、深入落實ESHS管理體系、ISO14001環境管理體系及各環境與安全制度，並廣泛利用科技，以增強全系統的運營成效。本集團亦成立安全與環境管理委員會，以進一步提升環保監察工作的效率與可靠性。



#### Promote ESHS Management System and strictly implement various environmental and safety systems

推動ESHS管理體系及嚴格執行各環境與安全制度

Apply standardised management throughout project investment, construction and operation, improving overall operational efficiency and effectiveness.

實現項目投資、建設及運營管理過程中各環節管理的規範化，加強整體運營效率和成效。



#### Promote ISO 14001 Environmental Management System in the operating projects

於運營項目內推行ISO 14001環境管理體系

Reduce and where possible prevent pollution from project operations, and make great efforts to protect the environment from harm and degradation.

減少，及在可能的情況下避免項目運營帶來的污染問題，並盡最大努力保護環境免受危害和退化。



#### Set up Safety and Environmental Management Committee

成立安全與環境管理委員會

Regulate, monitor and supervise the implementation of environmental and safety measures across all business sectors of the Group.

重點規範、監督、督導本集團各業務板塊環境及安全工作的實施。



#### Strengthen environmental management through technology

以科技加強環境管理

Adopt new management models of "Internet +" and "Informatisation and Intelligence", utilise new technologies such as cloud computing, Internet of Things (IoT) and big data, to develop a new online environmental management information platform; through connecting with the database of the MEE, data and information regarding air emissions and effluent discharge of all projects of Everbright Environment could be linked directly to the relevant platforms for real-time disclosure.

採用「互聯網+」和「信息化、智慧化」的管理新模式，以雲計算、物聯網、大數據等新技術建設全新的線上環境管理信息化平台；並通過與生態環境部資料庫聯網，平台可以獲得、公示並即時更新光大環境旗下各個項目的廢氣、廢水排放資料及報備資訊。

In addition, the Group screens the relevant environmental and social risks before making an investment in any projects and ensures that all required permits and environmental impact assessment approvals are obtained before construction.

## Developing Environmental Protection Business

Our environmental energy business helps reduce the adverse per capita environmental impact and preserves precious urban land resources via green incineration of municipal household waste; greentech's business improves air quality in rural areas by converting biomass raw materials such as agricultural and forestry waste into electricity and heat, hence avoids open burning of agricultural and forestry straw. Both businesses increase the share of renewable energy in the PRC's energy mix, demonstrating Everbright Environment's dedication to the green energy era in China. Meanwhile, environmental water's business helps solve the water quality and sanitation problems by effectively treating municipal and industrial waste water, following stringent national standards and producing high-quality reclaimed water for non-potable uses. On the other hand, the equipment manufacturing sector focuses on providing a full-process service system that covers R&D, manufacturing and maintenance of series of product; the eco-recycling sector commits to waste sorting and resource recovery and reuse, helping to construct zero-waste cities; the greenergy sector strives to contribute to energy conservation and urban outdoor lighting projects through R&D and manufacturing of energy-saving street lamps; the envirotech sector promotes the strategic plan of pursuing development that is driven by technology and innovation, and ensures the commercialisation of the technology R&D results; and the environmental planning sector strives to construct a first-class national planning and design institute.

此外，本集團在投資項目之前均會檢視其環境及社會風險，並確保於施工前獲得所需的許可證及環評批覆。

## 打造環保業務

我們的環保能源業務透過綠色焚燒城市生活垃圾，減少人均環境影響並守護珍貴的城市土地資源；綠色環保業務則利用農林廢棄物等生物質原材料轉化成電力和熱能，避免農林秸稈的露天焚燒，從而減低農村地區的空氣污染。這兩項業務還通過增加可再生能源的使用比重，為國家的綠色用電作出積極貢獻。與此同時，環保水務業務嚴格按照國家標準有效處理生活及工業污水，生產高質量的工業用回用水，協助改善水質和衛生問題。另一方面，裝備製造板塊專注提供系列產品從研發、製造到維護的全流程服務；生態資源業務致力從事垃圾分類及資源回收利用，協助建造無廢城市；光大照明板塊透過研發和製造節能路燈，致力作出節能貢獻，建造城市亮化工程；綠色科創板塊推動科技創新引領發展的戰略構想，保障科技研發的實效產出；而環境規劃板塊則致力打造一流國家級規劃設計院。

The phased-in roll-out of the “zero-waste cities” development pilot programmes, the transformation and upgrade of the green economy in the Guangdong-Hong Kong-Macau Greater Bay Area and the further implementation of the ecological and environmental protection plan for the Yangtze River Economic Belt have created new opportunities for the industry. Everbright Environment has now established a systematic development model with the development of “zero-waste cities” as its core mission. The Group is actively exploring a unique model relating to the development of “zero-waste cities” that covers waste sorting, reduction of waste from source, recycling and harmless treatment at the back end.

Throughout project construction and operations management, Everbright Environment has been strictly conducting relevant testing, complying with relevant emissions and discharge standards, and developing garden-like plant areas that have proven performance in four aspects (plant appearance, odour management, noise control and emissions standard). The Group’s waste-to-energy projects located in Suzhou, Nanjing, Wujiang, Changzhou, Changzhou Xinbei, Ningbo, Sanya, Boluo, Weifang, Rizhao, Yiyang and Ma’anshan have been awarded the “National AAA-Rated Waste-to-Energy Plants”, signifying the Group’s unwavering pursuit in quality enhancement and environmental performance.

## Responding to Climate Change

Given the increasing importance of sustainable finance, there has been a notable trend towards disclosing climate-related information, including how a company streamlines climate-related risks into its management decisions. In response to the new expectations from the investment community, the Group is committed to disclosing transparent, reliable and consistent climate-related information to its stakeholders and the public. Since 2019, the Group has made its dedicated disclosure of climate-related information through CDP (formerly known as Carbon Disclosure Project), which runs a global disclosure system for companies, cities, states and regions to measure and manage their environmental impacts.

國內的「無廢城市」建設試點逐步展開、粵港澳大灣區綠色經濟轉型升級、長江經濟帶生態環境保護規劃進一步落實，為行業帶來新的發展機遇。光大環境目前已形成以「無廢城市」建設為核心的系統性發展格局，積極探索涵蓋垃圾分類、源頭減量、資源回用、末端無害化處置的光大環境「無廢城市」建設獨有模式。

光大環境在項目建設與運營管理過程中，嚴格檢測達標排放，堅持打造「四個經得起」（經得起看、經得起聞、經得起聽、經得起測）的花園式廠區。本集團的蘇州、南京、吳江、常州、常州新北、寧波、三亞、博羅、濰坊、日照、益陽及馬鞍山垃圾發電項目已獲得國家「AAA級生活垃圾焚燒廠」評定，這充分肯定了本集團一直以來為提升項目品質和環境表現作出的努力。

## 應對氣候變化

由於可持續金融的重要性日益增加，對於氣候變遷相關資訊的披露亦呈顯著上升趨勢，包括企業如何將氣候相關風險納入到管理決策中。為響應投資者的新期望，本集團致力向持份者和公眾披露透明、可靠和連貫的氣候相關信息。自二零一九年以來，本集團通過CDP（前身為「碳披露項目」Carbon Disclosure Project）披露氣候相關資訊。CDP作為一個全球性的披露系統，為各公司、城市、州份和地區衡量和管理其對環境的影響。

**Everbright Environment Received the “Well Performance Award on Climate Action” and A- Rating in CDP’s 2020 Climate Change Questionnaire**

**光大環境榮獲「中國應對氣候變化企業優秀獎」及CDP二零二零年氣候變化「A-」評級**

In August 2020, CDP published the CDP China Report 2019, commending the leading Chinese enterprises in the field of environmental information disclosure. Everbright Environment won the “Well Performance Award on Climate Action”, the first climate change response related honour received by the Group.

二零二零年八月，CDP發佈了「CDP中國二零一九年度報告」，對中國二零一九年度環境信息披露示範企業進行表彰，光大環境榮獲「應對氣候變化企業優秀獎」，這是本集團首次獲得應對氣候變化領域的殊榮。

Later in December, Everbright Environment’s climate change score was improved from B in 2019 to A- in CDP’s *2020 Climate Change Questionnaire*, ranking among the best rank of leadership band in CDP’s assessment system. The Group’s A- rating is not only higher than the average B rating of the renewable energy industry, but also much higher than the global average of C rating and the Asian average of D rating.

其後在十二月，光大環境於CDP開展的《2020年氣候變化調查問卷》中，評級由二零一九年的「B」提升至「A-」，躋身該評估體系「領軍水平」最優級別。公司所獲評級「A-」不僅高於可再生能源發電行業平均評級「B」，亦遠高於全球平均評級「C」及亞洲平均評級「D」。



## Governance

### *Management Level*

Supported by the Risk Management Committee, the Board retains ultimate responsibility for the oversight of Everbright Environment's risk management activities. The Risk Management Committee under the Board takes accountability on risk management, and reviews corporate risk management and internal control at least twice a year.

Under the Management Decision Committee, the Group has also established an ESHS Management Committee. The ESHS Management Committee provides practical guidelines and support to the Group's sustainable development work, and is tasked to ensure thorough implementation of the Group's sustainable management policies in a top-down manner.

### Risk Management

Everbright Environment aims to identify, assess, and manage climate-related risks. The Group has been incorporating climate-risk, both physical and transitional into its operation. The Group has listed out key climate risks according to the risk analysis framework of TCFD, including the development of climate risk parameters, the conduct of climate risk assessments, formulation and implementation of climate risk control measures, analysis of the effectiveness of control measures, and execution of risk audits.

## 治理

### *管理層面*

在風險管理委員會的支持下，董事會全面負責對光大環境風險管理活動的監管。董事會旗下的風險管理委員會負責風險管理，並每年至少兩次對企業風險管理和內部監控情況進行檢討。

本集團更在管理決策委員會下，成立了ESHS管理委員會。ESHS管理委員會為本集團的可持續發展工作提供實際的指導及支持，確保由上而下全面實施集團的可持續管理政策。

### 風險管理

光大環境旨在識別、評估及管理與氣候相關的風險。本集團一直將氣候相關的實體風險和轉型風險納入其運營之中。本集團根據TCFD的風險分析框架列出了關鍵的氣候風險，包括制定氣候風險參數、進行氣候風險評估、制定和實施氣候風險控制措施、分析控制措施的有效性以及執行風險審計。



The Group continues to share its climate-related information by following the recommendation outlined in the Task Force on Climate-related Financial Disclosure (“TCFD”). In 2020, Everbright Environment signed up to become a TCFD Supporter, further demonstrating the Group’s commitment to supporting climate-related information disclosure. An outline of the key climate-related risks and opportunities applicable to the Group is presented below.

本集團繼續按照「氣候相關財務披露工作小組」(Task Force on Climate-related Financial Disclosures, 簡稱「TCFD」)的建議披露氣候相關資訊。於二零二零年，光大環境簽署成為TCFD的支持機構，進一步體現了本集團對於氣候相關資訊披露的支持。以下是適用於本集團主要氣候相關風險和機遇的概述。



### Risk Management Process

### 風險管理流程



### Strategy

Everbright Environment is committed to offsetting GHG emissions and to building a cleaner and environmentally friendly future. On the other hand, the Group strives to manage risks and opportunities imposed by climate change on its businesses.

### 策略

光大環境致力抵銷溫室氣體的排放，並建立一個更清潔及環保的未來。另一方面，本集團致力於管理氣候變化為其業務帶來的風險和機遇。



## Physical Climate Scenario Analysis

In 2020, the Group launched a study to conduct project-level modelling of acute and chronic physical climate risks associated with the baseline scenario (applies to water stress assessment)<sup>(1)</sup> and two Representative Concentration Pathways (“RCPs”) – RCP4.5 and RCP8.5 at the assessment year 2040 as developed by the Intergovernmental Panel on Climate Change (“IPCC”). The physical climate scenario analysis aims to assess key climate-related risks under the current situation and potential future climate states. The assessments cover water stress and coastal flood risk to all Everbright Environment’s assets that were under preparation, construction, commissioning and operation during the Reporting Period.

## Scenarios<sup>(2)</sup>

Baseline 基準	RCP4.5 (Optimistic) in 2040 二零四零年的基準RCP4.5 (樂觀情境)	RCP8.5 (Business-as-usual) in 2040 二零四零年的RCP8.5 (如常運作)
Represents modelled results for the year 2014. 代表二零一四年的模擬結果。	RCP4.5 is an intermediate emissions scenario, consistent with a future with relatively ambitious emissions reductions and GHG emissions increasing slightly before starting to decline circa 2040. It is aligned broadly with the GHG emissions profile that would result from implementation of the 2015 nationally determined contributions (NDCs) (out to 2030), followed rapidly by peaking and then reduction of global remissions by 50% by 2080. RCP4.5是中等排放情境，符合未來減排相對進取、溫室氣體排放量在2040年左右開始下降之前略有上升的情況。它與實施2015年國家自定貢獻(NDC) (直至2030年)、隨後迅速達到峰值、然後到2080年全球減排量減少50%的溫室氣體排放情況大體一致。	RCP 8.5 is the high-emissions scenario, consistent with a future with no policy changes to reduce emissions, and characterised by increasing GHG emissions that lead to a high atmosphere GHG concentrations. It is aligned broadly with a business-as-usual scenario. RCP8.5是高排放情境，符合未來沒有為減少排放之政策改變的情況，其特點是溫室氣體排放增加，導致大氣溫室氣體濃度較高。它與如常運作的情境大體一致。

Notes:

<sup>(1)</sup> Aqueduct’s modelled scenario using ordinary least squares (OLS) regression of time series water stress data from 1960 to 2014.

<sup>(2)</sup> The description of various scenarios is referenced to *Technical Supplement – The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities* published by the TCFD in 2017.

## 實體氣候情境分析

二零二零年，光大環境啟動了一項研究，根據由「聯合國政府間氣候變遷專門委員會」(Intergovernmental Panel on Climate Change, 簡稱「IPCC」) 開發、評估期為二零四零年的基準情境 (適用於用水壓力評估)<sup>(1)</sup>、以及兩個「代表濃度途徑」(Representative Concentration Pathways, 簡稱「RCPs」) – RCP4.5和RCP8.5，作出相關的急性和慢性實體氣候風險進行評估。這個實體氣候情境分析旨在評估當前的關鍵氣候相關風險狀況，以及未來潛在的氣候狀態。該評估涵蓋了用水壓力程度和沿海洪水風險對光大環境於報告期內所有在籌備、建設、投產以及運營中的資產之影響。

## 情境<sup>(2)</sup>

附註：

<sup>(1)</sup> Aqueduct的模擬情境使用普通最小平方法計算一九六零年至二零一四年的用水壓力程度。

<sup>(2)</sup> 各種情景的描述均參考TCFD在二零一七年發佈的技術手冊—《情景分析在披露氣候相關的風險和機遇中的作用》。

Water Stress

用水壓力情況

**Why assess water stress?**  
為什麼要評估用水壓力程度?

A majority of the Group's projects, including waste-to-energy projects, integrated biomass utilisation projects, hazardous and solid waste treatment projects, etc., consume a considerable amount of water for cooling purposes. A prolonged drought or insufficient water supply could affect the reliability of waste processing systems.

本集團的大部分項目，包括垃圾發電項目、生物質綜合利用項目、危廢及固廢處置項目等，在冷卻過程中均消耗大量水資源。長期乾旱或供水不足會影響廢物處理系統的可靠性。

**Methodology**  
方法

The Group's water stress assessment measures the ratio of total water withdrawals to available renewable surface and groundwater supplies<sup>(1)</sup>. Exposure to a higher risk of water stress indicates more competition among local users for freshwater.

本集團的用水壓力程度評估量度了總取水量與可再生地表水和地下水供應量的比率<sup>(1)</sup>。用水壓力程度風險越高，代表本地用戶之間對淡水的競爭越激烈。

**Findings**  
調查結果



**1. By Percentage of Capital Investment in Projects**  
按項目資本投資的百分比

From the Group's analysis, water stress is a dominant climate-related risk to the Group's projects in the future. **45.16%** of the Group's investment in projects under preparation, construction, commissioning and operation, are categorised with high water stress or above under the baseline scenario. The figures are increased to **67.61%** and **67.65%** respectively under optimistic scenario (RCP4.5) and business-as-usual scenario (RCP8.5) by 2040.

根據本集團的分析，用水壓力是未來本集團項目中與氣候相關的主要風險。在基準情境下，本集團在籌劃、建設、投產和運營中的項目投資中有**45.16%**屬於高水壓力或以上。到二零四零年，在樂觀情境（RCP4.5）和如常運作情境（RCP8.5）下，數字分別增加到**67.61%**和**67.65%**。



**2. By Percentage of Number of Projects**  
按項目數目百分比

**44.46%** of the Group's projects under preparation, construction, commissioning and operation, are categorised with high water stress or above under the baseline scenario. The figures are increased to **70.48%** and **70.85%** respectively under optimistic scenario (RCP4.5) and business-as-usual scenario (RCP8.5) by 2040.

在基準情境下，本集團籌備、建設、投產和運營中的項目中有**44.46%**屬於用水壓力程度高或更高的級別。到二零四零年，在樂觀情境（RCP4.5）和如常運作情境（RCP8.5）下，數字分別增加到**70.48%**和**70.85%**。

Note:

附註：

<sup>(1)</sup> The calculation of water stress level is based on Aqueduct 3.0 published by the World Resources Institute (WRI) in 2019.

<sup>(1)</sup> 用水壓力的計算是基於世界資源研究所(WRI)在二零一九年發佈的Aqueduct 3.0。

Water Stress Assessment of the Group under Baseline Scenario, Optimistic Scenario (RCP4.5, 2040) and Business-as-Usual Scenario (RCP8.5, 2040).

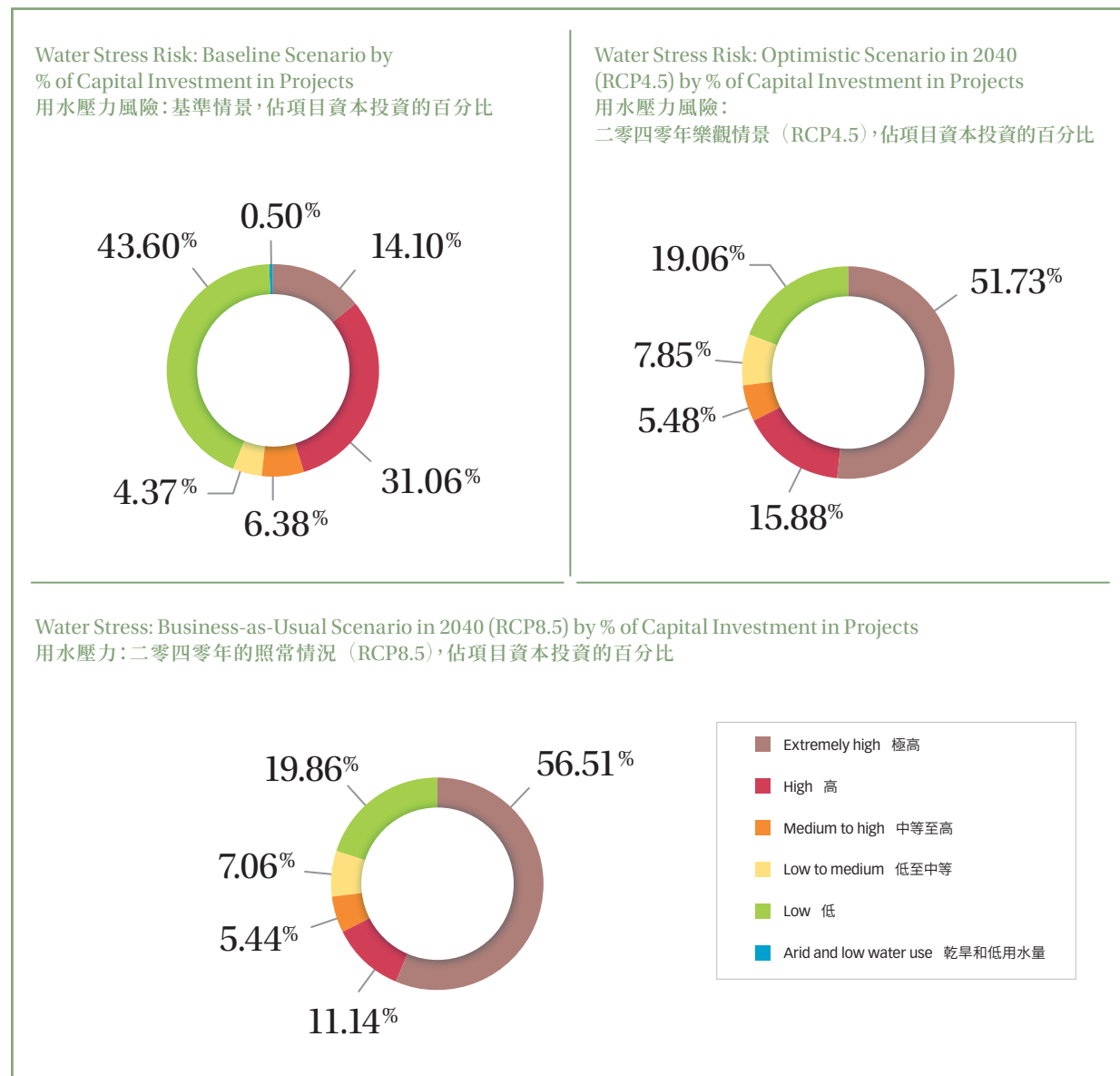
在基準情境、樂觀情境（二零二零年RCP4.5）和如常運作情境（二零二零年RCP8.5）下的本集團的用水壓力程度評估。

**By Percentage of Capital Investment in Projects**

As of 31 December 2020, the total amount of investment was RMB175.042 billion.

**佔項目資本投資的百分比**

截至二零二零年十二月三十一日，投資總額為人民幣1,750.42億元。

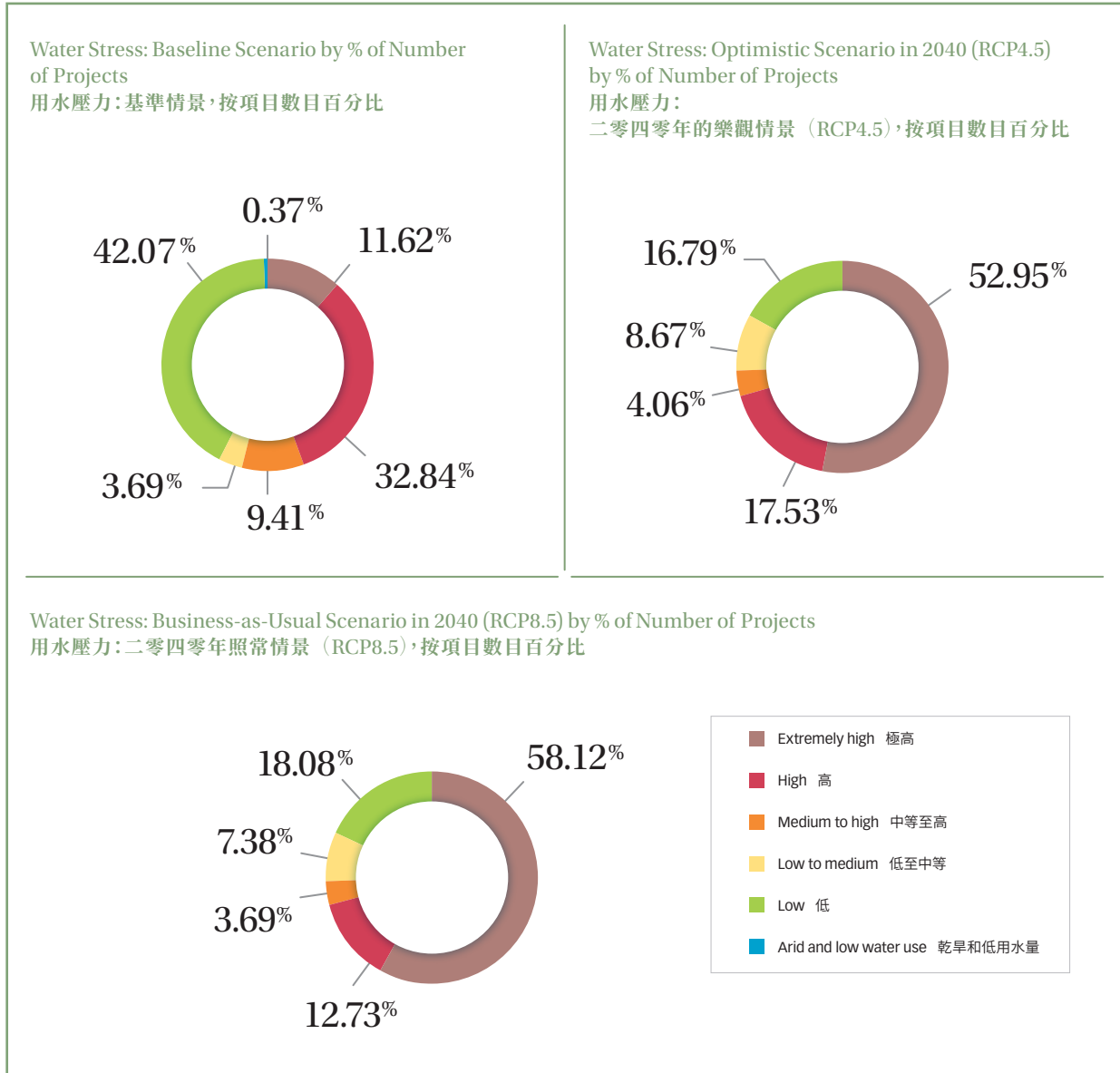


**By Percentage of Number of Projects**

As of 31 December 2020, the total number of projects was 542.

**按項目數目的百分比**

截至二零二零年十二月三十一日，項目總數為542。



Coastal Flood Risk

沿海洪水風險

**Why assess coastal flood risk?**

為什麼要評估沿海洪水風險？

Coastal flood risk would pose threats to the Group's assets and employees' safety. 沿海洪水風險將對本集團資產和員工安全構成威脅。

**Methodology**  
方法

The Group's coastal flood risk assessment measures the % of Group's projects by (1) capital investment and (2) number of projects in coastal cities that would be below the projected water level plus the added height of a local annual flood by 2040. Coastal flood risk assessment was conducted for all of the Group's projects under preparation, construction, commissioning and operation.<sup>(1)</sup>

本集團的沿海洪水風險評估衡量本集團沿海城市項目被當地二零四零年預測水平面及年度洪水疊加水位淹沒的情況，按(1)資本投資和(2)項目數量百分比表示。本集團正在籌備、建設、投產和運營的所有項目均有進行沿海洪水風險的評估。<sup>(1)</sup>

**Findings**  
調查結果



**1. By Percentage of Capital Investment in Projects**  
按項目資本投資的百分比

From the Group's analysis, **16.55%** of the investments of the Group's projects under preparation, construction, commissioning and operation are in coastal cities.

根據本集團的分析，正在籌備、建設、投產和運營的本集團項目中，有**16.55%**的投資是位於沿海城市。

By 2040, **62.51%** and **64.18%** of such investments will be below the projected water level plus the added height of a local annual flood in the RCP4.5 and RCP8.5 scenarios respectively.

於RCP4.5和RCP8.5的情境下，我們將分別有**62.51%**和**64.18%**的投資位於二零四零年當地預測水平面及年度洪水疊加水位之下。



**2. By Percentage of Number of Projects**  
按項目數目百分比

From the Group's analysis, **21.96%** of the no. of Group's projects under preparation, construction, commissioning and operation are located in coastal cities.

根據本集團的分析，正在籌備、建設、投產和運營的本集團項目中，有**21.96%**的項目是位於沿海城市。

By 2040, **60.50%** and **62.18%** of such projects will be below the projected water level plus the added height of a local annual flood in the RCP4.5 and RCP8.5 scenarios respectively.

於RCP4.5和RCP8.5的情境下，我們將分別有**60.50%**和**62.18%**的項目位於二零四零年當地預測水平面及年度洪水疊加水位之下。

Note:

<sup>(1)</sup> The calculation of flood risk referred to Coastal Risk Screening Tool published by Climate Central, Inc. in 2020.

附註：

<sup>(1)</sup> 沿海洪水風險的計算方法參考了Climate Central, Inc.於二零二零年發佈的沿海洪水風險篩檢工具。

Climate-Related Physical Risk Matrix

Based on the physical climate scenario analysis, a risk matrix under the baseline, optimistic (RCP4.5) and business-as-usual (RCP8.5) scenarios in 2040 was created.

Key Findings:

- Medium impact was imposed on the Group's projects on water stress in the baseline scenario and both optimistic (RCP4.5) and business-as-usual (RCP8.5) scenarios in 2040.
- Medium impact was imposed on the Group's projects on the coastal flood issue in the optimistic (RCP4.5) and business-as-usual (RCP8.5) scenarios in 2040.

與氣候相關的實體風險矩陣

根據實體氣候情境分析，我們建立了二零四零年的基準、樂觀(RCP4.5)和如常運作情境(RCP8.5)下的風險矩陣。

主要發現：

- 在二零四零年的基線、樂觀(RCP4.5)和如常運作(RCP8.5)情境中，用水壓力程度對本集團的項目均產生了中度影響。
- 在二零四零年均樂觀(RCP4.5)和如常運作的情境(RCP8.5)下，沿海洪水對本集團的項目均產生了中度影響。

Consequences of Climate Change on Everbright Environment's Projects under Different Scenarios		Baseline	Optimistic (RCP4.5)	Business-As-Usual (RCP8.5)
光大環境項目在不同情境中的氣候變化後果		基準	樂觀 (RCP4.5)	如常運作 (RCP8.5)
Water Stress	用水壓力	M	M	M
Coastal Flood Risk <sup>(1)</sup>	沿海洪水風險 <sup>(1)</sup>	N/A	M	M

**L** Low impact  
低度影響  
 $<25\%$   
of project investments impacted with high risk or above  
的項目投資受高風險或以上影響

**M** Medium impact  
中度影響  
 $\geq 25\%$  and  $<75\%$   
of project investments impacted with high risk or above  
的項目投資受高風險或以上影響

**H** High impact  
高度影響  
 $\geq 75\%$   
of project investments impacted with high risk or above  
的項目投資受到高風險或以上影響

Note:

<sup>(1)</sup> For coastal flood risk, Group's projects that would be below the projected water level plus the added height of a local annual flood in 2040 were categorised as high risk.

附註：

<sup>(1)</sup> 在沿海洪水風險方面，本集團所有位於二零四零年當地預測水平面及年度洪水疊加水位之下的項目均被評價為高風險。

Other Physical Risks

其他實體風險

Physical Risk 實體風險	Potential Impacts 潛在影響
Increase in average and daily maximum temperature 平均和每日最高溫度升高	<ul style="list-style-type: none"> <li>Health risks to employees due to hotter workplaces 工作場所溫度升高所導致的員工健康風險</li> <li>Increase in perceived odour impacts due to hotter ambient environment 因環境溫度升高而增加潛在氣味影響</li> </ul>
Changes in seasonal precipitation patterns – generally wetter winters (with less precipitation as snow) and drier summers (with a greater possibility of drought) 季節性降水模式改變——一般而言冬季較濕(降雪減少)和夏季較乾(乾旱可能性較大)	<ul style="list-style-type: none"> <li>Changes to site hydrology 現場的水文模式改變</li> <li>Impose stressful environment to on-site vegetation 對現場植被施加環境壓力</li> <li>Reduce water availability during dry seasons 乾旱季節供水減少</li> </ul>
Increase in frequency and magnitude of extreme weather events 極端天氣事件的頻率和幅度增加	<ul style="list-style-type: none"> <li>Increased risk of storm damage to buildings and facilities 暴風雨破壞建築物和設施的風險增加</li> <li>Increased storm-related disruption to critical transport for waste delivery 主要廢物運輸路線受風暴相關的干擾增加</li> <li>Increased risk of blowing away of open-stored materials by wind 露天存放材料被風吹走的風險增加</li> <li>Increased health and safety risks to employees exposed to extreme weather conditions 暴露於極端天氣條件下的員工的健康和安全風險增加</li> <li>Impacts on revenue due to interrupted operations (e.g. blockage in delivery of waste, unscheduled shutdown of facilities) 因運營中斷而對收入造成的影響(例如廢物運送的阻塞或設施的非計劃停運)</li> </ul>

Strategy to Manage Climate-Related Risks

氣候相關風險的緩解措施

Everbright Environment has prepared to commence adaptation measures to mitigate the adverse impacts of climate change that may impose on the Group's human capitals and projects. It will continue to promote these measures in the next five years.

光大環境已準備開始實施一系列的適應措施以減緩氣候變化可能對本集團的人力資本和項目的不利影響，該等措施將在未來五年內繼續推進。

Adaptation to Physical Risks

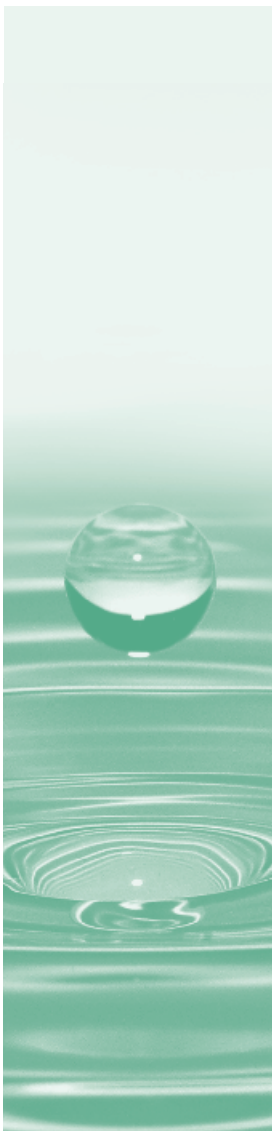
1. Water Stress Management

To better manage water stress, the Group has advanced its technology in reusing and recycling water. For instance, the third generation of the leachate treatment technology has been adopted in the Group's Hangzhou Jiufeng Waste-to-energy Project ("Hangzhou Jiufeng Project"). Through undergoing a series of treatments including ultrafiltration, nanofiltration and reverse osmosis, the effluent quality could meet the standard for use as cooling water. With the adoption of such technology, water recovery rate of 80% could be attained. The advanced waste water treatment process supports our vision towards "Reuse all Water, Zero Discharge".

適應實體風險

1. 用水壓力管理

本集團提高了其回用水和再用水的技術水平以更好地管理用水壓力。例如，本集團的杭州九峰垃圾發電項目（「杭州九峰項目」）採用了第三代滲濾液處理技術。出水經過超濾、納濾、反滲透等一系列處理後可達到冷卻水的使用標準。通過採用這種技術可以達到80%的水回收率。先進的廢水處理工藝支持我們實現到「全回用、零排放」的願景。



Re-Circulating Water

循環水

Water is re-circulated within the waste water treatment system as far as practical to reduce the use of freshwater.  
透過盡可能在廢水處理系統內對水進行循環使用，以減少消耗淡水資源。

Reclaimed Water

再用水

Reclaimed water refers to the effectively treated effluent which is clear and safe for general industrial use or non-potable uses such as street cleaning, vehicle washing, landscaping, toilet flushing, firefighting, etc.  
再用水是指經過有效處理的廢水，可安全地用於一般工業用途或非飲用水用途（如街道清潔、車輛清洗、環境綠化、廁所沖洗、消防等）。

Reusable Water

中水回用

Reusable water refers to the water that is purified by the reusable water projects of Environmental Water. The reusable water projects purify effluent from waste water treatment plants in accordance with *Reuse of Urban Recycling Water – Water Quality Standard for Industrial Uses* (GB/T 19923-2005) or equivalent standards. Reusable water produced by reusable water projects can be used for power plants and general industrial use, reducing freshwater demand of cities.

中水回用是指通過環保水務的中水回用項目淨化的水。中水回用項目根據《城市污水再生利用工業用水水質》(GB/T 19923-2005)或相等標準處理廢水處理廠的廢水。中水回用項目產生的回用水可用於發電廠和一般工業用途，從而減少城市的淡水需求。



## 2. Flood Risk Management

### *Projects with Built-in Flood Retention Measures*

The Group's projects have over 3 million m<sup>2</sup> site greenery area in total, providing aesthetically pleasing landscapes while incorporating flood retention designs.

#### **Some project highlights:**

部分項目亮點：



**Suzhou Waste-to-energy Project**  
蘇州垃圾發電項目

Overall site greenery area: 23,000 m<sup>2</sup>  
整體廠區綠化面積：23,000平方米

## 2. 洪水管理

### *已加入防洪措施的項目*

本集團的項目擁有逾300萬平方米的廠區綠化面積，提供了美麗的景觀之餘亦包含了防洪設計。



**Dangshan Integrated Biomass and Waste-to-energy Project**  
蕩山生物質及垃圾發電一體化項目

Overall site greenery area: 38,000 m<sup>2</sup>  
整體廠區綠化面積：38,000平方米



**Jiangyin Waste Water Treatment Project**  
江陰污水處理項目

Overall site greenery area: 98,000 m<sup>2</sup>  
整體廠區綠化面積：98,000平方米



**Ji'nan Waste Water Treatment Project**  
濟南污水處理項目

Overall site greenery area: 94,000 m<sup>2</sup>  
整體廠區綠化面積：94,000平方米

### *Elevation of Key Equipment/Machinery*

To the extent practicable, key equipment and machinery are elevated to avoid damages due to flooding.

### *核心設備／機械的高度*

在切實可行的範圍內升高核心設備和機器，以避免洪水造成的損壞。

### *Sponge City*

The Group puts the “blue-green infrastructure” concept in practice in its sponge city projects, which aims to improve a city’s ability in absorption, infiltration, retention, release and purification of rainwater, and to strengthen the urban ecosystem through building systems that can effectively control surface runoff and relieve pressure on urban river channels. A series of water storage tanks, rainwater pumping stations, rainwater drainage networks, waste water treatment facilities, as well as ecological restoration works are integrated into the sponge city projects.



Zhenjiang Sponge City Construction PPP Project  
鎮江海綿城市建設PPP項目

### *River-Basin Restoration*

To a broader extent, the Group undertakes river-basin restoration projects to help protect the water sources at the catchment scale. River-basin restoration (or river-basin ecological restoration) refers to river ecosystem restoration through establishing a healthy, comprehensive and stable river ecosystem using artificial reclamation measures, while meeting the basic needs for flood prevention, stormwater drainage and diversion within the river’s and land boundary.

### *海綿城市*

本集團的海綿城市項目旨在透過建立控制表面徑流和防洪排澇的系統，提升城市對雨水的吸納、蓄滲、緩釋和淨化能力，加強城市生態系統功能，從而實踐了藍綠建設的概念。海綿城市項目中包含了一系列雨水調蓄池、雨水泵站、排澇管道、廢水處理設施以及生態修復工程。

### *流域治理*

本集團在更大範圍內展開流域治理項目，以保護集水區範圍內的水源。流域治理（或生態河道治理）是指在河道陸域控制線內，在滿足防洪、排澇及引水等河道功能的基礎上，通過人工修復措施促進河道水生生態系統恢復，構建健康、完整、穩定的河道水生生態系統。

### 3. Emergency Response

The Group has enhanced its emergency preparedness for rapid response and recovery from extreme weather events, including heaving rainstorms, floods, typhoons, thunderstorms, sandstorms, etc. In response to the flood seasons and the occurrence of extreme weather events, the Group has deployed necessary measures in advance, and issued a number of procedural documents, namely *Notice on Strengthening Work Safety in May Day Holiday*, *Notice on Commencing "Safety Production Month"*, *Notice on Safe Management of Production Safety during Flood Seasons and under Catastrophic Weather Conditions*, *Notice on Work to "Prevent Typhoon and Flood in Summer"*, *Notice on Management of Production Safety during Adverse Weather*, and *Notice on Work Measures to Prepare for Strong Wind, Rainstorm, Thunderstorm and Lightning*.

At project levels, all project companies conduct regular inspections on adverse weather protection measures, as well as communication, logistics support and protection of emergency supplies to ensure safe operation at all times. A few days before the arrival of the an anticipated extreme weather event, all relevant projects companies advance their contingency plans including stocking up of emergency supplies, strengthening backup power systems and enhancing information exchange and operational liaison among the emergency response units.

The Group also commenced dedicated investigation and ratification of potential hazards to ensure precautionary measures were adequately in place. Furthermore, with an aim to improve accident prevention and handling capabilities of staff, emergency preparedness drills were carried out. Targeting key locations and positions, on-site plan and key emergency drills are carried out. In particular, the operational and practical preliminary emergency response drills for front-line employees of the workshop teams are conducted to enhance their capabilities in emergency response.

### 3. 緊急應變

本集團加強了對極端天氣事件(包括暴雨、洪水、颱風、雷暴、沙塵暴等)的快速反應和恢復的應急準備。針對汛期和極端天氣事件的發生，本集團提前部署，下發了《關於加強「五一」假期安全生產工作的通知》、《關於展開「安全生產月」活動的通知》、《關於認真做好汛期及災害性天氣安全生產管理工作的通知》、《關於做好「防颱防汛、平穩度夏」工作的通知》、《關於加強災害性天氣期間安全生產管理工作的通知》及《關於做好暴雨雷電大風等惡劣天氣防範應對工作的通知》等制度。

在項目層面上，所有項目公司定期檢討針對惡劣天氣的保護措施及實行通信、物流、應急物資保障工作，以確保時刻安全運行。所有相關的項目公司在預計發生極端天氣事件前幾天，已額外提早部署應急準備工作，包括儲備應急物資、加強後備電源、進一步加強前線應急成員單位的資訊交流與工作聯繫等。

本集團亦展開了專門調查和核定潛在危害，以確保充分採取預防措施。此外，我們展開了應急準備演習提高員工的事故預防和處理能力。演習針對重點場所和重點崗位，展開現場處置方案和重點崗位應急處置演練活動。特別是車間班組一線員工事發後第一間應急操作演練，提高應急處置能力。

#### 4. Robust Preventive Maintenance Programme

To maintain infrastructures within the same ranges of serviceability especially in the era of climate change, the Group has implemented a robust preventive maintenance programme that features regular, frequent maintenance activities to be performed on key systems to reduce the change of failure and extend uptime. The programme allows project companies to address any problems before they arise.

#### 5. Sustainable Financing

In April 2020, the Group, through its wholly-owned subsidiary, entered into a limited partnership agreement with China Everbright Group, a controlling shareholder of the Company, and wholly-owned subsidiaries of China Everbright Limited, to participate in the Everbright Belt and Road Green Equity Investment Fund, and would contribute RMB500 million to the fund. The fund would focus on ecological environmental protection and green development in markets along the Belt and Road, hence enhancing the climate resilience of cities.

#### 6. Climate-Related Risk Insurance

The Group has insurance against climate-related natural hazards including lightning, rainstorms, floods, storms, tornadoes, hail, typhoons, hurricanes, sandstorm, blizzards, landslide, collapse, mudslide, ground subsidence and other natural disasters. Insurance covers the compensation for damages of projects, interruption in operations, health of workers, etc.

### ***Transition Risk Scenario Analysis and Management Policy***

In 2020, we adopted the International Energy Agency's ("IEA") World Energy Outlook ("WEO") 450 Scenario ("450 Scenario"), which are consistent with the goals of the Paris Agreement, to analyse the climate transition risks that the Group is facing, and the implementation of a suitable management approach, so as to help us better plan the development of the enterprise.

#### 4. 健全的預防性維修計劃

為確保在氣候變化的影響下基礎設施的操作性能維持在相同範圍內，本集團實施了健全的預防性維修計劃，針對關鍵系統進行定期、頻繁的維修活動，以減少故障的變化並延長正常運行時間。該程序使項目公司可以提早發現及處理所有問題。

#### 5. 可持續融資

二零二零年四月，本集團透過旗下全資附屬公司與本公司控股股東中國光大集團及中國光大控股有限公司全資附屬公司訂立有限合夥合同，加入光大一帶一路綠色股權投資基金，並擬出資人民幣5億元認繳該基金，該基金將致力於「一帶一路」沿線市場的生態環境保護和綠色發展，從而增強城市的氣候抗禦能力。

#### 6. 氣候相關風險的保險

本集團安排了針對與氣候相關的自然災害的保險，包括閃電、暴雨、洪水、風暴、龍捲風、冰雹、颱風、颶風、沙塵暴、暴風雪、滑坡、塌陷、泥石流、地面塌陷和其他自然災害。保險包括對項目損害、運營中斷、工人健康等的賠償。

### ***轉型風險情境分析及管理方針***

二零二零年，我們採納了與《巴黎協定》目標一致的國際能源總署(IEA)世界能源展望(WEO)的450情境(「450情境」)，以分析本集團正面臨的轉型氣候風險及該實施的管理方針，從而幫助我們更好地規劃企業發展。

The 450 Scenario refers to controlling the concentration of greenhouse gases in the atmosphere within 450 ppm so that the temperature rise at the end of this century would not exceed 2°C of the average temperature before the industrial revolution, and proposed steps to achieve this goal. For example, the proportion of renewable energy will increase from 3% in 2015 to more than 20% in 2040, the increase in carbon pricing, and mature and commercially viable technologies will be adopted widely, etc., so as to reduce greenhouse gas emissions.

450情境是指控制大氣中溫室氣體濃度在450 ppm以內，讓本世紀末氣溫上升幅度不超過工業革命前平均溫度的2°C以內，並提出實現該目標的步驟。例如，可再生能源的佔比將由二零一五年的3%提升至二零四零年的20%、碳價格的提升、更廣泛地採用現今已成熟及商業規模可行的技術及科技等，以減少溫室氣體排放。

The transition risks, potential impacts, and management approach for the 450 Scenario are detailed below.

針對450情境而識別出的轉型風險、潛在影響及管理方針詳列如下。

Categories 類別	Major Risks 主要風險	Potential Financial and/or Operational Implications 潛在財務及／ 或運營影響	Management Approach in the Next Five Years 未來五年的管理方針
Policy Change Risk 政策改變風險	<p><b>Carbon tax, fuel/energy tax, volume and trading control</b> 碳稅、燃料／能源稅、總量管制與交易</p> <p>Affected by regulatory authorities' restrictions on GHG emissions or mandatory carbon trading. For example, China's plan to reach carbon neutrality by 2060 受到監管部門關於溫室氣體排放的限制及／或者強制碳交易的影響。例如，中國計劃於二零六零年達致碳中和</p>	<ul style="list-style-type: none"> <li>Increase of operating cost 增加運營成本</li> <li>Early retirement of existing assets due to policy changes 因政策變更而提前報廢現有資產</li> <li>Investment expenditure on developing low-carbon intensity technology 開發低碳強度技術的投資開支</li> </ul>	<ul style="list-style-type: none"> <li>Enhancement of communication with various monitoring authorities, adjustment to regulations promptly, and active implementation of measures to address changes in prevailing policies 加強與各監管部門的溝通聯繫，及時根據法規，同時根據政策變化主動調整</li> <li>Improvement in energy efficiency of operating assets and consider deploying more carbon offsetting measures (e.g. large-scale tree planting, investment in renewables) 提高運營資產的能源效率，並考慮採取更多的碳補償措施（例如大規模植樹，可再生能源投資）</li> </ul>
	<p><b>Sustainability/ESG reporting</b> 可持續發展／環境、社會和管治報告</p> <p>The major local and international guidelines for sustainability reports and sustainability ratings have been strengthened with emphasis on climate change 本地和國際的可持續發展報告和評級相關指南已得到加強，並著重於氣候變化</p>	<ul style="list-style-type: none"> <li>Increase in research and development expenditures on developing the matrix and targets for climate-related risks 增加用於開發與氣候相關風險的矩陣和目標的研究與開發支出</li> <li>Increase of compliance cost 增加合規成本</li> </ul>	<ul style="list-style-type: none"> <li>Commitment to the latest sustainability/ESG reporting requirements and attempt to become an industry leader in sustainability 致力遵守最新的可持續發展／環境、社會和管治報告要求，並成為可持續發展行業的領導者</li> </ul>

Categories 類別	Major Risks 主要風險	Potential Financial and/or Operational Implications 潛在財務及／ 或運營影響	Management Approach in the Next Five Years 未來五年的管理方針
<p><b>Reputation Risk</b> 聲譽風險</p>	<p><b>Relationship with ESG investors</b> 與環境、社會及管治投資者的關係</p> <p>Due to its incineration operations, waste-to-energy is usually misperceived as a carbon-intensive business, which may be less preferred by carbon-conscious investors compared with other renewables.</p> <p>因其焚燒的運作模式，垃圾發電常被誤認為高碳強度的業務。因此與其他可再生能源相比時，垃圾發電對於注重碳排放的投資者可能成為較次要的選擇</p>	<ul style="list-style-type: none"> <li>• Increase of financing cost 增加融資成本</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct evidence-based, scientific calculations to estimate total GHG emissions of waste-to-energy projects and their contributions in offsetting GHG emissions through replacement of the use of fossil-fuelled power, and diversion of household waste from landfills where the fugitive release of landfill gas (a strong GHG) would pose a threat to global warming 進行實證、科學的計算，以估算垃圾發電項目的總溫室氣體排放量及其透過取代使用化石燃料生產的電力，把生活垃圾從填埋場分流，以避免釋放無組織填埋氣體（為強力的溫室氣體，嚴重導致全球變暖）而得出對溫室氣體抵銷的貢獻</li> <li>• Improvement in communication with stakeholders to help them understand the unique nature of the waste-to-energy business, as well as the overall environmental benefits brought by waste-to-energy business aspects other than GHG reduction (i.e. resolving the waste crisis and the associated environmental implications to land, groundwater, etc.) 改善與持份者的溝通以幫助他們了解垃圾發電業務的獨特性則以及其減少溫室氣體排放以外，所帶來的整體環境效益（解決垃圾危機及其對土地、地下水相關的環境影響等）</li> </ul>
<p><b>Technology and Innovation Risk</b> 科技與創新風險</p>	<p><b>Technological advancement required</b> 需要進行科技革新</p> <p>More advanced technologies are needed to meet the increasingly stringent decarbonisation requirements.</p> <p>需要採用更先進的科技以符合日益嚴格的減碳要求</p>	<ul style="list-style-type: none"> <li>• Increase of operating cost 增加運營成本</li> <li>• R&amp;D expenditures in new and alternative technologies 新型和替代型技術研發支出</li> <li>• Capital investments in technology development 技術開發的資本投資</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of scientific and technology R&amp;D, actively brings technical expertise, promote the transformation of technological achievements and project applications, insist on "Innovation-Driven Development" 推動科技研發與創新，積極引進專業技術人才、展開自主技術研發、推動技術成果轉化以至項目應用，堅持「創新引領發展」</li> </ul>

### Exploring Future Adaptation Measures Against Climate Risks

Everbright Environment recognises the long-term challenges presented by climate change and has continued to explore adaptation measures to mitigate physical and transitional risks. The exploration efforts cover the entire cycle of projects from early-stage planning and design till on-going operation and management.

### 探索應對氣候變化風險的未來適應措施

光大環境意識到氣候變化帶來的長期挑戰，並繼續探索適應措施以減輕實體和轉型風險。探索工作涵蓋了從早期計劃和設計到正式的運營和管理的整個項目週期。

#### Planning 規劃

#### Climate-Sensitive Site Selection

##### 氣候敏感的選址

- Mainstream climate considerations into the site selection process of projects.  
將氣候因素納入項目選址過程。
- Avoid choosing sites with unfavourable hydrometeorological parameters and/or potential extreme weather conditions as appropriate.  
適當避免選擇水文氣象參數不利和／或潛在極端天氣條件的地點。

#### Green Building/Infrastructure Development

##### 綠色建築／基礎設施開發

- Consider climate-related impacts in the building lifecycle and obtain green building certifications for new buildings/infrastructures where possible. The Group will also closely monitor the energy performance of existing buildings through advanced technologies such as real-time energy monitoring for smart energy management, thereby reducing GHG emissions.  
考慮建築物生命週期中與氣候相關的影響，並在可能的情況下獲得新建築物／基礎設施的綠色建築物認證。本集團將通過先進技術（例如用於智能能源管理的實時能源監控）密切監視現有建築物的能源績效，從而減少溫室氣體排放。

## Design 設計

### Improve Structural Integrity 改善結構完整性

- Improve structural integrity of plants by adopting a more stringent wind load factor, larger temperature differences, and increased snow load in resilient building design, where appropriate.  
在適當的情況下，通過在彈性建築設計中採用更嚴格的風荷載系數、更大的溫差以及更高的雪荷載設計值來改善工廠的結構完整性。

### Drainage and Flood Prevention 防洪及排水設計

- Adopt climate resilient drainage design that caters for a higher rainfall intensity and shorter return period.  
採用氣候適應性排水設計，以滿足更高的降雨強度和更短的返回期。
- Install flood gates in areas that are prone to flooding.  
在容易發生水災的區域安裝水閘。
- Improve design to ensure proper drainage along key access roads to ensure uninterrupted transportation of waste and biomass raw materials to the plants.  
改善設計並確保主要通道排水設計恰當，以確保垃圾和生物質原料的運送不受影響。

### Improve Performance of Equipment under High Temperatures 提高設備在高溫下的性能

- Conduct thermodynamic modelling to investigate how higher temperatures and humidity would affect long term plant performance. Thermodynamic modelling allows the future performance of the power plant to be simulated under different scenarios, and helps identifying limitations in performance and areas of the plant where operational efficiency can be gained. The modelling results can facilitate adjustments in operations and maintenance or installation of additional infrastructure such as inlet cooling, to adapt to long-term changes to ambient conditions.  
使用熱力學模型以研究較高的溫度和濕度將如何影響項目的長期性能。熱力學模型允許在不同情況下模擬發電廠的未來性能，並幫助確定發電廠的性能和可獲得運行效率的領域的局限性。模型結果可以促進操作和維護方面的調整或安裝其他基礎設施（如入口冷卻），以適應環境條件的長遠變化。

### Rainwater Harvesting 雨水收集

- Explore opportunities to increase rainwater harvesting.  
探索增加雨水收集的機會。

### Transportation Route 運輸路線

- Carefully design transportation routes to reduce climate-related impacts that may affect the delivery of waste and raw materials.  
精心設計運輸路線，以減少因氣候變化因素阻礙垃圾和原材來輸送的影響。



**Construction**  
施工

**Sustainable Construction**  
可持續施工

- Select suitable low-carbon materials for construction.  
選擇合適的低碳材料進行施工。
- Use biodiesel to power the construction projects and equipment to lower carbon emissions.  
於在建項目及設備中使用生物柴油，以減少碳排放。

**Operation and Management**  
運營及管理

**Improve Flood Resilience of Operating Assets**  
提高運營資產的抗洪能力

- Review design and operation of existing assets to identify opportunities for improving waterproofing of buildings.  
檢視現有資產的設計和運營，尋找改善建築物防水能力的機會。

**Assessing Climate Resilience of Utilities**  
評估公用設施的氣候適應能力

- Communicate with utility authorities to assess climate resilience of utilities with considerations given to rerouting of pipelines, use of underground pipelines, etc.  
與公用事業當局進行溝通，以評估公用設施的氣候適應能力，並考慮管道的重新分佈、地下管道的使用等。

**Capacity Building**  
能力建設

- Conduct training for all staff to ensure their awareness of potential climate-related impacts.  
對所有員工進行培訓，以確保他們意識到與氣候相關的潛在影響。

**Supply Chain: Implementing Climatic Guidance for Procurement**  
供應鏈：實施採購氣候指引

- Where practical, procurement specifications shall clearly identify the climatic conditions (current and future) in which the equipment or asset will operate.  
在可行的情況下，採購規範應明確標識設備或資產正常運行的所需氣候條件（當前和將來）。

Climate-Related Opportunities

氣候相關機遇

Categories 類別	Major Opportunities 主要風險	Potential Financial and/or Operational Implications 潛在財務及／或運營影響	Management Approach in the Next Five Years 未來五年的管理方針
<b>Corporate Reputation</b> 企業商譽	<b>ESG investments</b> 環境、社會及管治投資 Climate change leads to ESG investment opportunities, and investors will make investment considerations based on the corporate's ESG performances 氣候變化帶來環境、社會及管治方面的投資機遇，投資者會依照企業的環境、社會和管治方面的績效作投資考慮	<ul style="list-style-type: none"> <li>Increase value of assets 提高資產價值</li> <li>Enhance the Group's reputation and competitiveness 提高本集團聲譽及競爭地位</li> </ul>	<ul style="list-style-type: none"> <li>Adopt international best practices in sustainability reporting 在可持續報告中採用國際最佳實踐</li> <li>Increase transparency in ESG information disclosure 增加披露環境、社會及管治資料的透明度</li> <li>Incorporate ESG considerations into the Group's operations 於本集團的運營中納入環境、社會及管治的考慮</li> </ul>
<b>Market Change</b> 市場轉變	<b>Sustainable waste treatment solutions</b> 可持續的廢棄物處理方案 In the era of climate change, the market has been looking for more effective and sustainable waste treatment solutions that facilitate landfill diversion and generate green electricity, which is in line with Everbright Environment's practice 在氣候變化的時代下，市場正在尋覓一個更有效與可持續的廢棄物處理方案，以促進廢棄物從填埋場的分流與綠色電力的生產，此市場趨勢與光大環境的業務工作一致	<ul style="list-style-type: none"> <li>Increase in demand of sustainable waste solutions 對可持續廢棄物管理方案的需求大增</li> <li>Enhance the Group's reputation and market standing 提高本集團聲譽及市場地位</li> </ul>	<ul style="list-style-type: none"> <li>Waste-to-energy will remain as a core business of Everbright Environment. The Group will step up the efforts in technology R&amp;D in order to improve operational efficiencies in waste treatment and supply of green electricity 垃圾發電會繼續為光大環境的核心業務。本集團將會加強在技術研發的努力，以改善其在廢棄物處理及供應綠色電力的運營效率</li> <li>The Group will actively explore alternative waste management models such as waste sorting and resource recycling to support the development of "zero-waste cities" 本集團會積極探索廢棄物管理的替代模式，如垃圾分類及資源回收，以支持「無廢城市」的發展</li> </ul>

## Metrics and Targets

The Group has used the internationally recognised CDM under the *United Nations Framework Convention on Climate Change* (“UNFCCC”) to estimate the projects’ GHG emissions and offset.

### Data Calculation Methodologies

The calculation of GHG emissions and offset is referenced to CDM methodologies *ACM0022: Alternative Waste Treatment Processes (Version 2.0)*, *AM0080: Mitigation of Greenhouse Gases Emissions with Treatment of Wastewater in Aerobic Wastewater Treatment Plants (Version 1.0)*, *ACM0018: Electricity Generation from Biomass Residues in Power-Only Plants (Version 3.0)*, *ACM0006: Electricity and Heat Generation from Biomass (Version 14.0)* and *AMS-I.C.: Thermal Energy Production With or Without Electricity (Version 20.0)*. GHG emissions from air travel are calculated by International Civil Aviation Organization Carbon Emissions Calculator.

During the Reporting Period, we have revised some of the calculation methods for GHG emissions and offset. The calculation principle is primarily based on CDM methodologies, however, some of the coefficients or emission factors have been changed to values that are more in line with China’s situation, and water content of waste has been deducted before calculation. Therefore, there are considerable discrepancies of GHG emissions and offset data when compared to previous years. The key revisions are as follows:

Scope 1 – Referred to *Household Waste Incineration Engineering Technology* published by Bai Liangcheng for the related emissions of household waste incineration, which uses the relevant coefficients of the carbon content of various types of wastes that are more in line with China’s situations, and water content of the incoming wastes has been deducted before calculation, which are different from the use of CDM’s default wet-based waste composition value; scope 2 – Referred to the *Regional Baseline Grid Emissions Factor for Emission Reduction Projects in China 2019*, which is more

## 指標和目標

本集團使用受國際認可的《聯合國氣候變化框架公約》下的CDM溫室氣體排放計算方法來估算項目的溫室氣體排放量及抵銷。

### 數據計算方法

溫室氣體的排放及抵銷的計算參照CDM方法《ACM0022：多選垃圾處理方式（2.0版）》、《AM0080：透過在有氧污水處理廠處理污水減少溫室氣體排放（1.0版）》、《ACM0018：純發電廠利用生物廢棄物發電（3.0版）》、《ACM0006：生物質熱電聯供（14.0版）》及《AMS-I.C.：電力或非電力用戶提供熱能（20.0版）》。飛機差旅的溫室氣體排放以國際民航組織的碳排放計算器計算得出。

報告期內，我們修訂了部份溫室氣體排放及抵銷的估算方法。估算的原則基本根據CDM的方法學，但其中部份系數或排放因子改為選用較符合國情的數值，並在計算前預先扣除垃圾的含水率。因此，溫室氣體排放及抵銷數據與往年相比差距較大。重點修訂如下：

範疇一 – 生活垃圾焚燒的相關排放參考白良成著作《生活垃圾焚燒處理工程技術》，改用較符合國情的各類垃圾碳含量相關系數、並預先扣除進廠垃圾含水量，而非採用CDM的默認濕基垃圾成分數值；範疇二 – 外購非再生能源電力的相關排放改用較新、且更符合營運情況的《二零一九年度減排項目中國區域電網基線排放因子》、並根據CDM發佈的指南《方法學工具—計算電力系統排放因子的工具》，採用電量邊際排放因子及容量邊際

updated and more in line with the operational situations, for the emissions related to purchased non-renewable energy electricity, in replacement of the previous *2015 National Average Grid Emissions Factor in China*; in addition, the weighted average of the operating margin (OM) and build margin (BM) as stated in the *CDM Methodological tool – Tool to calculate the emission factor for an electricity system* has been adopted; the methane conversion factor (MCF), the fractions of degradable organic carbon (DOC<sub>i</sub>) and the decay rate (K<sub>i</sub>) of various types of wastes, instead of the CDM default values, are adopted for the emission offset related waste-to-energy projects to be more in line with national actual situations.

The emissions factors used to calculate emissions related to energy combustion correspond to data in the 2006 IPCC Guidelines (*2006 IPCC Guidelines for National Greenhouse Gas Inventories*). Electricity emissions factors follow the *Regional Baseline Grid Emissions Factor for Emission Reduction Projects in China 2019* issued by the Ministry of Ecology and Environment) of the PRC.

#### GHG Emissions

Everbright Environment discloses all three carbon emissions scopes in absolute figures and intensities. In 2020, the Group generated 0.75 kg of CO<sub>2</sub> equivalent (“CO<sub>2</sub>e”) per on-grid green electricity supplied.

The scope 1 emissions were increased due to the increase in the number of operating projects each year. The huge project portfolio implies the increase in total GHG emissions. In addition, we expanded the reporting scope for scope 3 emissions in 2020, to include the indirect emissions from the transportation of solidified ash to landfills by project companies under the sectors of environmental energy and greentech, as well as the indirect emissions from nitrous oxide (“N<sub>2</sub>O”) released from effluent of the projects under the environmental water sector.

排放因子的加權平均，取代以往採用的《二零一五年全國電網平均排放因子》；與垃圾發電項目相關的排放抵銷量取用符合中國實際情況的甲烷轉換因子(MCF)、可降解有機碳比例(DOC<sub>i</sub>)及各類垃圾的降解率(K<sub>i</sub>)，而非CDM的默認數值。

用於計算與能源燃燒有關的排放因子與二零零六年政府間氣候變化專門委員會(IPCC)指南《二零零六年IPCC國家溫室氣體清單指南》)中的數據相對應。電力排放因子遵循中華人民共和國生態與環境部)發佈的《二零一九年度減排項目中國區域電網基線排放因子》。

#### 溫室氣體排放

光大環境披露三個碳排放範疇的絕對數值和強度。二零二零年，本集團每提供一度上網綠色電力便產生0.75公斤二氧化碳當量。

由於運營項目的數量每年都在增加，範疇一的排放量有所增加。龐大的項目組合意味著溫室氣體總排放量的增加。此外，我們更於二零二零年擴大了範疇三排放的匯報範圍，納入環保能源及綠色環保項目公司運送固化後的飛灰至填埋場的間接排放，以及環保水務項目從出水中釋放的氧化亞氮的間接排放。

GHG Emissions (in tonnes of CO<sub>2</sub>e)

## 溫室氣體排放 (噸二氧化碳當量)

	2020	2019	2018
Scope 1 (Direct Emissions) (tCO <sub>2</sub> e) 範疇一 (直接排放) (噸二氧化碳當量)	<b>10,717,354.60</b>	8,992,913.41 (re-stated) (經重列)	8,833,333.51 (re-stated) (經重列)
Incineration of household waste (tCO <sub>2</sub> e) 生活垃圾焚燒 (噸二氧化碳當量)	<b>10,548,374.40</b>	8,852,663.65 (re-stated) (經重列)	8,746,843.59 (re-stated) (經重列)
Other sources (tCO <sub>2</sub> e) 其他來源 (噸二氧化碳當量)	<b>168,980.20</b>	140,249.76 (re-stated) (經重列)	86,489.92 (re-stated) (經重列)
Scope 2 (Energy Indirect Emissions) (tCO <sub>2</sub> e) 範疇二 (能源引致的間接排放) (噸二氧化碳當量)	<b>454,575.00</b>	344,331.55 (re-stated) (經重列)	367,134.02 (re-stated) (經重列)
Scope 3 (Other Indirect Emissions) (tCO <sub>2</sub> e) 範疇三 (其他間接排放) (噸二氧化碳當量)	<b>42,076.01</b>	13,554.36	27,317.40
Total GHG Emissions (tCO <sub>2</sub> e) 溫室氣體排放總量 (噸二氧化碳當量)	<b>11,214,005.61</b>	9,350,799.32 (re-stated) (經重列)	9,227,784.92 (re-stated) (經重列)
Total GHG Emissions Intensity (kg CO <sub>2</sub> e/kWh of green electricity supplied) 溫室氣體排放強度 (公斤二氧化碳當量/千瓦時綠色電力上網量)	<b>0.75</b>	0.87 (re-stated) (經重列)	1.11 (re-stated) (經重列)
GHG Emissions Offset <sup>(1)</sup> (tCO <sub>2</sub> e) 溫室氣體排放抵銷量 <sup>(1)</sup> (噸二氧化碳當量)	<b>15,273,840.27</b>	10,561,808.35 (re-stated) (經重列)	9,456,250.18 (re-stated) (經重列)
GHG Emissions Reductions <sup>(2)</sup> (tCO <sub>2</sub> e) 溫室氣體減排量 <sup>(2)</sup> (噸二氧化碳當量)	<b>4,059,834.66</b>	1,211,009.03	228,465.25

Note:

附註：

(1) Due to revision of the calculation method, there may be some discrepancies between the data reported and those stated in our Annual Report 2020.

(1) 由於估算方法的修訂，部分數據與我們的二零二零年年報內所註或有出入。

(2) GHG emissions reductions is GHG emissions offset minus total GHG emissions.

(2) 溫室氣體減排量是指溫室氣體排放抵銷量減去溫室氣體排放總量。

GHG Emissions in 2020 by Business Sector

二零二零年按業務板塊劃分的溫室氣體  
排放量

**Total Scope 1 (Direct Emissions):**  
範疇一(直接排放)排放總量：

**10,717,354.60** tonnes CO<sub>2</sub>e  
噸二氧化碳當量

Operation Unit 運營單位	Emissions Sources 排放來源	2020 (tonnes CO <sub>2</sub> e) (噸二氧化碳當量)
<b>Environmental Energy</b> 環保能源	Fuel consumption by operation of facilities; incineration of household waste 設施運營的燃料消耗、生活垃圾焚燒	<b>9,738,873.21</b>
<b>Greentech</b> 綠色環保	Fuel consumption by operation of facilities; incineration of household waste; combustion of biomass raw materials 設施運營的燃料消耗、生活垃圾焚燒、生物質原材料燃燒	<b>950,977.03</b>
<b>Environmental Water</b> 環保水務	Fuel consumption by operation of facilities; fugitive methane emissions from waste water treatment projects; nitrous oxide emissions from the biological treatment process 設施運營的燃料消耗、污水處理項目的無組織甲烷排放、生物處理過程中的氧化亞氮排放	<b>27,215.63</b>
<b>Equipment Manufacturing, Eco-recycling, Greenergy, Envirotech, Environmental Planning, Headquarters, Representative Offices, Offices and Management Centres</b> 裝備製造、生態資源、 光大照明、綠色科創、 環境規劃、總部、 代表處、辦事處及 管理中心	Fuel consumption by operation of facilities 設施運營的燃料消耗	<b>288.73</b>

**Total Scope 2 (Energy Indirect Emissions):**  
範疇二 (能源引致的間接排放) 排放總量：

**454,575.00** tonnes CO<sub>2</sub>e  
噸二氧化碳當量

Operation Unit 運營單位	Emissions Sources 排放來源	2020 (tonnes CO <sub>2</sub> e) (噸二氧化碳當量)
<b>Environmental Energy</b> 環保能源	Consumption of purchased non-renewable electricity 消耗的外購非再生能源電力	<b>82,619.88</b>
<b>Greentech</b> 綠色環保	Consumption of purchased non-renewable electricity 消耗的外購非再生能源電力	<b>26,674.67</b>
<b>Environmental Water</b> 環保水務	Consumption of purchased non-renewable electricity 消耗的外購非再生能源電力	<b>342,619.47</b>
<b>Equipment Manufacturing, Eco-recycling, Greenergy, Envirotech, Environmental Planning, Headquarters, Representative Offices, Offices and Management Centres</b> 裝備製造、生態資源、 光大照明、綠色科創、 環境規劃、總部、 代表處、辦事處及 管理中心	Consumption of purchased non-renewable electricity 消耗的外購非再生能源電力	<b>2,660.98</b>

**Total Scope 3 (Other Indirect Emissions):**  
範疇三 (其他間接排放) 排放總量:

**42,076.01**

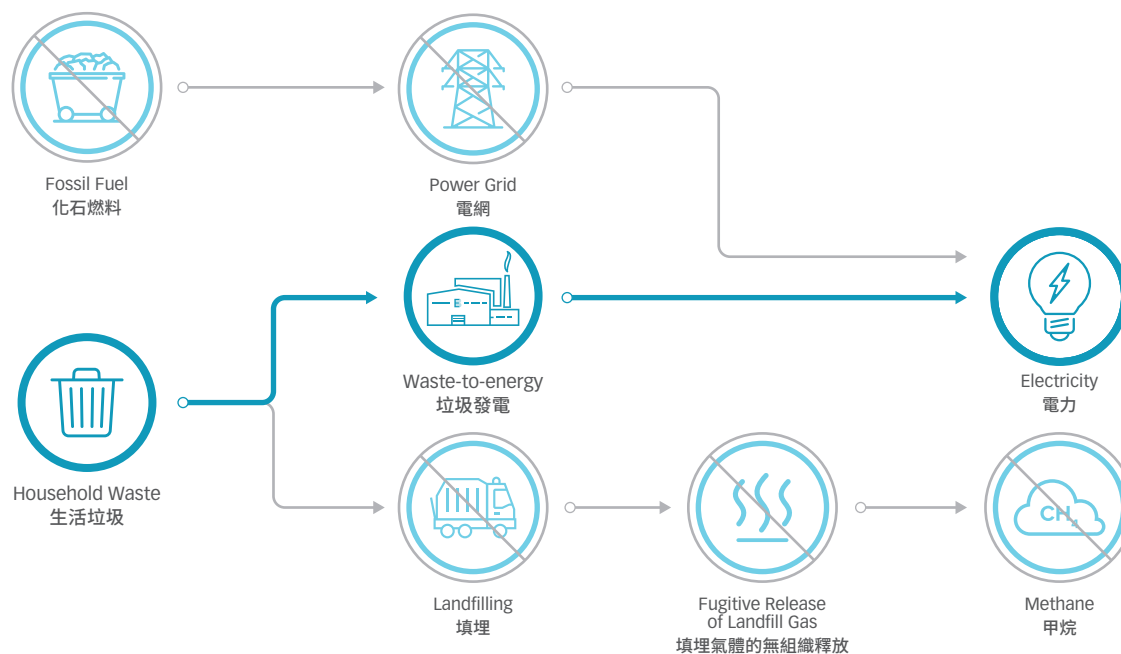
tonnes CO<sub>2</sub>e  
噸二氧化碳當量

Operation Unit 運營單位	Emissions Sources 排放來源	2020 (tonnes CO <sub>2</sub> e) (噸二氧化碳當量)
<b>Environmental Energy</b> 環保能源	Fuel consumption for the delivery of solidified ash to landfill by project companies; air travel by employees 項目公司運送固化後的飛灰至填埋場的燃料消耗、員工飛機差旅	<b>10,628.90</b>
<b>Greentech</b> 綠色環保	Fuel consumption for the delivery of solidified ash to landfill by project companies; air travel by employees 項目公司運送固化後的飛灰至填埋場的燃料消耗、員工飛機差旅	<b>216.99</b>
<b>Environmental Water</b> 環保水務	Nitrous oxide released from effluent; air travel by employees 從出水中釋放的氧化亞氮、員工飛機差旅	<b>30,924.28</b>
<b>Equipment Manufacturing, Eco-recycling, Greenergy, Envirotech, Environmental Planning, Headquarters, Representative Offices, Offices and Management Centres</b> 裝備製造、生態資源、 光大照明、綠色科創、 環境規劃、總部、 代表處、辦事處及 管理中心	Air travel by employees 員工飛機差旅	<b>305.84</b>



GHG Emissions Offset through Waste-to-Energy

以垃圾發電方式抵銷溫室氣體排放

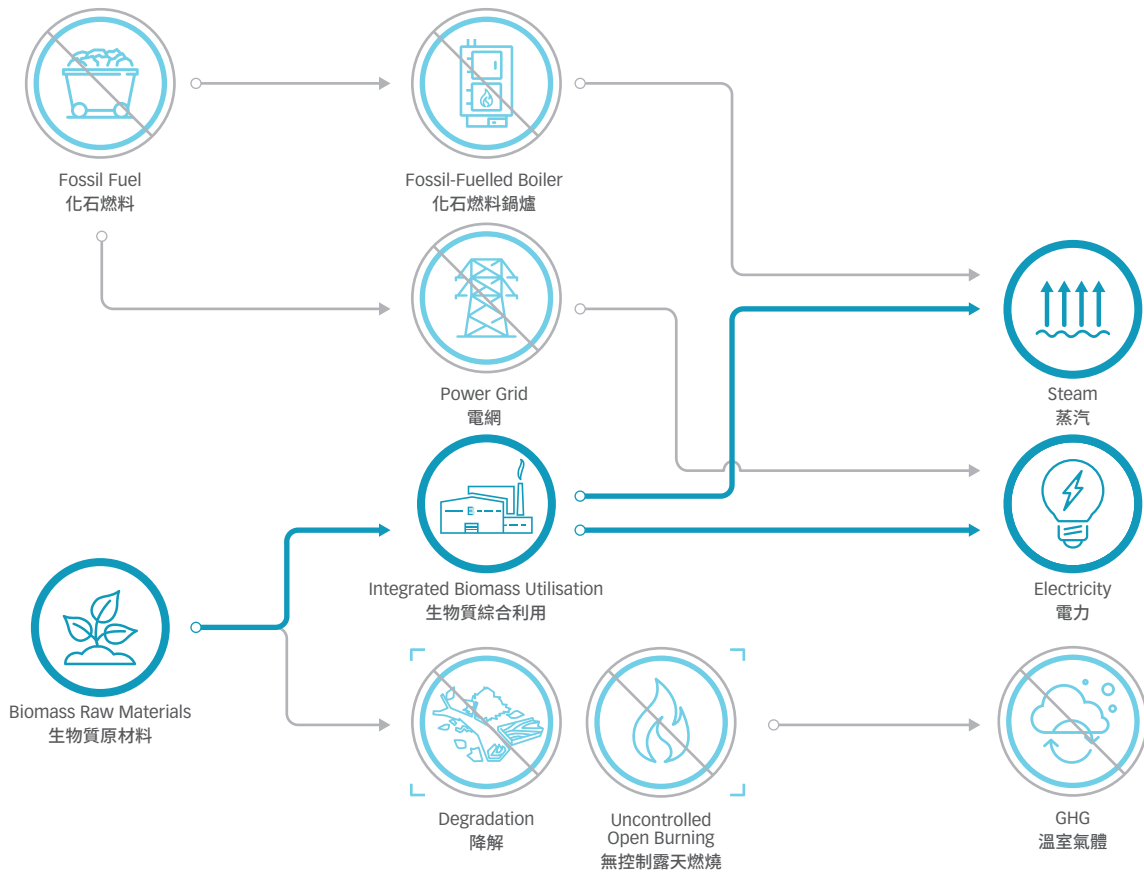


The Group's waste-to-energy projects recover the heat generated from incineration of household waste for electricity generation, thus offset GHG emissions by replacing the use of fossil-fuelled power. GHG emissions offset is also achieved by diverting household waste from landfills where the anaerobic degradation of organic waste would cause the fugitive release of landfill gas which is rich in methane, a strong GHG.

本集團的垃圾發電項目以生活垃圾焚燒所產生的熱量來發電，透過替代化石燃料能源的使用以抵銷溫室氣體排放。此外，把生活垃圾從填埋場分流亦避免了有機廢物在填埋場厭氧降解所引致的無組織填埋氣體（含大量甲烷，一種強力的溫室氣體）釋放。

GHG Emissions Offset through Integrated Biomass Utilisation

以生物質綜合利用方式抵銷溫室氣體排放



Apart from waste-to-energy operations, the Group's integrated biomass utilisation projects utilise biomass raw materials for power and heat generation, which offset GHG emissions through replacement of fossil fuels and avoidance of uncontrolled open burning or degradation of biomass which would otherwise generate GHG.

除了垃圾發電運營外，本集團的生物質綜合利用項目使用生物質原材料發電及供熱，通過替代使用化石燃料及避免生物質不受管控地露天燃燒或降解，從而抵銷溫室氣體排放。

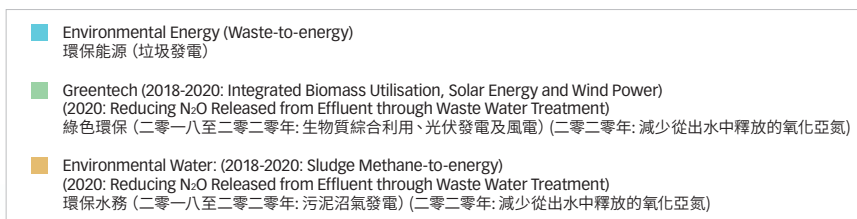
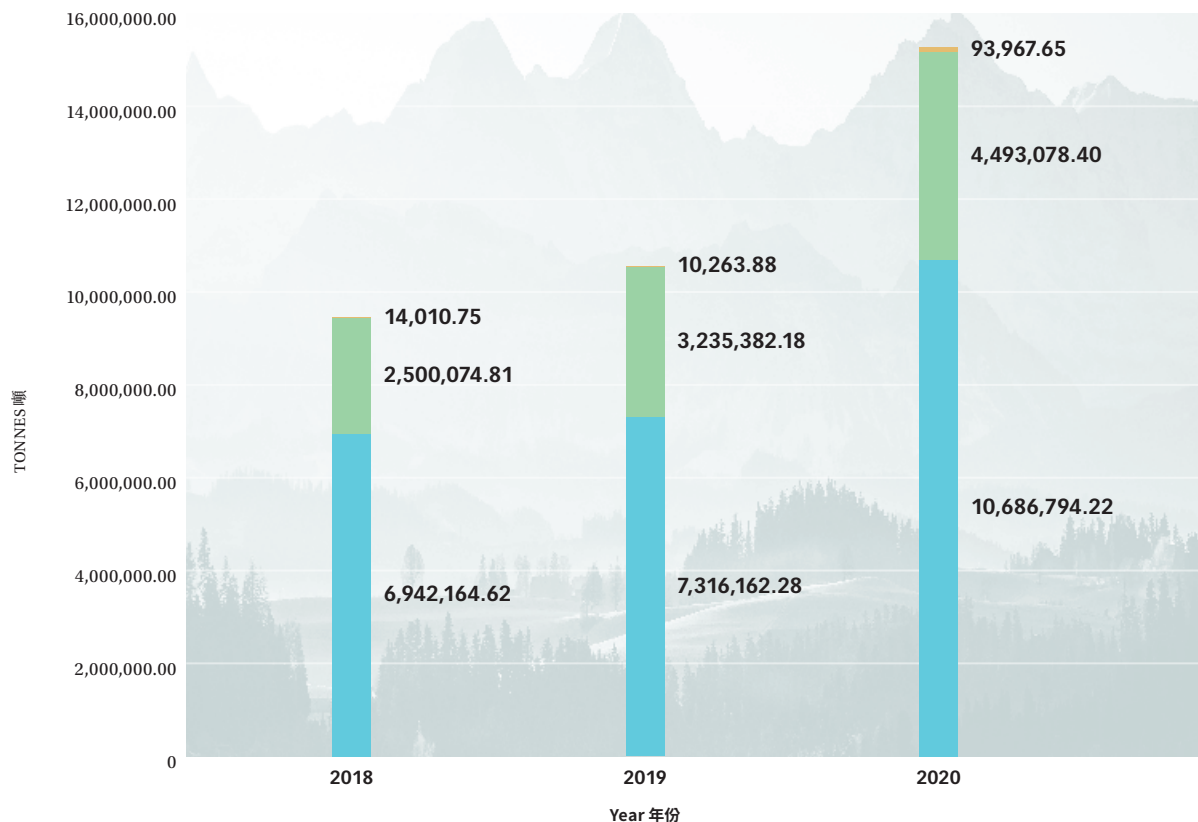
GHG Emissions Offset through Waste Water Treatment

以污水處理方式抵銷溫室氣體排放

Reducing nitrous oxide released from effluent through waste water treatment: the amount of N<sub>2</sub>O emissions depends on the nitrogen contents of effluent, thus nitrogen removal through waste water treatment is a process that offers GHG removals.

通過污水除氮處理工藝減少從出水中釋放的氧化亞氮：污水出水的氧化亞氮排放量取決於污水的氮含量，因此透過污水除氮處理工藝降低出水的氮含量，能夠達到溫室氣體抵銷。

GHG Emissions Offset by Business Sector  
按業務板塊劃分的溫室氣體抵銷量



Note:

(1) Due to revision of the calculation method, there may be some discrepancies between the data reported and those stated in our Annual Report 2020.

附註：

(1) 由於估算方法的修訂，部分數據與我們的二零二零年年報內所註或有出入。

## Air and GHG Emissions Management

Facing the new challenges brought by air pollution to the society, Everbright Environment will bear more social responsibilities, improve local environmental quality and sustainable development, and strive to reduce the impacts of air emissions on the environment.

Through implementing stringent operational procedures with frequent inspection and extensive supervision, the Group strictly controls stack emissions such as particulate matter (PM), sulphur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) in all combustion operations. The Group also pays attention to the effective control of fugitive air emissions at our projects to prevent air pollution. In particular, all odour-generating areas are maintained under negative pressure to ensure that odorous gases are properly collected and treated.

## 大氣及溫室氣體排放管理

面對空氣污染對社會帶來的新挑戰，光大環境將進一步踐行更多社會責任，推動當地環境品質的改善及可持續發展，致力減低氣體排放對環境造成的影響。

本集團採納了嚴謹的操作程序、高頻率的檢查和嚴謹的監督，嚴格控制所有在燃燒過程中所排放的顆粒物(PM)、二氧化硫(SO<sub>2</sub>)及氮氧化物(NO<sub>x</sub>)等大氣排放物。本集團亦關注項目無組織排放的有效控制，對於各氣味產生區域採用負壓收集處理，避免造成空氣污染。

### Waste-to-energy Projects 垃圾發電項目

The Group's waste-to-energy projects are designed and operated fully in compliance with the *Standard for Pollution Control on the Municipal Solid Waste Incineration* (GB18485-2014), local standards, as well as other requirements as set forth in the environmental impact assessment reports approved by the local government<sup>(1)</sup>, while the daily average values of online continuously monitored parameters are well below the respective emissions limits as stipulated under the *Industrial Emissions Directive* (2010/75/EU) and its relevant annexes and amendments ("Euro 2010 emission standards").

本集團的垃圾發電項目的設計和運營完全符合所有適用的國家環境規例和標準，當中包括《生活垃圾焚燒污染控制標準》(GB18485-2014)、相關地方標準及獲當地政府審批的環境影響評價報告中的其他要求<sup>(1)</sup>。煙氣在線監測指標日均值更全面優於歐盟《工業排放指令》(2010/75/EU)及其相關附表／修訂中的相關排放限值（「歐盟2010排放標準」）。

### Integrated Biomass Utilisation Projects 生物質 綜合利用項目

Apart from household waste incineration operations as explained above, all of the Group's biomass combustion operations meet the *Emission Standard of Air Pollutants for Thermal Power Plants* (GB13223-2011), local standards, as well as other requirements as set forth in the environmental impact assessment reports approved by the local government<sup>(2)</sup>.

除上述生活垃圾焚燒運營概況外，本集團生物質燃燒的運營則達《火電廠大氣污染物排放標準》(GB13223-2011)、相關地方標準及獲當地政府審批的環境影響評價報告中的其他要求<sup>(2)</sup>。

#### Notes:

<sup>(1)</sup> Air pollutants regulated by relevant national laws and regulations mainly include dioxins, PM, SO<sub>2</sub>, NO<sub>x</sub>, hydrogen chloride, carbon monoxide, mercury and other heavy metals (and their chemical compounds), odour pollutants.

<sup>(2)</sup> Major air pollutants regulated by relevant national laws and regulations include PM, SO<sub>2</sub>, NO<sub>x</sub>.

#### 附註：

<sup>(1)</sup> 受相關國家法律及規例規管的大氣污染物主要包括二噁英、顆粒物、二氧化硫、氮氧化物、氯化氫、一氧化碳、汞和其他重金屬（及其化合物）、惡臭污染物。

<sup>(2)</sup> 受相關國家法律及規例規管的大氣污染物主要包括顆粒物、二氧化硫、氮氧化物。

In addition, other air pollutants such as dioxins and various heavy metals are tested by Everbright Environment with frequencies much higher than the national requirements. For instance, the testing of dioxins for all the Group's waste-to-energy projects in China is conducted at least four times a year, which is significantly higher than the national requirement of once per year. Dioxins concentrations of all samples are substantially lower than the emissions limits of the *Standard for Pollution Control on the Municipal Solid Waste Incineration* (GB18485-2014). The emissions monitoring reports of the Group's waste-to-energy projects can be found at the environmental information disclosure platform of Everbright Environment's website at [www.cebenvironment.com](http://www.cebenvironment.com).

Besides, following the application of the self-developed technologies to the Group's integrated biomass utilisation projects, e.g. low-nitrogen combustion, flue gas recirculation, enhanced selective non-catalytic reduction (SNCR) and ozone oxidation, the combustion of biomass has successfully achieved ultra-low emissions (with NO<sub>x</sub> emissions concentration below 50mg/m<sup>3</sup>), which can guarantee the compliant emissions of flue gas from the projects.

The Group strives to ensure that people everywhere can conveniently access its projects' environmental performance information. During the Reporting Period, the Group continued timely disclosing emissions data and environmental management information of its projects on Everbright Environment's corporate website, including the ground-breaking initiative of online disclosure of hourly average emissions rates of all the Group's operating waste-to-energy projects. The Group also devoted to improving the information sharing platform which connects with the Group's Hong Kong headquarters and Shenzhen management office for real-time capture of projects' operational information to ensure compliant operation, and to timely report the performance of the Group's projects to the stakeholders.

此外，光大環境對煙氣二噁英和重金屬等污染物均以遠高於國家要求作更頻密的檢測，而當中本集團位於中國的所有垃圾發電項目的煙氣二噁英的檢測頻率更達每年至少四次，遠高於國家每年一次的檢測要求，所有檢測樣本二噁英濃度均低於《生活垃圾焚燒污染控制標準》(GB18485-2014)中所列的限值。各垃圾發電項目的煙氣檢測報告可於光大環境企業網站環境信息披露平台([www.cebenvironment.com](http://www.cebenvironment.com))查看。

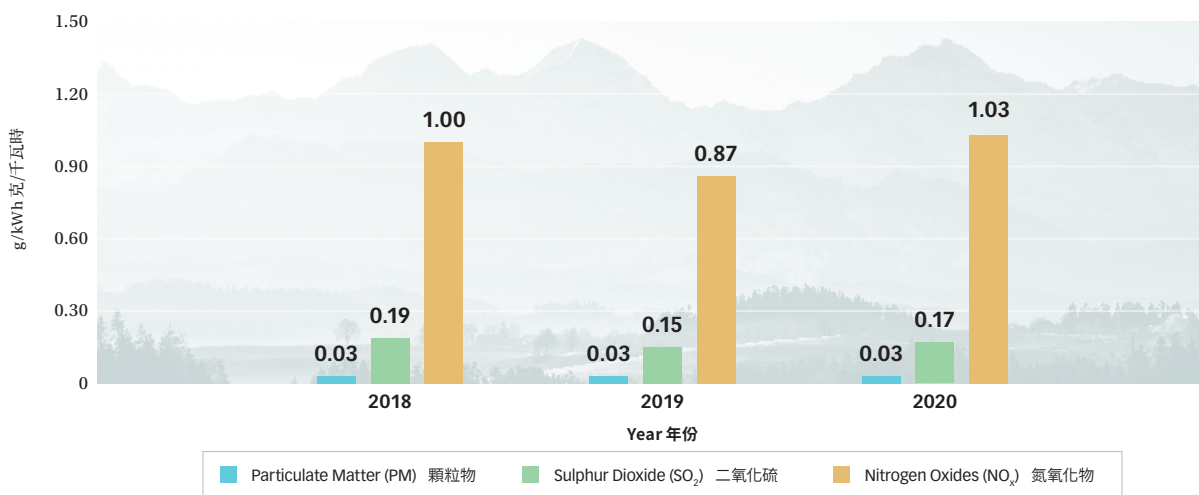
此外，由本集團自主研發的低氮燃燒、煙氣再循環、選擇性非催化還原脫硝技術(SNCR)優化、活性分子氧化等技術於生物質綜合利用項目中得到全面推廣應用，生物質的燃燒實現了超淨排放(NO<sub>x</sub>排放濃度低於50mg/m<sup>3</sup>)，有力保證了項目煙氣的達標排放。

本集團致力確保所有人都能隨時隨地掌握其項目的環境信息。報告期內，本集團繼續主動對項目的排放數據和環境管理信息實施適時披露，包括於光大環境網站每小時更新所有運營垃圾發電項目的煙氣在線監測均值，創行業先河。本集團還積極完善信息共享平台建設，旨在讓香港總部及深圳管理中心實時掌握所有項目的運營狀況，確保所有項目達標運營，並能迅速地向本集團持份者報告項目的運營表現。

## Key Air Emissions in 2020 二零二零年主要煙氣排放量

Particulate Matter (PM) 顆粒物 <b>457.09</b> tonnes 噸	Sulphur Dioxide (SO <sub>2</sub> ) 二氧化硫 <b>2,595.33</b> tonnes 噸	Nitrogen Oxides (NO <sub>x</sub> ) 氮氧化物 <b>15,463.35</b> tonnes 噸
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### Air Emissions Per kWh of Green Electricity Supplied 每千瓦時綠色上網電量的煙氣排放量



### The Group's Climate-related Targets

GHG emissions (scope 1) from the incineration of household waste are calculated based on the fraction of fossil carbon in total carbon content of the household waste. The Group does not have an overall target for Scope 1 emissions as the amount of such GHG emissions may substantially fluctuate from time to time due to the varying composition of the household waste received, which is beyond Everbright Environment's control.

To drive long-term decarbonisation to align with the *Paris Agreement*, we are actively considering setting relevant emissions reduction targets for different business sectors. Specific targets are currently under development and details will be disclosed in due course.

### 本集團的氣候相關目標

生活垃圾焚燒引致的溫室氣體排放(範疇一)以生活垃圾中化石碳佔總碳的比例為計算基礎。生活垃圾成分的差異可對此溫室氣體排放不時造成大幅波動，這不屬於光大環境的控制範圍之內，因此本集團未有制定溫室氣體排放(範疇一)整體目標。

為了推動長期脫碳以符合《巴黎協定》，我們正在積極考慮為不同業務板塊設定相關的減排目標。我們目前正在製定具體目標，有關細節將在適當時候披露。

## Energy and Materials Usage

The Group has adopted various measures to reduce energy and material consumption across the Group. The waste-to-energy and methane-to-energy projects in the environmental energy sector; and the integrated biomass utilisation projects, solar energy and wind power projects in the greentech sector all make use of the project's own electricity to minimise the consumption of electricity from non-renewable energy sources. On the other hand, due to the characteristics of the project, waste treatment projects of environmental energy and greentech sectors pay special attention to the performance and efficiency of the boilers. Through regular maintenance and the use of advanced environmental protection and energy-saving technologies, the effective use of energy can be ensured, while at the same time reducing the use of boiler fuel and the consumption of energy and materials. In addition, the project companies of the Group also formulate various energy-saving measures according to their own circumstances, such as implementing electronic processes to reduce the number of official documents and the scale of meetings, formulating concrete energy-saving targets and measures, setting up dedicated energy-saving and consumption-reducing leading group to supervise energy saving practices, etc.



## 能源及物料使用

本集團採取了多方面的措施，以減低集團上下的能源及物料消耗。環保能源板塊的垃圾發電及沼氣發電項目；以及綠色環保板塊的生物質綜合利用、光伏發電及風電項目等皆會使用項目自產電力，以盡量減少外購源自非再生能源的電力。另一方面，因應項目特質，環保能源及綠色環保板塊的各類垃圾處理項目格外重視鍋爐的性能及效率。透過定期維護保養及採用先進的環保節能技術，可確保能源的有效利用，同時節約鍋爐燃料，減少能源及物料的消耗。除此之外，集團的各項目公司亦會按照各自情況自行制定各種節約措施，如落實電子流程以減少公文數量及會議規模、制定明確的節能目標及措施、設立專門的節能降耗工作領導小組以監督節能工作等。



To ensure a proper energy and inventory management, the Group records in detail the monthly energy and main materials consumption of each project company, with the regional management centre coordinating the integration work. Through the collected data, the Group could clearly understand the resource utilisation situation in the business development process, thus allocate and adjust the energy and material usage accordingly. Data recording is also conducive to the Group's long-term resource management strategy and to reduce resource wastage.

為了確保妥善的能源和庫存管理，本集團每個月都會詳細記錄各項目公司的能源和主要物料使用量，並由區域管理中心協調整合工作。透過所收集的數據，本集團能夠清楚了解業務發展過程中的資源利用狀況，繼而對能源和物料使用作出相應的分配及調整。數據紀錄亦有利於本集團制定長遠的資源管理策略，減少資源浪費。

## Ideas on Energy Conservation

During the Reporting Period, project companies under the Group all implemented the *Annual Energy Saving and Consumption Reduction Plan and Management Measures* to actively carry out energy-saving and consumption reduction activities as well as implementing effective energy-saving measures. A number of projects even established their own energy-saving targets and evaluation systems. The key measures and targets are detailed below.

## 節能巧思

報告期內，本集團旗下的項目公司均各自實施了《年度節能降耗計劃及管理措施》，積極展開節能降耗活動及推進有效的節能措施，更有多個項目自行建立了節能目標及評價考核制度。重點措施及目標詳列如下。

### Energy-saving measures

- Phase out outdated and inefficient electrical appliances, and install industrial frequency converters for high-power motors in the production system to reduce electricity consumption
- Retrofit the cooling fans of the boilers' auxiliary burners to reduce their power consumption rates
- Strengthen the inspection and cleaning of the dust accumulation in the flue pipes to prevent them from being blocked, thereby reducing the energy consumption of the fans
- Incorporate equipment energy consumption management into the procurement process, and use equipment and spare parts with low energy consumption as much as possible
- Strengthen the management of sewage and overflow water in the plant area so as to reduce the use of rainwater pump and thus the corresponding power consumption
- Retrofit the lighting system in the plant area so that the switching time is adjusted according to the hours of sunlight
- Replace the streetlights in the project plant area with Everbright New Sodium Lamps

### Energy-saving Targets

- The leachate transformers and waste circulation water transformers shall attain Grade II efficiency as specified in *Minimum Allowable Values of Energy Efficiency and the Energy Efficiency Grades for Three-phase Distribution Transformer* (GB20052-2013)
- The main transformer in the plant shall attain Grade II efficiency as specified in *Minimum Allowable Values of Energy Efficiency and the Energy Efficiency Grades for Power Transformers* (GB24790-2009)
- Strive to reduce power consumption continuously and to increase the proportion of self-generated electricity consumption

### 節能措施

- 淘汰落後低效的電器設備，並為生產系統的大功率電機加裝工業變頻調速器，降低用電消耗
- 對鍋爐輔助燃燒器的冷卻風機進行改造，以降低廠用電率
- 加強檢查及清理煙道的積灰，防止煙道堵塞，從而減少風機的運行耗能
- 將設備耗能管理納入採購流程，盡量採用低能耗的設備和備件
- 加強廠區排污及溢流水管理，減少雨水泵啟動次數，降低雨水泵電耗
- 技術改造廠區照明系統，根據日照時間變化調整開關時間
- 逐步將項目廠區的路燈更換為光新鈉燈

### 節能目標

- 廠內的滲濾液變壓器、垃圾循環水變壓器需達到《三相配電變壓器能效限定值及能效等級》(GB20052-2013) 中二級能效要求
- 廠內的主變壓器需達到《電力變壓器能效限定值及能效等級》(GB24790-2009) 規定的二級能效
- 致力不斷降低電力消耗及提高項目自發用電比例





In 2020, the Group's electricity consumption was **3,122,157,096.17** kWh; the proportion of self-generated electricity consumption was **77%**.

二零二零年，本集團的電力消耗為**3,122,157,096.17**千瓦時；自發用電量比例為**77%**。

In addition, the Group's greenergy sector leverages on its core product Everbright New Sodium Lamp, and focuses on building a full industry chain that includes the R&D and manufacturing of energy-saving street lamps, urban outdoor lighting projects and other types of energy-saving lighting products. During the Reporting Period, greenergy's Shandong Rizhao Streetlight Retrofitting EMC Project completed construction successfully, while Shandong Ji'nan Streetlight Retrofitting EMC Project and Tengzhou Urban Streetlight Retrofitting EMC Project commenced construction in succession. These three projects aimed at replacing the original high-pressure sodium lamps with Everbright New Sodium Lamps, thus improving the quality of street lighting and reducing the energy consumption with a saving of up to 50%.

此外，本集團的光大照明板塊以光大新鈉燈為核心產品，專注節能路燈、城市亮化工程、節能照明產品研發及製造等全產業鏈佈局。報告期內，光大照明山東日照路燈節能改造EMC項目順利完工；山東濟南路燈節能改造EMC項目、滕州主城區路燈節能改造EMC項目亦先後開工。這三個項目透過將原有的高壓鈉燈更換為光大新鈉燈，提升路燈照明品質，降低能耗，節電率可達50%。

#### **Energy Conservation Technology of the Everbright New Sodium Lamp Selected in the *National Industrial Energy-saving Technology and Equipment Recommendation Catalog (2020)*** 光大新鈉燈照明節能技術入選《國家工業節能技術裝備推薦目錄(2020)》

Greenergy's energy conservation technologies of the Everbright New Sodium Lamp were selected into the *National Industrial Energy-saving Technology and Equipment Recommended Catalog (2020)*. The related technology profile in the catalogue shows that the Everbright New Sodium Lamp with independent intellectual property rights has the characteristics of high luminous efficiency and high colour rendering. Its colour temperature is 3000K, its luminous efficiency of 140W can reach 120-130Lum/W, and its lighting effect is equivalent to 250W high-pressure sodium lamps. With the use of a lighting control system, its energy-saving contribution is highly noticeable when compared with high-pressure sodium lamps. It is suitable for energy-saving technology retrofitting in the field of outdoor lighting, and the proportion of technology promotion is expected to increase to 20% in coming five years.

光大照明的光大新鈉燈照明節能技術成功入選《國家工業節能技術裝備推薦目錄(2020)》。該目錄中相關技術簡介顯示，擁有自主知識產權的光大新鈉燈具有高光效、高顯色性的特點，色溫3000K，140W光效可達120-130Lum/W，照明效果等同於250W的高壓鈉燈，配套使用照明控制系統，相比於高壓鈉燈，節電效果明顯，適用於戶外照明領域節能技術改造，預計未來五年的技術推廣比例可增至20%。

Direct Energy Consumption Statistics in 2020

二零二零年直接能源消耗統計

Unit: GJ

單位：吉焦

Operation Unit 運營單位	Diesel 柴油	Gasoline 汽油	Natural Gas 天然氣	Liquefied Petroleum Gas 液化石油氣	Biogas 沼氣	Non-renewable Electricity 非再生 能源電力	Renewable Electricity 可再生 電力消耗
Environmental Energy 環保能源	608,934.55	86,061.64	930,348.69	250.94	104.56	494,696.70	6,807,651.35
Greentech 綠色環保	239,548.48	270,687.25	101,914.81	1.54	-	142,297.20	1,810,561.23
Environmental Water 環保水務	1,682.75	8,027.17	-	-	-	1,993,845.90	35,487.07
Equipment Manufacturing, Eco-recycling, Greenergy, Envirotech, Environmental Planning, Headquarters, Representative Offices, Offices and Management Centres 裝備製造、生態資源、光大照明、 綠色科創、環境規劃、總部、 代表處、辦事處及管理中心	-	2,758.57	664.37	1.02	-	15,551.80	-
<b>Total 總計</b>	<b>850,165.78</b>	<b>367,534.63</b>	<b>1,032,927.88</b>	<b>253.50</b>	<b>104.56</b>	<b>2,646,391.60</b>	<b>8,653,699.65</b>

Note:

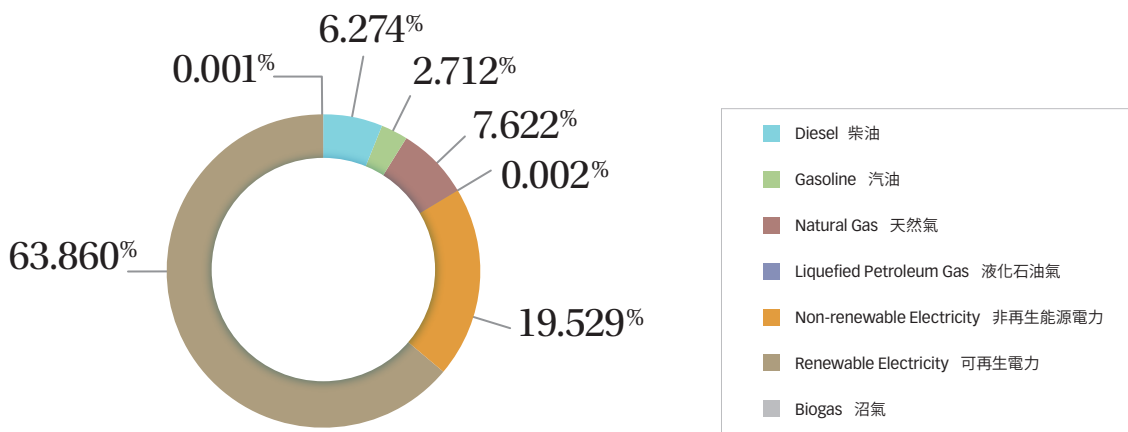
<sup>(1)</sup> Relevant energy conversion factors from *China Energy Statistical Yearbook 2018* are adopted.

附註：

<sup>(1)</sup> 能源單位根據《中國能源統計年鑒二零一八》的參考系數作換算。

Direct Energy Consumption Statistics of Projects Under Construction and in Operation in 2020

二零二零年各在建及運營項目的直接能源消耗統計



Total Direct Energy Consumed  
直接能源消耗總量

13,551,077.61 GJ  
吉焦

Key Production Materials Consumption in 2020

二零二零年主要生產物料使用統計

Environmental Energy

環保能源

Unit: Tonne

單位：噸

Lime 石灰	Activated carbon 活性碳	Ammonia water 氨水	Acetylene 乙炔	
268,847.46	10,246.63	62,132.81	72,483.03	
Industrial sulphuric acid 工業硫酸	Industrial hydrochloric acid 工業鹽酸	Scale inhibitor 阻垢劑	Bactericide 殺菌劑	
709.48	154,535.86	1,507.25	361.45	
Cationic polyacrylamide (CPAM) 工業硫酸	Anionic polyacrylamide (APAM) 陰離子聚丙烯醯胺	Sodium hydroxide 氫氧化鈉	Sodium hypochlorite 次氯酸鈉	
15,159.75	59.65	54.81	968.36	
Liquid alkali 液碱	Citric acid 檸檬酸	Disodium phosphate 磷酸氫二鈉	PAC 聚合氯化鋁	Reducing agent (sodium bisulphite) 還原劑 (亞硫酸氫鈉)
961.67	136.59	3.06	698.34	42.58

Greentech

綠色環保

Lime 石灰	Activated carbon 活性碳	Ammonia water 氨水	Chelating agent 螯合劑
54,621.41	908.38	45,917.83	1,934.97

Environmental Water

環保水務

pH adjustment 酸鹼調整	Coagulant & flocculant 凝結劑及絮凝劑	Disinfectant 消毒劑	Chemical oxidiser 化學氧化劑
23,414.15	145,506.25	19,155.41	21,388.87
Carbon source 碳源	Biological treatment 生物處理	Others 其他	
117,261.47	19.29	9,278.84	

Office Materials and Packaging Materials Consumption  
in 2020

二零二零年辦公室物料及包裝材料使用統計

Unit: Tonne

單位：噸

Operation Unit 運營單位	Office Materials Consumption (Paper Products, Metal and Plastics) 辦公室物料使用 (紙製品、金屬及塑料)	Packaging Materials (Paper Products, Plastics, Foams and Boards) 包裝材料 (包括紙製品、塑料、泡沫及木板)
Environmental Energy 環保能源	119.95	-
Greentech 綠色環保	36.83	
Environmental Water 環保水務	36.74	
Equipment Manufacturing, Eco-recycling, Greenergy, Envirotech, Environmental Planning, Headquarters, Representative Offices, Offices and Management Centres 裝備製造、生態資源、綠色科創、環境規劃、總部、代表處、辦事處及管理中心	25.96	37.41
<b>Total 總計</b>	<b>219.48</b>	<b>37.41</b>

Water Resources Consumption and Management

水資源使用及管理

Water scarcity is an increasingly severe crisis. However, our daily operation such as drinking water, cleaning, washrooms, etc.; and various production process, such as unit cooling for waste-to-energy projects and integrated biomass utilisation projects, as well as preparing chemical solvents for projects including waste water treatment projects, etc., require the use of a large amount of water resources. Therefore, as a responsible enterprise, Everbright Environment pays close attention to the relevant national water conservation policies, while at the same time strives to reduce the water consumption among projects and ensure the proper treatment of waste water. When conducting environmental impact assessment, we also take into consideration of water resource related impacts so as not to deprive the right to use water resources of other stakeholders.



水資源短缺乃日益嚴峻的危機。然而，我們的日常運作，例如飲用水、清潔、洗手間等；以及多個生產過程，例如垃圾發電項目及生物質綜合利用項目的機組冷卻、以及包括污水處理項目在內的各項目製備化學溶劑等皆需要運用到大量的水資源。因此，作為負責任的企業，光大環境密切關注國家相關的用水節水政策，同時致力減少項目耗水並確保污水妥善處理。在進行各項目的環境影響評估時，我們亦會考慮水資源的相關影響，確保項目不會剝奪其他持份者使用水資源的權利。



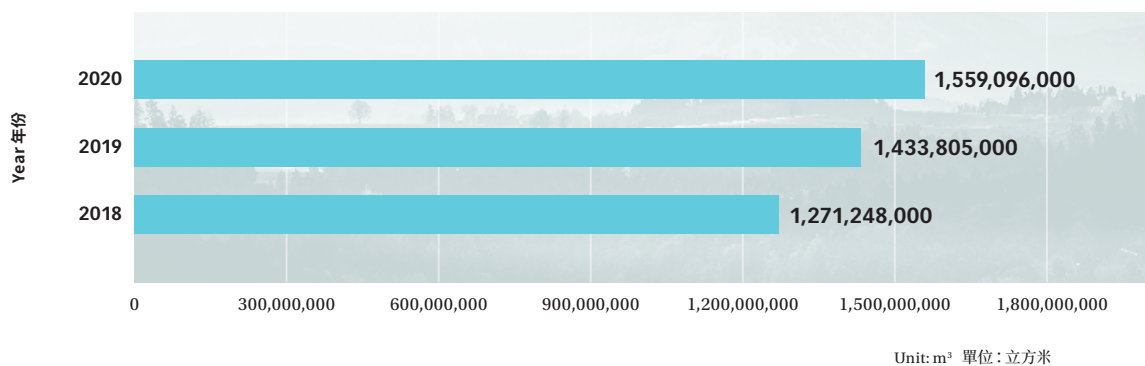
During the Reporting Period, we referenced the *Aqueduct 3.0* published by the World Resources Institute (WRI) to access water stress of the Group's projects, and to formulate action plan for project companies with high water stress. WRI accesses the water stress of an area with the ratio of total water withdrawals to available and renewable surface and groundwater supplies, higher water stress indicates more competition among users.

報告期內，我們參照世界資源研究所(WRI)在二零一九年發佈的Aqueduct 3.0，評估集團各項目的用水壓力，並為存在高用水壓力的項目公司制定應對計劃。世界資源研究所根據地區的總取水量與可用及可再生地表水供應量的比率判斷該地區的用水壓力，用水壓力愈高，代表用戶之間的競爭愈大。

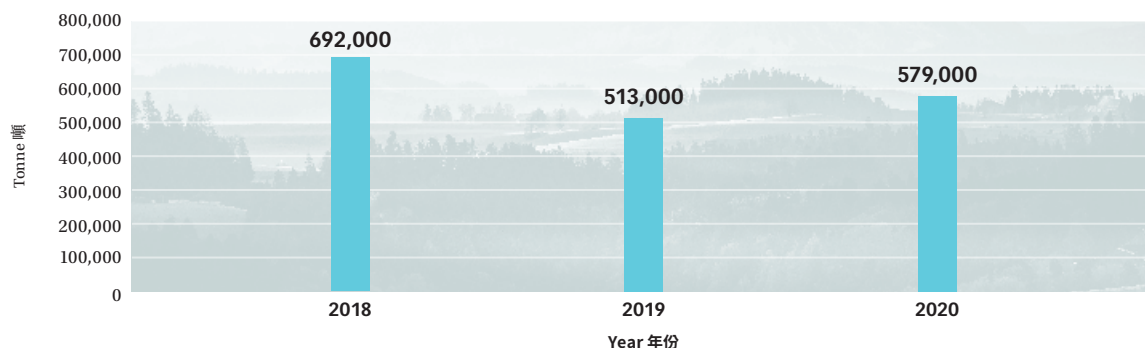
Through the network of environmental water's project companies across the country and a series of water environment treatment services including municipal and industrial waste water treatment and reusable water, the Group continues improving the environmental and hygiene conditions of water bodies in China. The projects have greatly minimised the environmental damage caused by waste water discharge, and protect the health and well-being of the public.

此外，通過環保水務遍佈全國的項目公司分佈網絡，利用市政及工業污水治理、中水回用等一系列的水環境綜合治理服務，本集團持續改善中國水體狀況及其衛生標準，大幅度降低污水排放造成的環境損害，保障公眾的健康和福祉。

Waste Water Treated in the Past Three Years  
過往三年的污水處理量



COD Discharge Reduced in the Past Three Years  
過往三年的COD減排量



## Discharge Standards and Water Quality Testing

The Group's waste-to-energy projects treat leachate and municipal waste water in accordance with *Reuse of Urban Recycling Water – Water Quality Standard for Industrial Uses* (GB/T 19923-2005), *Reuse of Urban Recycling Water – Water Quality Standard for Scenic Environment Use* (GB/T 18921-2002) or other relevant standards. We will also take corresponding considerations into the environmental impact assessment based on the water bodies receiving the effluent from each project.

All of the Group's waste water treatment projects adopt stringent discharge standards. Through continuous upgrading works, effluent discharged from all of the Group's waste water treatment projects complies with the requirements as stipulated in the environmental impact assessment reports approved by the local governments<sup>(1)</sup>, whilst the majority of the projects comply with Grade 1A standard of *Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant* (GB18918-2002). To guarantee the highest standard of the water quality of the effluent, all waste water treatment projects of the Group have installed systems that are rapid, reliable and continuous to monitor the water quality of the effluent. Third-party laboratories are also appointed regularly to perform testing on effluent samples, striving to reduce environmental pollution and burden brought to the ecological environment. Also, the Group's new biological deodourisation technologies are capable of adjusting the processing parameters in response to different types of odorous gases, reducing odour released from waste water treatment plants and making the facilities more efficient and environmentally friendly.

Besides being reused internally by project companies and being supplied to third parties as reclaimed and/or reusable water, the Group's waste water is mainly discharged to waste water treatment plants operated by third parties, the sea, and rivers and lakes. Following stringent effluent discharge standards could ensure that no negative impacts would be caused on downstream users of the water bodies (including agricultural, public recreation or potable uses, etc).

Note:

<sup>(1)</sup> Major effluent parameters regulated by relevant national regulations and standards include COD, biological oxygen demand, suspended solids, animal fats and vegetable oils, total nitrogen, ammoniacal nitrogen, total phosphorus, pH, colour, Escherichia coli, mercury and other heavy metals (and their chemical compounds).

## 排放標準及水質檢測

本集團的垃圾發電項目均依照《城市污水再生利用工業用水水質》(GB/T 19923-2005)以及《城市污水再生利用景觀環境用水水質》(GB/T 18921-2002)或其他相關標準處理滲濾液及生活污水。我們亦會根據接收各項目出水的水體，在進行環境影響評估時作相應考量。

本集團的污水處理項目採用嚴格的出水標準。通過持續的提標改造工程，在符合當地政府批准的環境影響評估報告中所有相關要求<sup>(1)</sup>的基礎上，大部分項目的出水水質更達到《城鎮污水處理廠污染物排放標準》(GB18918-2002)的一級A標準。為了出水水質的最大程度保證，本集團的所有污水處理項目均安裝了快速、可靠、可無間斷記錄出水水質資料的監測系統，並定期聘請第三方化驗所檢測出水樣本，竭力減少對環境造成的污染及對生態環境帶來的負荷。在解決污水處理廠產生的臭氣問題上，本集團的新型生物除臭系統可以根據不同類型的氣體對處理參數作出調整，減少污水處理廠釋出氣味，使設施更加高效環保。

本集團的污水除了供項目公司內部重用以及供應至第三方作再用水及／或回用水使用外，其餘主要排放至第三方機構運營的污水處理廠、大海、河流及湖泊。遵循嚴格的出水標準可確保水體的下游使用者（包括農業灌溉、公眾休憩或飲用等）皆不會受到負面影響。

附註：

<sup>(1)</sup> 受相關國家規例及標準規管的出水指標主要包括化學需氧量、生物需氧量、懸浮物、動植物油、總氮、氨氮、總磷、酸鹼值、色度、大腸桿菌數量、汞及其他重金屬（及其化合物）。

## Leachate Treatment and Reuse

Through continuous research on the combination of advanced processes by the Group such as ultrafiltration, nanofiltration, softening, high-pressure reverse osmosis, and separating membrane, the Group embarks its research on the fourth-generation leachate treatment technology to simplify operation and maintenance workflow, reduce energy consumption and related costs, site area, as well as achieving fully quantified management. Leachate meeting reusable water standards are recirculated in the Group's waste-to-energy projects, while the reverse osmosis concentrate is used in other processes, such as lime preparation. In 2020, over 67% of the treated leachate at the Group was reused.

## Water Conservation

Each project company of the Group has independently formulated their water-saving measures for 2020, established a water-saving management system, and established a dedicated water-saving leading group; measures are also more stringent in areas with high water stress. Through various actions, we strive to make the best use of the precious water resources and improve water use efficiency. The key measures are detailed below.

### Water-saving measures

- Periodically measure the temperature of the drains of main steam, water supply, ventilation, bypass, discharge and other systems and the drain valves of steam turbine to monitor the tightness of the drains, so as to facilitate timely detection of leakage defects in the drain system and to avoid leakage.
- Maintain the control system for steam temperature and pressure running at designed parameters with automatic settings at 405°C, so as to reduce the usage of cooling water.
- Reuse condensate from completed water treatment process to the desalinated water tank, thus reducing costs of purchasing desalinated water while avoiding the wastage of discharging condensate of water treatment process.
- Reuse high-temperature steaming water, domestic waste water, in-plant floor-washing water, and rainwater to the quench tower of the incineration line.
- After retrofitting, the slag conveyor could utilise self-backwashing water from the integrated units to reduce water consumption.

## 滲濾液處理及回用

本集團研發第四代滲濾液處理技術，不斷研究組合超濾、納濾、軟化、高壓反滲透、物料分離膜等先進工藝，使其運行維護更簡單，運行能耗費用更低，佔地面積更少，有助實現全量化處理。達到循環補充水水質標準的反滲透出水將回用作為垃圾發電項目循環補充水，而濃水則回用於石灰漿製備等其他工藝。二零二零年，本集團經處理的滲濾液回用比例超過67%。

## 節約用水

本集團各項目公司自行制定了針對二零二零年的節水措施、建立節水管理制度、並設立專門的節水領導小組等；在面對高用水壓力的地區，措施亦相應更嚴謹。透過多方面的行動，務求達至善用珍貴的水資源、提升水資源使用效率。重點措施詳列如下。

### 節水措施

- 對主汽、給水、抽汽、旁路、排污等系統的疏水和汽輪機缸體的疏水閥門定期測溫，以監視疏水閥的嚴密性，便於及時發現疏水系統的洩漏缺陷及避免洩漏情況。
- 控制汽溫汽壓的調節保持壓紅線運行，盡可能自動設置在405°C，從而減少減溫水用量。
- 將完成水處理冷凝水回用至除鹽水箱，節約了外購除鹽水的費用，同時避免水處理冷凝水外排造成浪費的現象。
- 將高溫蒸餾廢水、生活廢水、廠區地面沖洗水以及初期雨水回用於焚燒線的急冷塔。
- 經技術改造後撈渣機用水採用一體化自反洗出水以節約用水。

**Multiple Everbright Environment projects Won the Title of  
“City-/Provincial-level Water-saving Enterprise”**  
光大環境多個項目榮獲「市／省級節水型企業」稱號



In 2020, multiple project companies across all business sectors of Everbright Environment were awarded the title of “City-/Provincial-level Water-saving Enterprise”, which affirmed the outstanding contributions of the project companies in terms of water conservation. Among them, Everbright Water’s Sanmenxia Project Company was awarded the title of “City-level Water-saving Enterprise”; environmental energy’s Quzhou Waste-to-energy Project and greentech’s Chuzhou Biomass Energy Project were awarded the title of “Provincial-level Water-saving Enterprise”.

二零二零年，光大環境各業務板塊皆有項目公司榮獲「市／省級節水型企業」稱號，肯定了各項目公司在節水工作方面的傑出貢獻。其中，光大水務板塊的三門峽項目公司獲「市級節水型企業」稱號；環保能源板塊的衢州垃圾發電項目及綠色環保板塊的滁州生物能源項目獲「省級節水型企業」稱號。

In 2020, the Group mainly withdrew fresh water from rivers and lakes, followed by municipal water supplies or other water facilities, and groundwater.

二零二零年，本集團取用的淡水主要源自河流及湖泊，其次為市政供水或其他水務設施及地下水。



Water Withdrawn by Source In 2020

二零二零年按來源劃分的取水量

Unit: m<sup>3</sup>

單位：立方米

Operation Unit 運營單位	Sea Water 海水	Rivers and Lakes 河流及湖泊	Groundwater 地下水	Municipal Water Supplies or Other Water Facilities 市政供水或 其他水務設施
<b>Environmental Energy</b> 環保能源	–	19,522,531.30	1,127,540.40	21,463,251.12
<b>Greentech</b> 綠色環保	–	12,324,999.87	669,873.60	5,397,418.22
<b>Environmental Water</b> 環保水務	–	–	235,200.00	1,045,990.00
<b>Equipment Manufacturing, Eco-recycling, Greenergy, Envirotech, Environmental Planning, Headquarters, Representative Offices, Offices and Management Centres</b> 裝備製造、生態資源、 光大照明、綠色科創、 環境規劃、總部、代表處、 辦事處及管理中心	–	–	–	72,892.36
<b>Total</b> 總計	–	<b>31,847,531.17</b>	<b>2,032,614.00</b>	<b>27,979,551.70</b>

**Total Freshwater Withdrawn**  
淡水取用總量 **61,859,696.87** m<sup>3</sup>  
立方米

Effluent Discharge by Destination in 2020

二零二零年按目的地劃分的排水量

Unit: m<sup>3</sup>

單位：立方米

Operation Unit 運營單位	Surface Water 地表水	Underground Water 地下水	Sea 大海	Waste Water Treatment Plants Operated by Third Parties 第三方機構運營的 污水處理廠	Water Supplied to Third Parties for Use as Reclaimed Water and/or Reusable Water 供應至第三方作 再用水及/或 回用水使用
Environmental Energy 環保能源	4,980,980.00	-	-	3,224,600.14	-
Greentech 綠色環保	975,876.61	-	-	718,326.40	1,004,000.00
Environmental Water 環保水務	1,184,268,509.60	-	154,517,183.00	93,851,216.71	10,634,473.00
Equipment Manufacturing, Eco-recycling, Greenergy, Envirotech, Environmental Planning, Headquarters, Representative Offices, Offices and Management Centres 裝備製造、生態資源、光大照明、 綠色科創、環境規劃、總部、 代表處、辦事處及管理中心	-	-	-	54,879.00	-
<b>Total 總計</b>	<b>1,190,225,366.21</b>	<b>-</b>	<b>154,517,183.00</b>	<b>97,849,022.25</b>	<b>11,638,473.00</b>

**Total Effluent Discharges**  
**總排水量** 1,454,230,044.46 m<sup>3</sup>  
立方米

## Waste Management

The General Office of the State Council of the PRC published the *Plan for Pilot Development of "Zero-waste Cities"* earlier last year, proposing the concept of "Zero-waste Cities". For an environmental protection enterprise, waste reduction is always a vital part. The Group strives to achieve environmentally sound management of all wastes throughout their life cycles, and significantly reduce their release to air, water and soil through comprehensive recycling and resource utilisation schemes. We monitor various waste data through the in-plant weighbridge that is regularly calibrated, and properly record it in the monthly production or environmental reports. At the same time, we only hire qualified downstream contractors or recyclers, and regularly check their trip tickets to ensure that waste is legally and properly handled.



On the other hand, Everbright Environment has established the eco-recycling sector, with major businesses consisted of waste sorting and zero-waste cities, integrated urban-rural environmental sanitation services and recyclable resources utilisation, to realise a full-chain business system that ranges from waste collection at source to final treatment and disposal. Everbright Environment is pioneering its unique business model that covers waste reduction at source, waste sorting, recycling and ultimate treatment in a harmless manner. These initiatives support reduction of solid waste at source, resource utilisation, and assist the development of zero-waste cities.

## 廢棄物管理

國務院辦公廳於去年年初印發《「無廢城市」建設試點工作方案》，提出「無廢城市」概念，而惜物減廢一直是本集團作為環保企業的重要一環。本集團務求達至對所有廢物全生命週期的綠色管理，並透過全面的回收及資源化利用計劃，減少向空氣、水和土壤的排放。我們透過廠內定期校正的磅橋監察各類廢棄物的數據，並妥善紀錄在月度生產或環保報告內。同時，我們只會僱用合資格的下遊承辦商或回收商，並定期檢查他們的運載紀錄，以確保廢棄物獲合法、妥善處理。



另一方面，光大環境已成立生態資源板塊，並以垃圾分類及無廢城市、城鄉綜合環衛服務、再生資源回收利用為三大主營業務，實現了從源頭收集至末端處置的固廢全產業鏈業務體系。光大環境正在創建源頭減量、垃圾分類、循環利用、末端無害化處置的獨有模式，以此推進固體廢物源頭減量、資源化回收利用，協助無廢城市的建設。

### Resource Utilisation and Recycling

The Group is committed to reducing waste generation and encouraging resource utilisation and recycling. In terms of waste generated from the projects, the Group is committed to recycling the by-products arising from the Group's operations in various fields and contributing to green construction as well as urban greening. Bottom ash generated from our waste-to-energy projects is recycled to make bricks to support green construction; furnace ash produced from biomass combustion can be used as fertilisers, while sludge generated from municipal waste water treatment can be used for producing compost, supporting horticultural greening.

During the Reporting Period, individual projects adjusted the fineness of calcium hydroxide, thus reduced the use of calcium hydroxide, as well as the generation of fly ash. In addition, the Group's China Everbright Green Technology Innovation Research Institute located in Hong Kong adopted the filtration and heating integrated equipment to provide drinking water, thus fully avoiding the procurement and consumption of bottled water and minimising the production of waste plastic bottles in 2020.

### 資源利用及回收

本集團致力減少廢物的產生，並鼓勵資源利用及回收。在項目產廢方面，本集團致力將運營中的副產物在多個領域循環利用，對綠色建設及城市綠化等方面作出積極貢獻。我們垃圾發電項目產生的爐渣被循環再用於製磚，以支持綠化建設；生物質燃燒產生的爐灰可用於製作肥料，而生活污水處理中產生的污泥在經處理後則可用於製作堆肥，從而支持園景綠化。

報告期內，個別項目更調整了氫氧化鈣的細度，不僅節約了氫氧化鈣的使用量，更減少了飛灰量的產生。此外，本集團於香港的中國光大綠色技術創新研究院採用「過濾-加熱一體化」設備進行飲用水供水，於二零二零年度完全避免了瓶裝水的採購和消耗，最大限度減少了廢棄塑料瓶的產生。

**Bottom ash generated from waste-to-energy projects**  
can be used for making bricks

.....

垃圾發電項目產生的爐渣可用於製磚

**Furnace ash produced from biomass combustion**  
can be used for producing fertilisers

.....

生物質燃燒產生的爐灰可用於製作肥料

**Sludge generated from municipal waste water treatment**  
can be used for producing compost (for horticultural use)

.....

污水處理產生的污泥可用於製作堆肥 (作園藝用途)

Fly Ash<sup>(1)</sup> and Furnace Ash Generated and Processed in 2020 二零二零年飛灰<sup>(1)</sup>及爐灰產生量及處置方式

Unit: Tonne

單位：噸

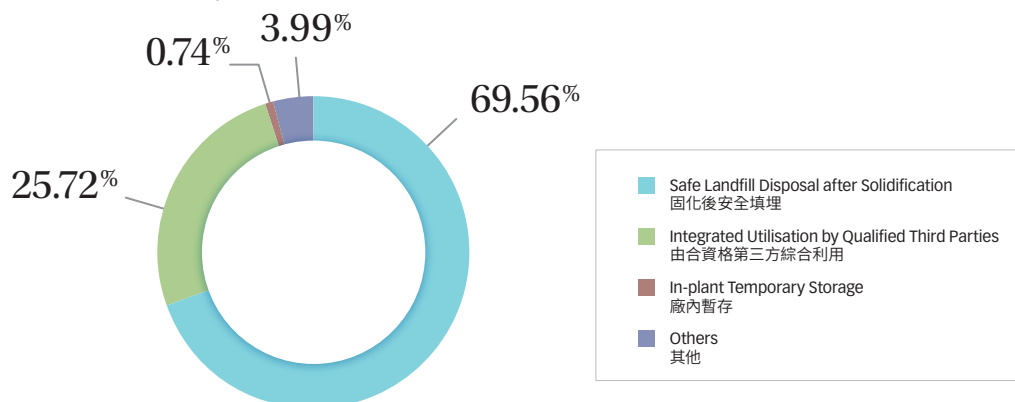
Operation Unit 運營單位		Safe Landfill Disposal after Solidification 固化後安全填埋	Integrated Utilisation 綜合利用	In-plant Temporary Storage 廠內暫存	Others 其他
<b>Fly Ash</b>					
<b>Environmental Energy</b> 環保能源	Waste-to-energy Projects 垃圾發電項目	807,684.89	–	3,665.86	18,848.55
<b>Greentech</b> 綠色環保	Integrated Biomass Utilisation Projects (Waste-to-energy) 生物質綜合利用項目 (垃圾發電)	56,040.25	–	5,713.53	–
	Hazardous Waste Incineration Projects 危廢焚燒項目	18,175.69	–	–	974.2
<b>Furnace Ash</b>					
<b>Greentech</b> 綠色環保	Integrated Biomass Utilisation Projects (Biomass) 生物質綜合利用項目 (生物質)	4,353.30	327,636.01	–	30,961.66
<b>Total</b> 總計		<b>886,254.14</b>	<b>327,636.01</b>	<b>9,379.39</b>	<b>50,784.41</b>

Note:

附註：

(1) Refers to the amount of fly ash after solidification

(1) 固化後的飛灰量



Total Fly Ash and Furnace Ash Generated  
飛灰及爐灰產生總量 **1,274,053.95** tonnes  
噸

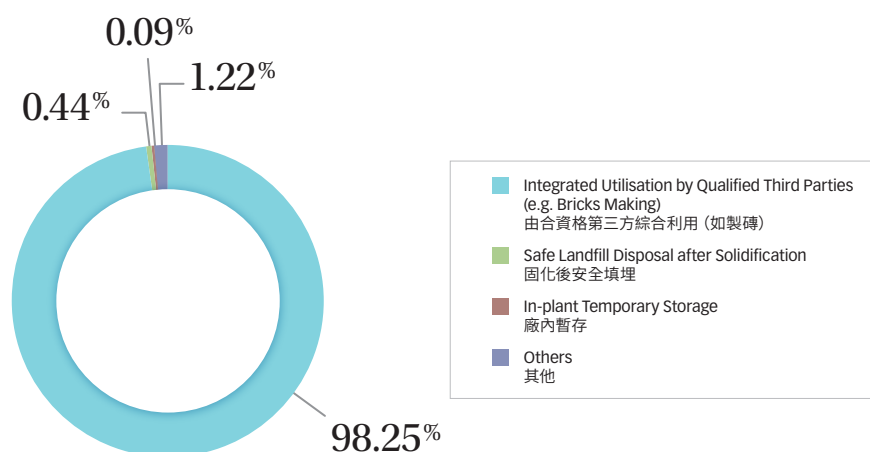
Bottom Ash Generated and Processed in 2020

二零二零年爐渣產生量及處置方式

Unit: Tonne

單位：噸

Operation Unit 運營單位		Integrated Utilisation by Qualified Third Parties (e.g. Bricks Making) 由合資格第三方綜合利用 (如製磚)	Safe Landfill Disposal after Solidification 固化後安全填埋	In-plant Temporary Storage 廠內暫存	Others 其他
<b>Environmental Energy</b> 環保能源	Waste-to-energy Projects 垃圾發電項目	5,595,615.49	-	6,150.00	54,100.44
<b>Greentech</b> 綠色環保	Integrated Biomass Utilisation Projects 生物質綜合利用項目	1,235,435.14	-	-	-
	Hazardous Waste Incineration Projects 危廢焚燒項目	5,165.47	30,642.89	-	30,961.66
<b>Total</b> 總計		<b>6,836,216.10</b>	<b>30,642.89</b>	<b>6,150.00</b>	<b>85,062.10</b>



**Total Bottom Ash Generated**  
爐渣產生總量 **6,958,071.09 tonnes**  
噸

The Group continues to conduct technological R&D in the fields of sludge treatment and disposal and properly dispose of the sludge it produces. Most of the sludge treatment technologies consist recycling measures, so as to achieve energy recovery and resource recycling, promoting sustainable waste management. The municipal waste water treatment projects of the Group strictly comply with the national standards such as *Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant* (GB18918-2002) for the treatment of sludge. These operating projects under environmental water also consider relevant international standards including the World Bank Group's *General Environmental Health and Safety Guidelines* and *Environmental, Health and Safety Guidelines for Water and Sanitation* to reduce the environmental impacts of sludge. Most of the treated sludge with satisfactory testing results are sent to qualified third parties for further treatment, reuse and/or utilisation, such as the production of compost, utilisation as construction materials, etc. A small amount of sludge that cannot be utilised is sent to designated landfills for disposal after undergoing dewatering process for the reduction of water content and volume. In order to promote the concept of sustainable waste management to the downstream of our value chain, the Group only hire qualified third parties for further treatment of sludge produced by our project companies, ensuring that the sludge treatment and disposal process complies with national environmental laws and regulations.

本集團在污泥處理處置等領域繼續進行技術研發，並妥善處理其生產的污泥。大部份的污泥處理技術更包含循環措施，能夠達致能源回收及物料再生利用，推動可持續廢棄物管理。本集團的市政污水處理項目嚴格遵從《城鎮污水處理廠污染物排放標準》(GB18918-2002)等國家標準處理污泥。環保水務的運營項目還把世界銀行集團的《通用環境、健康和 safety 指南》及《水與衛生環境、健康與 safety 指南》等相關國際標準納入考慮，以減少污泥對環境的影響。大部分經處理並通過檢測的污泥會被送到合資格第三方作進一步處理、循環再用及／或作綜合利用，如製作堆肥、建材利用等。少數無法循環再用的污泥則會進行脫水工序以減低含水量及體積，並送到指定填埋場作填埋處理。為把可持續廢棄物管理理念推廣至價值鏈下游，本集團只會僱用合資格的第三方組織進一步處理項目公司所產生的污泥，確保污泥處理及處置流程遵循國家環保法規。

### Amount and Methods of Disposal of Sludge Generated in 2020

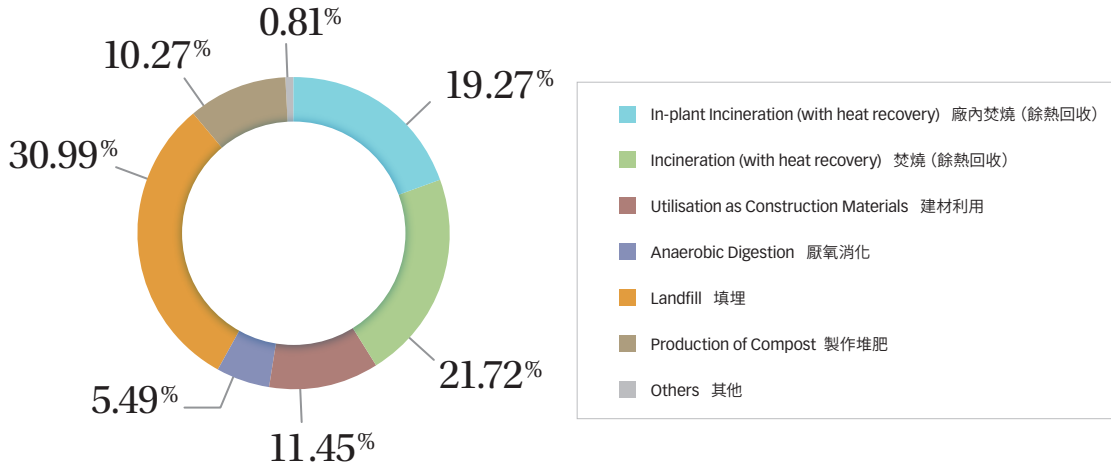
### 二零二零年污泥產生量及處置方式

Unit: Tonne

單位：噸

Operation Unit 運營單位		In-plant Incineration (with Heat Recovery) 廠內焚燒 (餘熱回收)	Incineration (with Heat Recovery) 焚燒 (餘熱回收)	Utilisation as Construction Materials 建材利用	Anaerobic Digestion 厭氧消化	Landfill 填埋	Production of Compost 製作堆肥	Others 其他
<b>Environmental Energy</b> 環保能源	Waste-to-energy Projects 垃圾發電項目	332,396.78	26,545.50	-	-	250,351.58	-	8,779.98
<b>Greentech</b> 綠色環保	Integrated Biomass Utilisation Projects 生物質綜合利用項目	12,605.13	-	63.00	-	-	-	-
	Solid Waste Treatment Projects 固廢處置項目	3,646.71	-	-	-	40.056	-	5,333.76
<b>Environmental Water</b> 環保水務	Waste Water Treatment Projects 污水處理項目	-	366,295.29	207,058.76	99,260.32	310,263.57	185,826.41	492.06
<b>Total</b> 總計		<b>348,648.62</b>	<b>392,840.79</b>	<b>207,121.76</b>	<b>99,260.32</b>	<b>560,655.21</b>	<b>185,826.41</b>	<b>14,605.80</b>

Ultimate Treatment/Disposal Methods of Sludge Generated in 2020  
二零二零年所產生的污泥最終處理/處置的方式



**Total Sludge Generated** 1,808,958.91 tonnes  
**污泥產生總量** 1,808,958.91 噸

The Group fully implements waste recycling and reuse policy from production facilities to offices and dormitories. The recycled waste includes paper, metal, plastic and food waste, etc. We also call on our employees to support resource recovery. All general waste is handled by dedicated external waste collectors and recyclers to prevent illegal waste disposal.

本集團從生產設施及至辦公室和宿舍等全面執行廢棄物回收以及重用政策，回收的廢棄物包括紙張、金屬、塑料和廚餘等；我們亦呼籲員工支持資源回收。所有一般廢物均由專責的外部廢物收集商和回收商處理，以杜絕非法棄置廢物。







## Environmental Protection 環境保護

Note:

- (1) Key air pollutants regulated by relevant national laws and regulations include smoke blackness, particulate matter, carbon monoxide, sulphur dioxide, hydrogen fluoride, hydrogen chloride, nitrogen oxides, mercury and other heavy metals (and their compounds), and dioxins.

附註：

- (1) 受相關國家法律及條例規管的大氣污染物主要包括煙氣黑度、顆粒物、一氧化碳、二氧化硫、氟化氫、氯化氫、氮氧化物、汞和其他重金屬（及其化合物）及二噁英。

### Hazardous and Solid Waste Processed in the Past Three Years

過去三年危廢及固廢處置統計



## Valuing Technology R&D and Applying Innovative Technologies

Adhering to technological innovation, enhancing endogenous power and core competitiveness are the unswerving goals of Everbright Environment, while investment in technology R&D must be sustained. In 2019, Everbright Environment actively promoted the optimisation and adjustment of our structure in technology R&D, further clarified the important role of technology R&D in leading and driving the Group's development. In 2020, Everbright Environment achieved outstanding results in scientific research across various fields, including solid waste treatment, flue gas treatment, water treatment and intelligent control, some examples are: applied optimised anti-coking design for small-scale waste incinerators at the Group's Shandong Ju County Waste-to-energy Project, with the good operational outcome; completed R&D of the high-temperature metal pre-heat dedusting technology for waste incineration, which is first-of-its-kind in China and the overseas; applied intelligent automatic combustion control (ACC) system with independent intellectual property rights at the Group's waste-to-energy projects in Boluo County of Guangdong Province and Lantian County of Shaanxi Province and many more.

In the future, Everbright Environment will continue to focus on the development and breakthrough of technology R&D, promoting the China Everbright Green Technology Innovation Research Institute as a "Four-in-One" technological innovation and R&D layout with platforms in Hong Kong, Shenzhen, Nanjing and Qingdao cities, so as to construct a world-class green technology innovation and transformation centre, promoting corporate development and environmental protection.

## 重視科技研發 應用創新技術

堅持科技創新、增強內生動力和核心競爭力，是光大環境堅定不移的努力目標，科技創新投入必須持之以恆。二零一九年，光大環境積極推動科技創新架構的優化調整，進一步明確科技創新對公司發展的重要引領和驅動作用。二零二零年，光大環境於固廢處置、煙氣處理、水處理、智能控制等領域的科研取得亮眼成績，例如：小型垃圾焚燒爐防結焦優化設計已在本集團山東莒縣垃圾發電項目完成改造施工，運行效果良好；國內乃至國際首套垃圾焚燒金屬高溫預除塵器技術已完成研發；自主知識產權的智能燃燒控制系統在本集團廣東博羅及陝西藍田垃圾發電項目運行情況良好。

未來，光大環境將以科技研發為持續發力點和著重突破點，推進中國光大綠色技術創新研究院在香港、深圳、南京、青島的「一院四城」科技研發體系佈局，建設世界級綠色技術創新及技術轉化中心，進一步推動企業發展及環境保護。



### Qingdao Institute's Water Dioxin Testing Capability has been Recognised by Many Parties 青島研究院水樣二噁英檢測技術能力獲多方肯定



In February 2020, Everbright Environment's Qingdao Institute participated in the ERA Proficiency Testing Round 282 hosted by the US Environmental Resources Association. With its excellent capability in testing dioxins in water, the Institute achieved outstanding results and stood out among the 770 laboratories participated in the testing, winning the title of "Laboratory of Excellence".

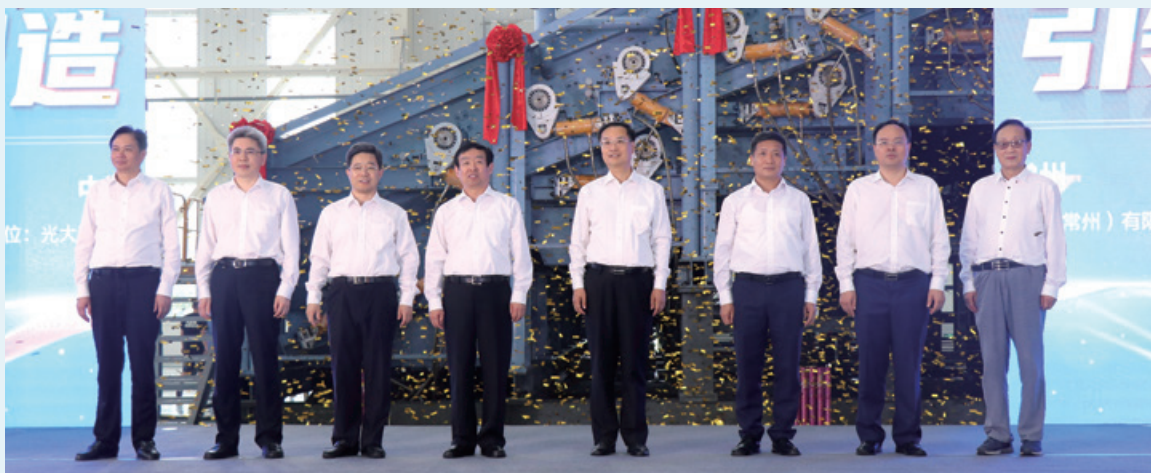
光大環境的青島研究院於二零二零年二月參與了美國環境資源協會舉辦的第282輪國際檢測能力驗證活動，並憑藉先進的水樣二噁英檢測技術能力取得優異成績，在同期參加比對的770家實驗室中脫穎而出，獲得「卓越實驗室」稱號。

Later in August, the Institute successfully passed the extended assessment of water dioxin testing by China Inspection Body and Laboratory Mandatory Approval ("CMA"). This marks the second time for the institute for having passed the relevant on-site testing by CMS since December 2019, when the institute had obtained CMA certificates for its testing capabilities in ambient air, flue gas, solid waste, soil and sediment. The Institute has now gained the qualification to test dioxins in water in accordance with the law, having passed another CMA on-site assessment.

其後，青島研究院在八月順利通過水樣二噁英CMA（檢驗檢測機構資質認定）擴項評審。這是繼二零一九年十二月取得CMA證書，具備環境空氣和廢氣、固體廢物、土壤和沈積物等多個領域的檢測能力之後，青島研究院再一次通過CMA現場評審，意味著具備了對水樣二噁英項目依法展開檢測的能力。

## Off-the-production-line Ceremony for Everbright Environment's First Domestically Produced 1,000-tonnes/day Grate Furnace Held in Changzhou

光大環境國產首台(套)1,000噸/日爐排下線儀式在常州隆重舉行



On 8 July 2020, the off-the-production-line ceremony for Everbright Environment's first domestically produced 1,000 tonnes/day grate furnace was held at the plant of Everbright Environmental Technical Equipment (Changzhou) Limited.

光大環境國產首台(套)1,000噸/日爐排爐下線儀式於二零二零年七月八日在光大環保技術裝備(常州)有限公司廠區隆重舉行。

The Group's self-developed 1,000 tonnes/day large scale grate furnace is not only the first that is produced domestically, but also the world's largest grate furnace. It can simultaneously process domestic waste, Industrial waste, sludge, blue-green algae and many more materials, equipped with a wide fuel adaptability. Its designed calorific value is up to 2,600 kcal, and the power generation capacity per tonne of waste could reach 887 kWh. It has the advantages of large single-furnace capacity, small footprint requirement, low treatment costs, low emissions, etc. It is estimated that compared to the units with the same total processing capacity, this grate furnace contributes to lower plant power consumption rate, higher incinerator efficiency, and better economic benefits.

光大環境自主研製的1,000噸/日大型爐排爐，不僅是國產首台，更是世界容量最大的爐排爐，可同時處理生活垃圾、工業垃圾、污泥、藍藻等多種物料，燃料適應性廣，設計熱值達2,600大卡，投運後噸垃圾發電量可達887千瓦時，具備單爐處置量大、佔地面積小、處置成本低、污染物排放量小等優勢。經測算，在相同處理量的前提下，廠用電率更低，焚燒爐效率更高，經濟效益更好。



Caring OUR PEOPLE  
and  
creating THE PATH TO SUCCESS

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關懷員工  
共創成功之路



TALENT DEVELOPMENT  
人才發展

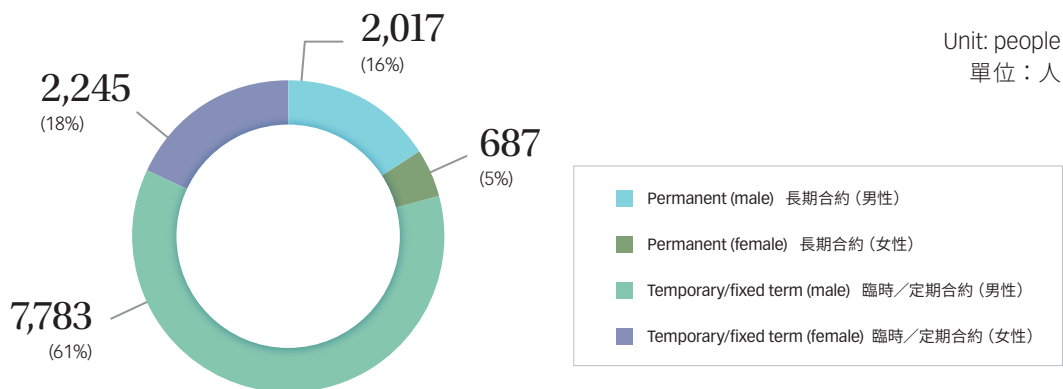
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**E**verbright Environment adheres to the “People-Oriented” principle, and is committed to creating a comfortable, inclusive, and healthy working environment for its employees. The Group also provides employees with professional training and flexible development opportunities, allowing them to have greater room for growth and development.

### Our Professional Team

The Group’s continuous business growth is attributed to our proud and advancing professional team. As at 31 December 2020, the Group had a total of 12,732<sup>(1)</sup> employees, who give a full play to their abilities in different areas.

By Employment Contract and Gender  
按合約類型及性別劃分

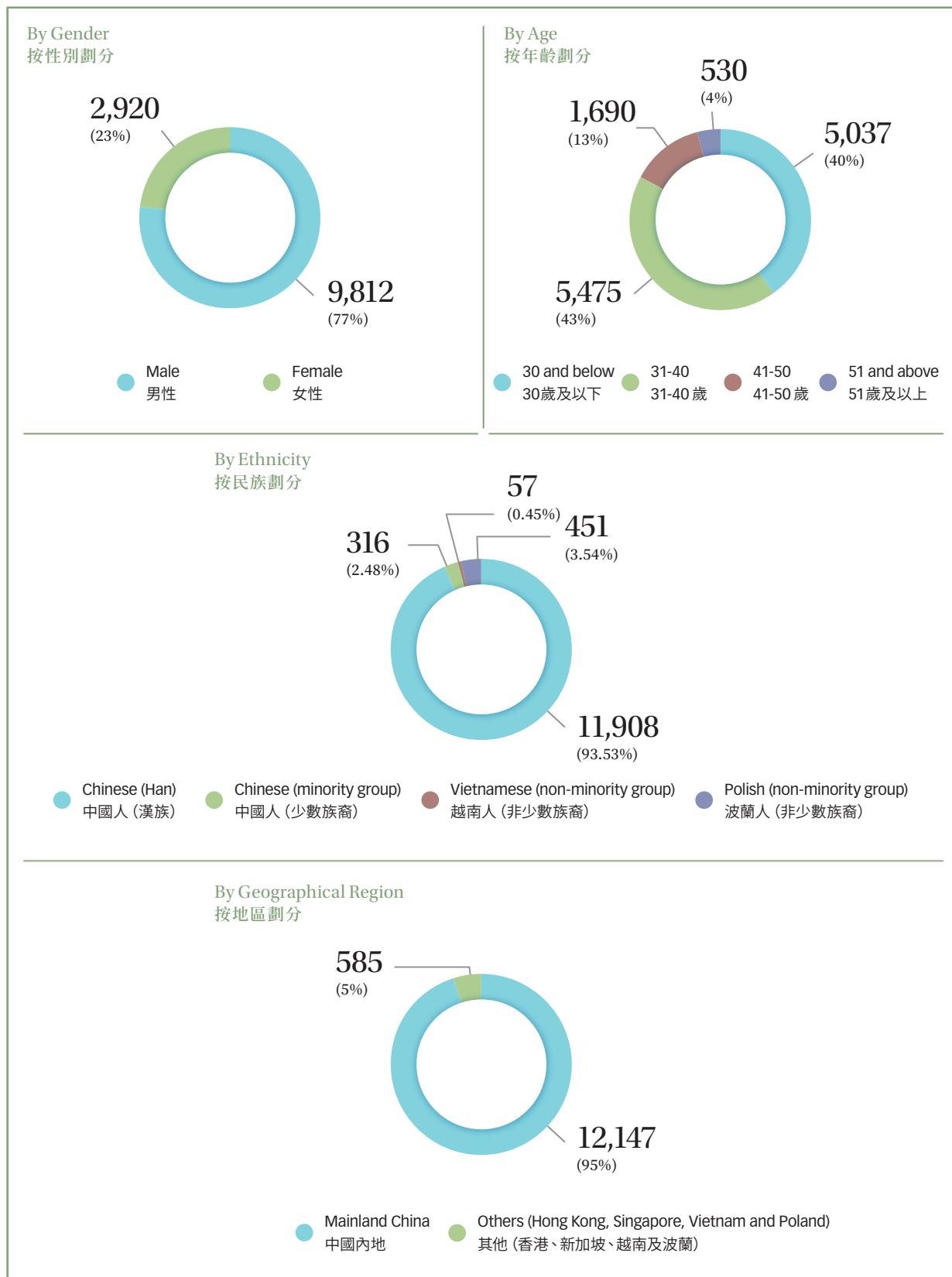


**光**大環境一向貫徹「以人為本」的理念，致力為員工營造一個舒適、共融及健康的工作環境，並提供專業培訓及靈活發展機會，讓員工有更大的成長和發揮空間。

### 我們的專業團隊

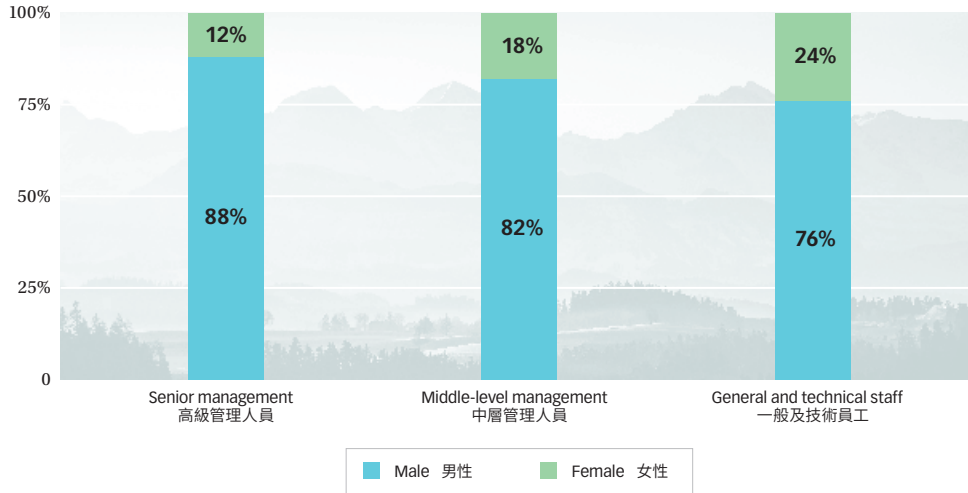
本集團持續的業務增長有賴於我們引以為傲及與時俱進的專業團隊。截至二零二零年十二月三十一日，本集團共有12,732<sup>(1)</sup>名員工於不同業務領域群策群力，各展所長。

Unit: people  
單位：人

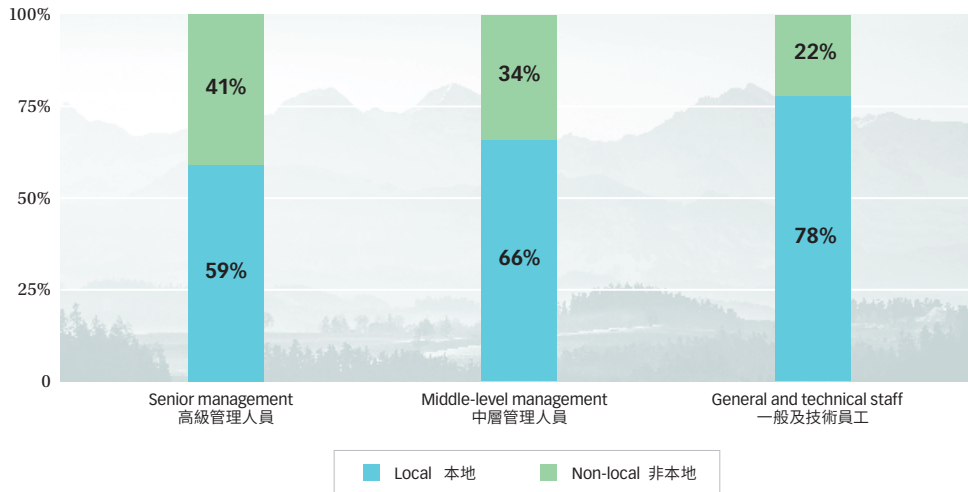




Male to Female Ratios by Employee Ranking  
各員工職級的男女比例



Employees Hired by Geographical Region<sup>(2)</sup>  
按地區劃分的受僱員工<sup>(2)</sup>



Notes:

- (1) All employees were full-time employees.
- (2) Employees hired from the same province in Mainland China are regarded as local employees, whereas the employees hired from other provinces in Mainland China are regarded as non-local employees.

## Integrity and Ethics

The Group has established the *Human Rights Policy* to support all international norms and codes regarding human rights, including the “UN’s Universal Declaration of Human Rights”, “Guiding Principles on Business and Human Rights” and related regulations of the “UN Global Compact” and the International Labour Organisation. The policy upholds human rights and sets specific guidelines for diversity and inclusion, equal opportunity, reasonable working hours, workplace health and safety, freedom of association, and employee-employer negotiations. The Group adopts a zero-tolerance attitude towards child labour and forced labour, and at the same time strictly follow the requirements of the main human rights declaration and labour regulations. During the Reporting Period, there were no violations of human rights or the use of child labour or forced labour, and no young workers were exposed to hazardous work.

The Group highly values the ethical, personal and professional conduct standards of its employees. We require all employees to strictly comply with the Group’s *Code of Conduct*, including avoiding conflicts of interest, discrimination and harassment as well as bribery (including any form of facilitating payment), extortion, fraud and money laundering, etc. Employees’ ethical performance is reflected in their appraisals to ensure the Group is operating ethically in the Group’s businesses. In addition, employees are required to report any violations of the *Code of Conduct* to the management. During the Reporting Period, the Group did not have any violation of the *Code of Conduct*.

## Equal Opportunities and Integration

The Group’s *Staff Handbook* covers topics such as compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, preventing child and forced labour, and other benefits and welfare. We provide employees with a fair, transparent, and respectful career platform that is free of discrimination on the grounds of gender, age, ethnicity, nationality, marital status, and religion, etc.



附註：

- (1) 所有員工均為全職員工。
- (2) 在中國內地同省受聘的員工被視為本地員工，而在中國內地外省受聘的員工則被視為非本地員工。

## 誠信與道德

本集團制定了《人權政策》，以支持所有有關人權的國際規範和準則，包括「聯合國世界人權宣言」、「工商業與人權指導原則」以及「聯合國全球契約」和國際勞工組織的相關規定。該政策維護人權，並為多樣性和包容性、平等機會、合理工作時間、工作場所健康和 safety、結社自由以及僱員、僱主談判制定了具體指導方針。同時，本集團對於童工及強迫勞動採取零容忍的態度，同時嚴格按照主要人權宣言及勞動法規的要求用工。我們亦制定政策，防止在招聘、晉升和解僱方面出現有違道德的行為，包括聘用童工和強制勞工。於報告期內並沒有任何侵犯人權或存在使用童工或強迫／強制勞動之事件，亦沒有年少工作者從事危險工作。

本集團高度重視員工的道德、個人及專業操守準則，並要求所有員工須嚴格遵循本集團之《員工守則》，內容包括避免利益衝突、歧視或騷擾、以及賄賂（包括任何形式的通行費）、勒索、欺詐及洗黑錢等違法行為。員工的道德表現亦被視為績效評估的考慮因素之一，以確保本集團的經營合乎相關之商業道德。另外，本集團對疏於職守者、貽誤工作、洩露機密及貪污受賄者定必依法嚴肅處理。於報告期內，本集團並沒有任何違反《員工守則》的個案。

## 平等機會及共融

本集團的《員工手冊》涵蓋了關於薪酬及解僱、招聘及晉升、工作時數、假期、平等機會、防止童工及強迫勞動、以及其他待遇及福利等議題。我們為所有員工提供一個公平開放及互相尊重的就業平台，杜絕任何因性別、年齡、種族、國籍、婚姻狀況、宗教等而引致的歧視。此外，本集團實施公平及具競爭力的薪酬福



Besides, the Group implements a fair and competitive remuneration and welfare system. The remuneration is determined based on qualification, experience, nature of work, performance and market conditions, so as to create equal employment opportunities. In view of the fact that the human resources distribution in energy and engineering sectors polarises on male, the Group pays special attention to issues including gender equality and remuneration, with an aim to reduce the impact of gender factors on pay scale and structure. This year, the percentage of female employees of the Group's management positions is 16.7%. We have set a relevant target for the next year, hoping the percentage will remain not lower than this year's figure, reflecting our determination of retaining female employees.

The Group strives to safeguard the rights of vulnerable employees, including offering pregnant employees with sufficient maternity leave and male employees with paternity leave. The Group reserves positions for employees on maternity or paternity leave, encourage them to return to work, and ensures their career development and remuneration are unaffected.

利制度，薪酬乃根據資歷、經驗、工作性質、表現以及市場情況計算釐定，致力締造平等的就業機會。有鑑於從事能源和工程相關行業的人力資源分佈側重於男性，本集團特別關注性別平等與薪酬待遇等議題，務求減少性別因素對薪酬水平及結構的影響。本年度，本集團管理人員的女性比例為16.7%。我們為明年設立相關目標，期望該比率不少於今年的數值，以反映我們挽留女性員工的決心。

本集團更傾力於維護弱勢員工的權利，包括給予懷孕員工充足的產假，以及給予男員工待產假等。本集團為在產假／待產假中的員工保留崗位，鼓勵他們再次重返工作崗位，並確保其職業發展和薪酬不會因而受影響。



Employee Maternity/Paternity Leave Statistics in 2020

二零二零年員工產假／侍產假數據



		Female 女	Male 男
Number of female and male employees who took maternity/paternity leave in 2020	二零二零年放產假／侍產假的男女員工數目	149	357
Number of employees who returned to work after maternity/paternity leave in 2020	二零二零年產假／侍產假結束後重返工作崗位的員工數目	142	345
Number of employees who returned to work after maternity/paternity leave ended in 2019 and still employed by the end of 2020	二零一九年產假／侍產假結束後重返工作崗位並於二零二零年底仍在職的員工總數	137	287
<b>Percentage of employees who returned to work after maternity/paternity leave ended in 2020</b>	<b>二零二零年產假／侍產假結束後重返崗位的員工比例</b>	100%	99.71%
<b>Percentage of employees who returned to work after maternity/paternity leave ended in 2019 and still employed by the end of 2020</b>	<b>二零一九年產假／侍產假結束後並於二零二零年底仍在職的員工比例</b>	92.57%	94.41%

Employees' Benefits

員工福利

The Group has a comprehensive welfare and safeguard system, official employees are provided with life insurance, medical insurance, disability and critical illness coverage, maternity leave and paternity leave, etc. The Group also distributes discretionary bonuses to reward outstanding employees. In addition to providing mandatory pension insurance as required by law, the Group has also developed a supplementary pension system as an additional retirement benefit.

本集團擁有完善的福利和保障制度，正式員工皆享有人壽保險、醫療保險、傷殘及疾病保障、產假及侍產假等福利。本集團亦會酌情派發獎勵花紅，獎勵表現優異的員工。此外，除了提供法律規定的強制性養老保險，本集團更為員工貼心制訂了補充養老制度作為額外的退休福利。

To ensure the physical and mental health of employees, free body check and occupational disease prevention inspection are provided every year, including physical diagnosis, blood test, kidney function test, liver function test and other items. Starting from 2019, in addition to free body check, front-line workers can also receive follow-up support to safeguard their health. During the Reporting Period, the Group also provided healthcare security fund to staff and their families who were affected by the Pandemic.

為確保員工的身心健康，本集團每年均為員工提供免費的身體檢查及職業病防範檢查服務，內容包括體格檢查、血液檢查、腎臟功能檢查、肝臟功能檢查等項目。二零一九年開始，前線工人除了享有免費身體檢查，亦能獲得後續的支持，確保身體健康得到保障。在報告期內，本集團亦為受疫情影響的員工及其家人發放醫療保障基金。

## Two-way Communication

To create an ideal working environment for employees to grow, the Group proactively communicates with employees. Employees can express their thoughts about the Group through different channels, including regular staff meetings and employee satisfaction surveys. The Group also welcomes employees to communicate directly with the CEO and/or the chairman of the audit committee via email, allowing them to express their views under a comfortable and private environment. The Group's grievance mechanisms cover different topics including labour relations, human rights, workplace harassment and discrimination, etc., provide employees a platform to share their views, and express their concerns on corporate governance.

The Group also regularly publishes internal publications, such as the "Everbright Environment Monthly Magazine", to share the Group's updates and encourage employees to contribute articles as a way to express their opinions.

## 2020 Employee Survey

In order to further understand the views of the Group's employees on the Company's management, working environment, benefits and other aspects, the Group invited employees to participate in an online questionnaire in 2020. Over 1,500 employees participated in the survey. Over 80% of respondents are satisfied with their current job duties and working environment.

The survey results showed that employees generally got along well with their colleagues. They also understood the Company's development goals and how their work contributes to the Company's development. In addition, employees also actively put forward suggestions on Company policies, which helped the Group to improve its policies and systems, and helped us to fully consider the needs of employees when formulating management approaches.

## 雙向溝通

為建立一個讓員工茁壯成長的理想工作環境，本集團積極主動地與員工進行溝通。本集團透過定期舉辦員工大會、進行員工滿意度問卷調查等途徑，讓員工表達對本集團的想法。本集團更歡迎員工透過電郵與總裁及／或審核委員會主席直接對話，讓他們在舒適和私隱度高的環境下表達意見。而本集團所設立的申訴機制覆蓋勞資關係、人權、職場騷擾及歧視等多個方面，供員工循序提出申訴、發表意見及提出對本集團管治的關注。

此外，本集團亦定期出版如「光大環境月刊」等內部刊物，除了分享集團資訊和動向，更鼓勵員工投稿，讓他們發表己見。

## 二零二零年員工問卷調查

為進一步了解各員工對公司的管理、工作環境、福利待遇等各方面的看法，本集團於二零二零年邀請了員工參與網上問卷調查。是次調查共有超過1,500名員工參與。80%以上的參與者對現有工作崗位及環境感到滿意。

調查結果顯示，員工普遍跟同事相處融洽，另外也了解公司的發展目標，以及明白自身工作如何對公司發展作出貢獻。另外，員工亦積極提出有關公司政策的建議，有助本集團完善其政策與制度，並協助本集團在制定管治方針時更能充分考慮到員工的需求。



### Meetings with Project leaders of the Nanjing and Suzhou Regional Centers of the Environmental Energy Sector

#### 環保能源板塊南京區域和蘇州區域項目負責人座談會

In August 2020, Mr. Wang Tianyi, the then CEO of Everbright Environment, visited the Company's Nanjing and Wujiang Waste-to-energy Projects. Meetings with Project leaders of the Nanjing and Suzhou Regional Centers of the Company's environmental energy sector were held to understand the demands and difficulties of the projects and exchange views on the construction engineering, operations management, brand promotion and financial management. Mr. Wang also responded to the concerns of frontline staff, such as questions regarding business exploration and staff benefits.



二零二零年八月，光大環境時任總裁王天義先生分別赴南京垃圾發電項目、吳江垃圾發電項目並與南京區域和蘇州區域項目負責人進行座談會，聽取了項目發展過程中存在的需求和困難。這次座談會圍繞工程建設、運營管理、品牌宣傳、財務管理等工作展開深入交流，就基層普遍關心的業務拓展、員工福利等相關問題進行了耐心解答，與員工交流想法。

### Talent Recruitment and Retention

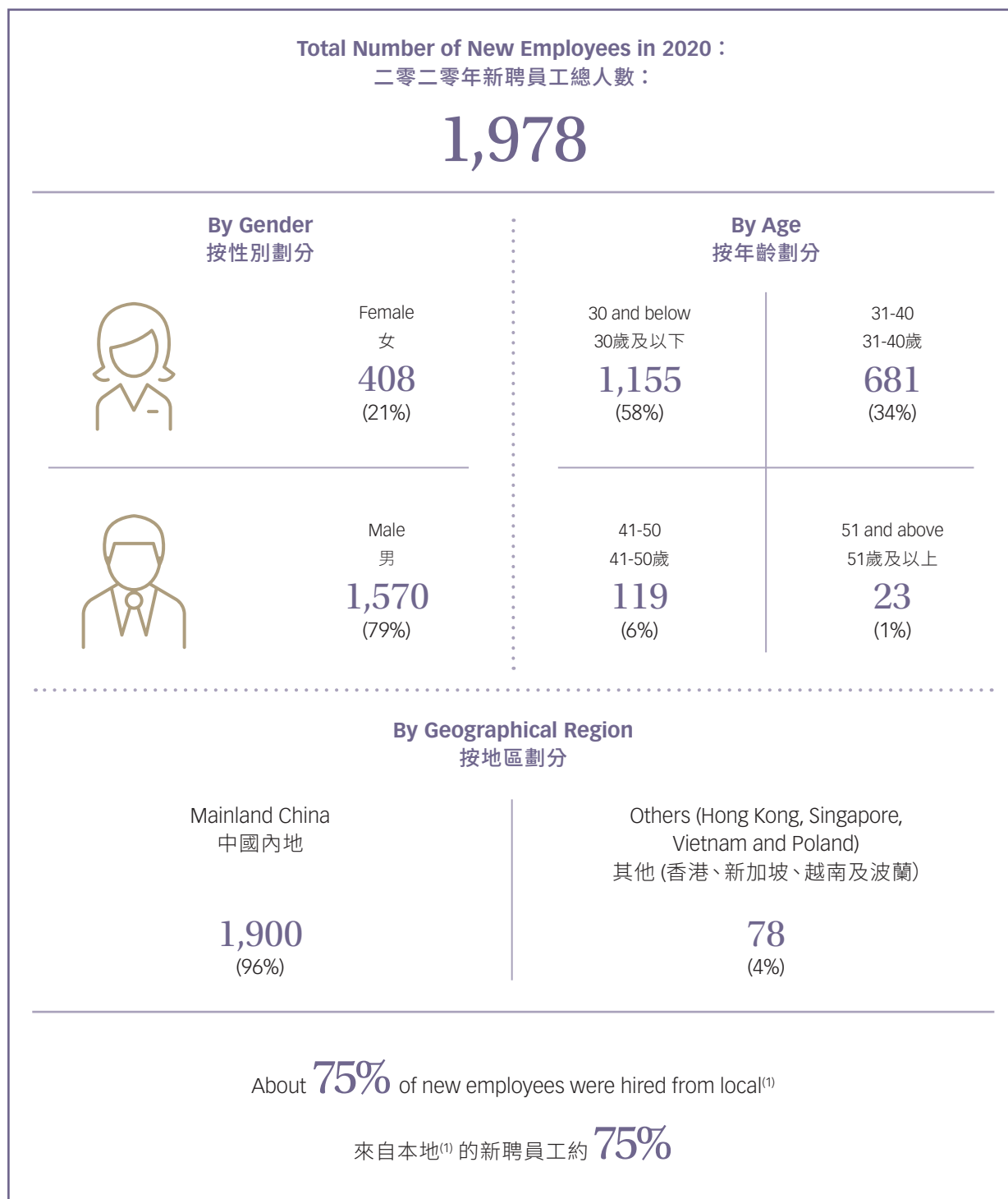
Everbright Environment's project management team comprises members with extensive and in-depth experience in project planning, procurement, construction, operations, and R&D. The Group actively develops its talent pool through local, overseas, and on-campus recruitments and various internal training initiatives to attract and cultivate professional and international talents. The Group issued the *Management Measures and Awards for Talent Referral by Internal Staff* to encourage existing staff to refer suitable candidate(s) to the Group. In line with the Group's "Technology Leads Development" strategy, the Group actively brings in management and technical expertise in technological R&D through industrial-academic collaboration and acquisition of technology companies in recent years. In 2020, the hiring costs per full-time employee was HK\$1,475.58.

The Group is committed to providing open and equal employment opportunities and platforms, where the ability and qualification of candidates remain as the most important assessment criteria in the recruitment process. Their employment opportunities are never affected by factors such as gender, age, and ethnicity. Meanwhile, the Group is committed to promoting local economic development and employment opportunities through hiring local talents for the Group projects in remote areas. In 2020, 23.60% of open positions were filled by internal candidates.

### 人才招募及挽留

光大環境的項目管理團隊皆由在項目規劃、採購、施工、運營及研發方面具有廣泛及深入經驗的資深成員組成。本集團一直通過社會招聘、海外招聘、校園招聘及自身培養等方式不斷加強人才隊伍建設，吸納及培養專業化和國際化的人才。本集團現行《內部員工推薦外部人才管理及獎勵辦法》，鼓勵員工引薦合適人員加入本集團發揮所長，從更多途徑招賢納士。為了配合本集團「科技引領發展」的策略，集團近年更透過產學合作、收購技術公司等方式，積極引進技術研發的管理及技術專才。二零二零年，每名全職員工的招聘成本為港幣1,475.58元。

本集團致力提供公開而平等的就業機會與平台，在招聘的過程中應徵者的能力和資質為最關鍵的考核要素，應徵者的機會絕不會受到性別、年齡、種族等其他因素影響。同時，本集團亦致力協助促進當地經濟發展和就業機會，在偏遠地區的項目聘用本地人才。二零二零年，有23.60%的空缺職位由內部申請人填補。



Note:

<sup>(1)</sup> Employees hired from the same province in Mainland China are regarded as local employees, whereas the employees hired from other provinces in Mainland China are regarded as non-local employees.

附註：

<sup>(1)</sup> 在中國內地同省受聘的員工被視為本地員工，而在中國內地外省受聘的員工則被視為非本地員工。

**Total Number of Employee Turnover (Resignation/Retirement) in 2020 :**  
二零二零年流失員工 (離職/退休) 總人數：

**2,094**

**By Type**  
按類型劃分

Resigned  
離職  
**2,051**  
(98%)

Retired  
退休  
**43**  
(2%)

**By Gender**  
按性別劃分



Female  
女  
**357**  
(17%)



Male  
男  
**1,737**  
(83%)

**By Age**  
按年齡劃分

30 and below  
30歲及以下  
**1,011**  
(48%)

31-40  
31-40歲  
**771**  
(37%)

41-50  
41-50歲  
**230**  
(11%)

51 and above  
51歲及以上  
**82**  
(4%)

**By Geographical Region**  
按地區劃分

Mainland China  
中國內地  
**2,038**  
(97%)

Others  
(Hong Kong, Singapore,  
Vietnam and Poland)  
其他  
(香港、新加坡、  
越南及波蘭)  
**56**  
(3%)



The Group deeply understands that talent development takes time, therefore, we monitor the number of employees who are going to be eligible for retirement every year in order to formulate a human resources strategy while providing employees with appropriate career management plans, including retirement arrangements.

本集團深明培育人才需時，因此我們每年均會透過統計即將合資格退休的員工數目，長遠考慮、制定及調整人力資源政策，同時為員工提供包括退休安排的妥當職業生涯管理計劃。

### Percentage of Employees Eligible for Retirement in 5 and 10 years

### 五年及十年內合資格退休的員工百分比

Employee Ranking	員工職級	In 5 years 五年內	In 10 years 十年內
Senior management	高級管理人員	9.68%	21.72%
Middle level management	中層管理人員	2.95%	8.78%
General and technical staff	一般及技術員工	2.04%	4.03%

### Training and Development

### 培訓及發展

With an aim to grow together with our employees and share the fruits of success, the Group incorporates employee training as a norm in management where training profiles are established to help employees reach their full potential. In 2019, the Group established the Ecological Environment Institute to arrange centralised training programmes tailored to business development needs of the Group. Training programmes were also held to enhance management's and staff's professional and general competence through continuous education. On top of that, our project companies conduct relevant trainings to meet their specific business needs on a regular basis, empowering our employees to utilise their talents and providing the enterprise with a team of excellent professionals. In 2020, the average amount spent per full-time employee on training and development was HK\$1,354.39.

為促進本集團與員工相互成長並共享成果，本集團把員工培訓納入常態管理，建立培訓檔案，務求裝備員工成才。本集團於二零一九年設立了生態環境學院，針對本集團業務發展需要，統一安排合適培訓，亦先後舉辦了各類培訓班，讓管理層及員工持續進修，提升專業和綜合能力。除此以外，各項目公司亦會按照自身需要定期為員工提供合適培訓，讓員工發揮所長、為企業提供優秀的專業人才隊伍。二零二零年，投放至每名全職員工的平均培訓及發展資源為港幣1,354.39元。

During the Reporting Period, in response to the Pandemic, training of the Group was adjusted to live broadcast and video training programmes. Training courses in relation to employees' awareness of information security, budget management standard, the use of electronic transaction platform for tendering and procurement, purchase price analysis and cost control were held to enhance management's and employees' general competence. Moreover, a number of our project companies made well use of technology by providing employees with online training courses, such as courses for public communication staff, etc. Online assessment was also arranged to ensure the effectiveness of our training programme. In addition, under the premise of the alleviated situation of the Pandemic and the safeguard of our employees' safety, part of our project companies conducted on-site training programmes as usual, such as "Organic Project Training Week", so as to strengthen the learning awareness of our employees.

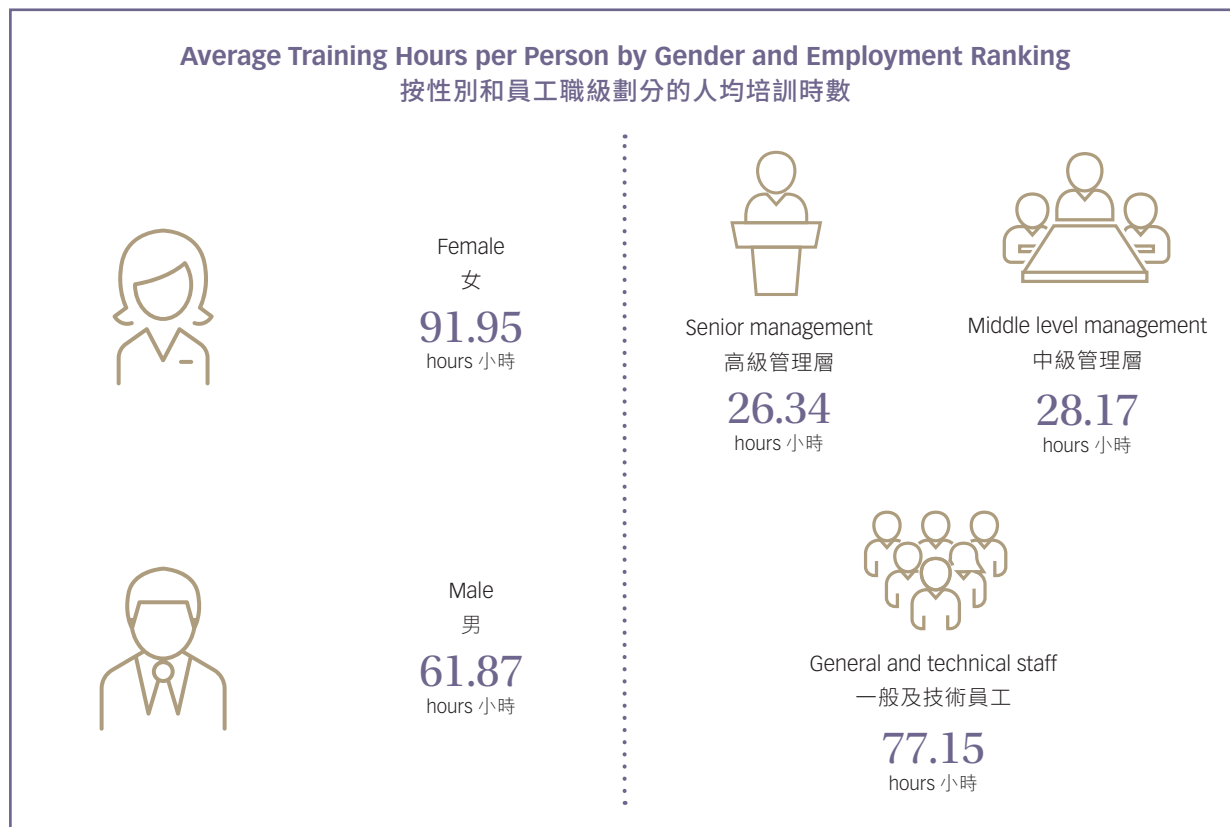
The Group also sets up a comprehensive and measurable employee assessment system to enhance the working quality, competitiveness and enthusiasm of employees. In 2020, all employees received constructive feedback and career planning advice from their performance appraisals, laying a firm foundation for the talent pool and corporate sustainable development.

報告期內，本集團應對疫情，調整了培訓安排，改為線上直播及視頻培訓，先後舉辦了員工資訊安全意識、預算管理工作規範、招標採購電子交易平台使用、採購價格分析與成本控制等培訓，進一步提升管理層及員工綜合能力。本集團多間項目公司在疫情下善用科技，為員工提供全系統通訊員等線上培訓，並且設置線上考核，確保培訓效果。亦有部分項目公司在疫情好轉、保障員工安全的前提下繼續舉行如「有機項目培訓周」等線下培訓，加強員工的學習意識。

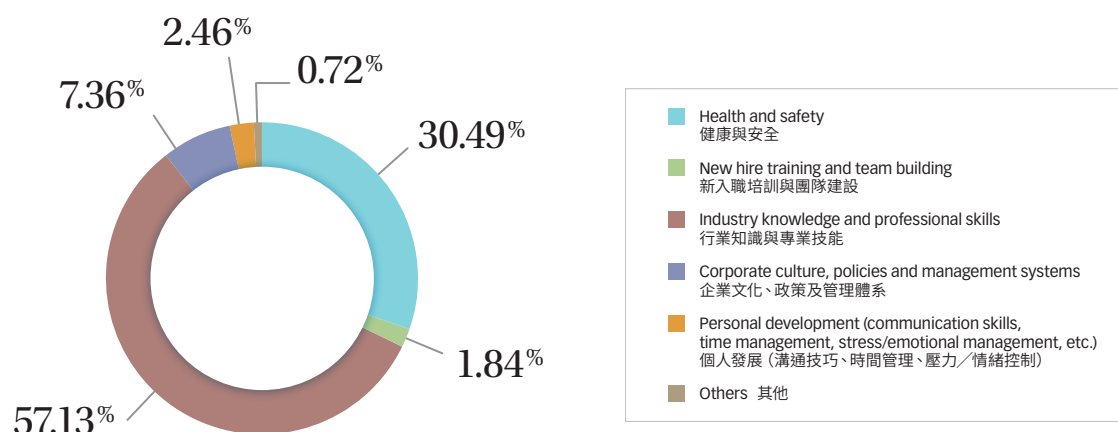
本集團亦設立全面及可評估的員工考核制度，以提升員工的工作質素、競爭力及積極性。二零二零年，所有員工均從各自的績效考核中取得具建設性的回饋和職業生涯規劃建議，為人才儲備及企業持續發展奠定了堅實的基礎。

In 2020, total training hours of employees in Everbright Environment were **875,520.98** hours. Average training hours per employee were **68.77** hours.

二零二零年，光大環境的員工培訓總時數為**875,520.98**小時，人均培訓時數為**68.77**小時。



Percentage of Training by Category  
培訓類別的百分比



### “Fight the Virus” Investment and Development Training Programme 「戰疫情、強內功」投資發展專題培訓

With the increasing level of uncertainty and instability shrouding the market, inheritance with innovation has become a core requirement to investment and development management staff. In 2020, the Group organised a “Fight the Virus” Investment and Development Training Programme to enhance investment employees’ general competence and technical skills through professionalism, organisational and leadership aspects, promoting mutual growth of the Company and its employees. A total of 114 investment and development full-time and part-time employees participated in the training. The participants were greatly benefitted, and their knowledge on related issues are important for the future development of the Group.

面對市場的不確定性和不穩定性越來越高，守正出新是對投資發展管理人員的核心要求。本集團在二零二零年舉行了「戰疫情、強內功」投資發展專題培訓課程，力求從專業性、組織能力、領導能力三個層面全方位培養投資人員的綜合素養並提升其職業技能，把公司發展和個人成長融為一體。培訓受眾為投資發展全職及兼職人員共計114名，參與員工皆獲益良多，而員工對相關議題的認識亦對本集團的未來發展尤關重要。

### Back-up Talent Management

To ensure that the talent pool can coordinate with the Group’s sustainable development, the Group continues to enrich the Group’s back-up management personnel pool across the 8 business sectors of the Group. There are currently 797 back-up management personnel acting as the major budding talents that will support the future development of the Group and provide the Company with a team of competitive professionals.

The Group also provides recruitment opportunities in the form of voluntary registration and bottom-up recommendation by posting recruitment information in the talent pool to select and nurture excellent management personnel, so that employees who have ability and aspirations could have greater room for growth and development. Meanwhile, the Group issued a series of management measures for human resources to improve the efficiency of human resource management, including the selection of various operating projects as talent cultivation bases, with a focus to cultivate the mainstay of the Group’s future development.

### 後備人才管理

為確保人才儲備配合本集團的可持續發展，本集團繼續致力完善八大業務板塊的後備管理人員庫。本集團目前共有797名後備管理人員，將作為集團未來發展的主力軍和新力軍，為集團未來發展打造更具競爭力的專業人才團隊。

本集團亦透過在人才庫中公開發佈招聘訊息，以自願報名及由下至上推薦等形式提供內部選聘的機會，培養選拔優秀管理人員，讓有能力、有理想的員工有更大的成長和發展空間。同時，本集團亦頒發了一系列人力資源管理辦法，提升人力資源管理效率，其中包括選出多個運營項目作為培養基地，重點培育集團未來發展的中流砥柱。

As at 31 December 2020  
截至二零二零年十二月三十一日



Total number of back-up management personnel  
後備管理人員總數共

797 people  
人



Number of Deputy General Managers promoted to General Managers  
副總經理獲晉升為總經理的人數共

43 people  
人



Number of back-up management personnel promoted to General Managers, Construction Supervisors or Project Management Team Leaders  
後備管理人員赴任新項目的總經理、總指揮或籌備組長的人數共

37 people  
人

### Internal Inheritance and Exchange

The Group values the internal inheritance and exchange of human resources. During the Reporting Period, the Group held its first environmental safety exchange meeting and environmental safety knowledge competition in Nanjing. During the event, participants shared their experiences on safety and environmental management, exchanged views and learnt from each other with an aim to establish smooth business operation. This meeting showcased the Group's great attention to work from all functional departments and business sectors, offering valuable experience for different departments.

To help the young employees grow into talents, the Group actively makes use of its human resources advantage to pursue the Apprenticeship Programme, in which experienced and skilled employees sign apprenticeship agreements with new employees and teach them technical skills. The mentors are responsible for imparting knowledge and skills, helping the apprentices to integrate into the working environment, driving them to learn actively and work hard, and finally achieve the internal inheritance.

### 內部承傳和交流

本集團注重人力資源的內部交流和承傳。於報告期內，本集團在南京舉辦了首屆安環管理經驗交流會暨安環知識競賽活動，透過交流分享安環管理經驗，取長補短，互促共進，營造互相交流、穩定運營的良好氛圍。這次會議交流分享進一步體現了本集團各部門、板塊對工作的高度重視，亦為各部門提供了寶貴經驗。

為促進青年員工成長成才，本集團推行「師帶徒」培訓計劃，積極以自身人力資源優勢，讓經驗豐富或綜合素質較強的員工與新員工簽訂師徒協議，傳授學藝，培養技術技能。師父們以「傳幫帶」的方式：傳授知識技能、幫助徒弟融入工作環境、帶動新人積極學習、認真工作，最終達致薪火相傳。

## Work-Life Balance

Everbright Environment is committed to protecting the health and well-being of its employees. We regularly organise a variety of leisure and sports activities to create healthy lifestyles for our employees, facilitates employee relations and maintains work-life balance.

## Cultivating Healthy Lifestyle

The Group's project companies have provided comfortable and well-equipped staff quarters for the Group's employees with multiple recreational facilities including sports grounds, gymnasiums, chess and bridge rooms, libraries, etc., to help employees relax and relieve work stress. The Group also encourages employees to maintain a healthy lifestyle, and thus various leisure and sports activities are organised every year, including swimming competitions, fun sports days, basketball friendly matches and birthday celebrations, with aims to promote employees' health, and reach a win-win situation for both the enterprise and employees.

Furthermore, some projects have set up dietary committees, which are dedicated to collecting employees' opinions on the quality and taste of their meals, continuously updating the menu and providing them with nutritious and delicious meals.

## 工作與生活平衡

光大環境一向重視員工的身心健康，因此我們積極舉辦各類有益身心的活動，以促進員工關係並使他們在生活與工作上取得平衡。

## 締造健康生活

本集團的項目公司皆為員工提供了舒適且配套完善的宿舍，包括設有運動場、健身房、棋牌室及圖書館等休閒設施，讓員工可適時放鬆、舒緩工作壓力。本集團亦鼓勵員工保持身心健康的生活方式，每年舉辦及參與多項文娛休閒及體育活動，包括游泳比賽、趣味運動會、籃球友誼比賽及生日慶祝活動等，以促進員工健康發展，實現企業和員工雙贏。

此外，個別項目更設立了膳食委員會，致力了解員工對菜品、口味的用餐體驗，不斷改進菜餚的搭配，為員工提供營養豐富而且美味的飯菜。



The employees of Environmental Hygiene Municipal Waste Center participated in a swimming competition in Hangzhou  
環衛固廢中心員工參與杭州市城管系統職工運動會游泳比賽



Hangzhou Waste-to-energy Project Company provided its employees with free haircut service to celebrate "Dragon Heads-raising Day", a Chinese traditional festival  
杭州垃圾發電項目公司為員工安排免費理髮服務慶祝國家傳統民族「剃龍頭」



Suzhou Waste-to-energy Project Company sent birthday greetings to the employees who cannot return hometowns during the Pandemic  
蘇州垃圾發電項目公司為疫情下未能回鄉的員工送上生日祝福

### Supporting Environmental Protection Activities

As a leading enterprise in the environmental protection industry, we always encourage employees to be the role models in bringing environmental protection awareness from work to their daily lives and spreading the spirit of Everbright Environment. In 2020, the Group's employees continued to actively participate in environmental protection activities outside of work, exert personal influence and encourage various community groups to join the Group to build a better future for the next generation.

### 身體力行 參與環保

作為環保行業的領軍企業，本集團積極推動員工在工作和日常生活中建立環保意識，從身邊小事做起，成為群體中的模範。二零二零年，本集團的員工積極地在工餘時間參與環保活動，鼓勵身邊親朋好友、社區群體共同保護環境，為下一代建設更美好的將來。


### "I am an Ecological Environmental Tour Guide"

「我是生態環境講解員」

On 5 September 2020, the Chinese Society of Environmental Sciences and Everbright Environment jointly organised the "I am the Ecological Environmental Tour Guide" Finals in Beijing. The employees of Suzhou Waste-to-energy Project won the first prize by demonstrating their professional presentation skills in the field of popular science. Participating staff not only displayed professional skills at work, but also contributed to the environmental protection industry; they also actively used their professional knowledge to spread the importance of ecological and environmental protection in their spare time, spreading the spirit of Everbright Environment employees.



二零二零年九月五日，中國環境科學學會與光大環境在北京聯合舉辦「我是生態環境講解員」總決賽。本集團蘇州垃圾發電項目的員工以專業的科普講解水平等能力，從大賽中獲得一等獎。參賽員工不單在工作中展現專業技能，為環保行業出一分力；在工作以外也積極通過專業知識傳播生態環境保護的重要性，充分展現了光大環境員工的風采。



Upholding  
SAFETY OPERATION,  
enhancing  
QUALITY OF SERVICES

堅守**安全運營**  
提升**服務品質**

SAFETY CULTURE  
安全文化

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**S**afety culture is of utmost importance to the Group. We have implemented a Safety Management System that strives to provide employees with a safe working environment and avoid occupational injuries. At the same time, we actively promote safety education to raise employees' awareness on safety issues. With this two-pronged approach, we try to prevent accidents before they happen, so as to protect employees and promote public health and safety.

### Safety Management System and Policies

Our Group has implemented the ESHS Management System and has established standard operating procedures and on-site work checklists for all projects to ensure the safety of the working environment, protect employees, third-party contractors and subcontractors working on-site from occupational injuries, and to maintain public safety. Meanwhile, the project companies in each business sector have set up customised emergency plans to manage the potential risks of different scopes and management processes in the plants, ensuring the safety management of the project companies and neighbouring communities. The emergency plans are also regularly adjusted and improved to reflect actual needs according to the evaluation mechanism. The Group has also formulated management systems such as the *Regulations on the Filing and Assessment Management of Safety and Environmental Management Institutions and Personnel* to improve the level of safety management by strictly establishing preventive mechanisms and standardising production practices.

In order to improve management proficiency, the Group has set up a Safety and Environmental Management Committee that covers the four levels of headquarters, business sectors, regional centres and project companies, thus built up a "four-in-one" safety and environmental management system. It has also established a four-level safety and environmental management model, which includes a sound safety and environmental management department at each level of the headquarters, business sector, regional centres, and project companies. The Safety and Environmental Management Committee has decision-making powers. It is responsible for regulating, supervising, and leading the implementation of environmental and safety work in each business sector of the Group, and holds regular meetings every year to review the Group's ESHS management system. At the same time, we encourage employees of all levels to give suggestions on improving the ESHS management system, as well as the safety systems and measures in operation, to their supervisors at any time. The system also protects employees who report safety risk from fear of retaliation, so as to ensure that no safety accidents would be caused by the failure of reporting.

**安**全文化對本集團至為重要。我們落實安全管理體系，致力為員工提供安全的工作環境、避免職業性傷害；同時，我們積極推廣安全教育與宣傳以提高員工的安全意識，透過雙管齊下的方式達到防患於未然，以維護員工及公眾的健康與安全。

### 安全管理體系及制度

本集團全面實施ESHS管理體系，為所有項目建立了標準操作流程和現場工作檢查表，以確保工作環境的安全、保障僱員、第三方承包商及分包商駐場工人免受職業性傷害，並同時維護公眾安全。同時，各業務板塊的項目公司均設有專門的應急預案，對應廠區不同範圍和管理流程的潛在風險，為項目公司和鄰近社區的安全管理把關。應急方案亦會按評估機制定期按照實際需要作出相應的調整及改進。本集團亦制定了《關於安全與環境管理機構及人員備案、考核管理的規定》等管理制度、嚴格建立預防機制，規範生產行為，全面提升安全管理水平。

為提升管理效能，本集團建立了總部、業務板塊、區域中心及轄屬項目公司四個主要層面的安全與環境管理委員會，搭建「四位一體」的安全與環境管理體系；建立健全的總部、業務板塊、區域中心及項目公司的安全與環境管理部，搭建了「四級聯動」安全與環境管理模式。安全與環境管理委員會具有決策權，專責重點規範、監督、督導集團各業務板塊環境及安全工作的實施，並每年定期召開會議檢討集團的ESHS管理體系。同時，我們更鼓勵各階級的員工們隨時對上級提出對ESHS管理體系、以及運營中的安全制度及措施的改善建議。體系亦保障舉報安全風險的員工毋須畏懼報復，以確保不會因知情不報的情況引致安全事故。



In order to identify and eliminate occupational hazards and risks as early as possible, we have formulated the *ESHS Audit Management Standards* to implement ESHS on-site audits of project companies in each business sector of Everbright Environment, so as to review the performance of the project companies in terms of ESHS, and to determine if preventive and corrective measures for ESHS performance on site are required. Except for solar energy and wind power projects, which conduct internal ESHS on-site audits every two years, all other operating and under-construction projects under the Group conduct annual internal ESHS on-site audits.

為及早識別及消除職業危害及風險，我們制定了《ESHS審核管理標準》，實施光大環境各業務板塊項目公司的ESHS現場審核、審查項目公司在ESHS方面的績效表現，並確定是否需要對項目公司現場的ESHS表現採取預防及整改措施。除了光伏發電及風電項目每兩年進行一次內部ESHS現場審核外，本集團旗下所有其他的運營及在建項目均會每年進行一次內部ESHS現場審核。

Everbright Environment's project management and environmental management department, as well as the operation and environmental management departments of each sector may also conduct unscheduled on-site assessments on the ESHS performance of project companies. The scope of the audit covers the environment (such as pollution discharge, temporary storage of hazardous waste), safety (such as fire services design, vehicle use), occupational health (such as occupational hazards, annual body check), and social responsibility (such as supplier screening, charitable activities), where risk factors are categorised as high, medium and low based on its severity and impact. The ESHS supervisory department of regional centres are responsible for sending feedbacks from the audit report to the project companies, as well as follow up with the rectification, in order to minimise occupational hazards and risks. The ESHS supervisory department of regional centres also needs to summarise the audit conclusions and the rectification items found from all project companies and to report them to the sector's operation and environmental management department, which is responsible for the analysis and summary to further improve the safety management of the Group.

We have also formulated the *ESHS Accidents, Incident Reporting, Investigation and Management Standards* to establish the procedures for responding to and follow up on accidents. All accidents are categorised into level one to three according to its severity and impact. The most serious level one accidents must be reported to Everbright Environment's Safety and Environmental Management Committee, which is responsible for overseeing the investigation; the remaining accidents must be reported to the operation and environmental management department of the respective business sector, which will then submit investigation reports to Everbright Environment's project management and environmental management department (for level two accidents), or the project company's manager and the ESHS supervisory department of regional centres (for level three accidents). The investigation will include the cause of the accident and related risks, accident prevention and rectification measures, and summaries of lessons learnt for safety production management and other topics, so as to prevent the recurrence of accidents.

光大環境項目管理及環境管理部、以及各板塊運營及環境管理部亦有可能對項目公司的ESHS表現進行不定期現場考核。審核範圍涵蓋環境（例如污染排放、危險廢物暫存）、安全（例如消防設計、車輛使用）、職業健康（例如職業病危害因素、年度體檢）及社會責任（例如供應商篩選、公益活動），根據嚴重性及影響評定低、高、中風險因素。區域中心ESHS主管部門負責將審核報告反饋予項目公司，同時跟進後續整改情況，以盡可能減少職業危害及風險。區域中心ESHS主管部門亦需要將所有項目公司的審核結論及發現的整改項目匯總上報至板塊運營及環境管理部，由該部門負責分析匯總，以進一步完善集團的安全管理。

我們又制定了《ESHS事故、事件匯報、調查管理標準》，確立應對意外事故的流程及後續跟進。我們根據事故的嚴重性及影響，將各類事故分成一至三級。最嚴重的一級事故必須上報至光大環境的安全與環境管理委員會，並由委員會負責監督調查工作；其餘事故則須上報至所屬業務板塊的運營及環境管理部，其後由該部門向光大環境項目管理及環境管理部（二級事故）或項目公司領導和區域中心ESHS主管部門（三級事故）提交調查報告。調查內容包括事故發生原因及相關風險、事故防範和整改措施、總結包括安全生產管理方面的教訓等，以防止事故再次發生。

The Group has always insisted on designing and constructing projects with the highest safety standards, and has continuously increased investment in project safety to ensure safe construction. The Group has a well-established system of construction rules and regulations. Through the implementation of diverse safety and environmental specified inspections and assessments for constructing projects, the Group improves the level of standardised management at construction sites, while at the same time strengthens the management and assessment of construction parties and suppliers, as well as time planning, etc. The Group has also signed “Letters of Responsibility for Construction Unit Safety” with the construction contractors to promote the principle of “Everyone Is a Safety Officer and Should be Responsible for Safety”.

Meanwhile, the Group has been actively implementing the internationally certified OHSAS 18001/ISO 45001 Occupational Health and Safety Management System in its operating project companies.

### Pandemic Prevention and Control Management

In 2020, in the face of the difficult situation of the Pandemic, the Group established corresponding leading groups for joint Pandemic prevention and control at the levels of company headquarters, business sector, and project company, thus forming a three-level management Pandemic prevention and control system. A Pandemic prevention and control system, resumption guidelines, and emergency plans are also introduced for constructing projects. The management and department heads held dedicated weekly meetings to study various Pandemic prevention work, and formulated and implemented strict prevention and control measures, ensuring the safety and health of employees and the normal operations of projects, as well as achieving zero infection in the plant workplace.

本集團一直堅持以最高的安全標準設計及建設項目，並不斷加大工程項目安全投入，確保安全施工。本集團訂立完善的工程建設規章制度。通過對在建工程項目開展多元化的安全與環境專項檢查和考核工作，提升工程現場標準化管理水平，同時加強對施工方、供應商的管理與考核，科學編製工期計劃等。本集團更與施工單位簽訂「施工單位安全責任書」，提倡「人人都是安全員、人人都為安全負責」的原則。

本集團亦積極於運營項目公司推行獲國際認證的OHSAS 18001/ISO 45001職業健康和安全管理體系。

### 疫情防控管理

二零二零年，面對新冠疫情形勢嚴峻，本集團在公司總部、業務板塊、項目公司層面分別成立了疫情聯防聯控領導小組，形成了三級管理的疫情防控體系，並出台了工程建設疫情防控制度及復工指引及應急預案。管理層與部門負責人每週召開專題會議研究各項防疫工作，制定並落實了嚴格的疫情防控措施，保障了員工安全健康及各項目正常生產，成功實現了工作廠區「零感染」。



During the Pandemic, employees' health management and strict disinfection are an important part of the Group's Pandemic prevention and control work. Our project companies have also implemented a series of Pandemic prevention and safety measures, including arranging disinfection and sterilisation at public areas of the dormitory and office areas in the morning and afternoon, measuring the body temperature of employees entering and leaving the factory to allow real-time tracking of their physical conditions. We strive to support our employees in terms of Pandemic control and to demonstrating Everbright Environment's care and protection for employees.

疫情期間，所有員工的健康管理、嚴格規範的消毒是本集團疫情防控工作的重要一環。我們的項目公司亦分別實施了一系列的防疫安全措施，包括每天安排專人對宿舍公共區域、辦公區域上下午消毒殺菌，對進出廠門口的員工進行測量體溫，實時跟蹤他們的身體狀況，為員工築起防疫後盾，使廣大員工感受到光大環境的關愛與守護。



For safety reasons, each project company encourages employees to bring their own lunch after resuming work. Yet, as many employees responded that it is inconvenient for them to bring their own lunch, we immediately resumed operations in the cafeteria, with dedicated personnel to arrange epidemic prevention and control. For example, we adopted a segregated-hours system to distribute meals so as to avoid the gathering of people. The project companies' canteens are responsible for meeting employees' dietary needs and ensuring dining safety, so that employees can enjoy their meal at ease.

為安全起見，各項目公司更鼓勵員工復工後自帶午飯，但有鑒於很多員工反映不方便自帶午飯，我們亦緊急著手食堂復工工作，派專人進行疫情防控安排，例如採取錯時制度發放飯菜，避免人員聚集。公司食堂亦擔負著滿足員工飲食需求、確保用餐安全的重任，使員工安心用餐。

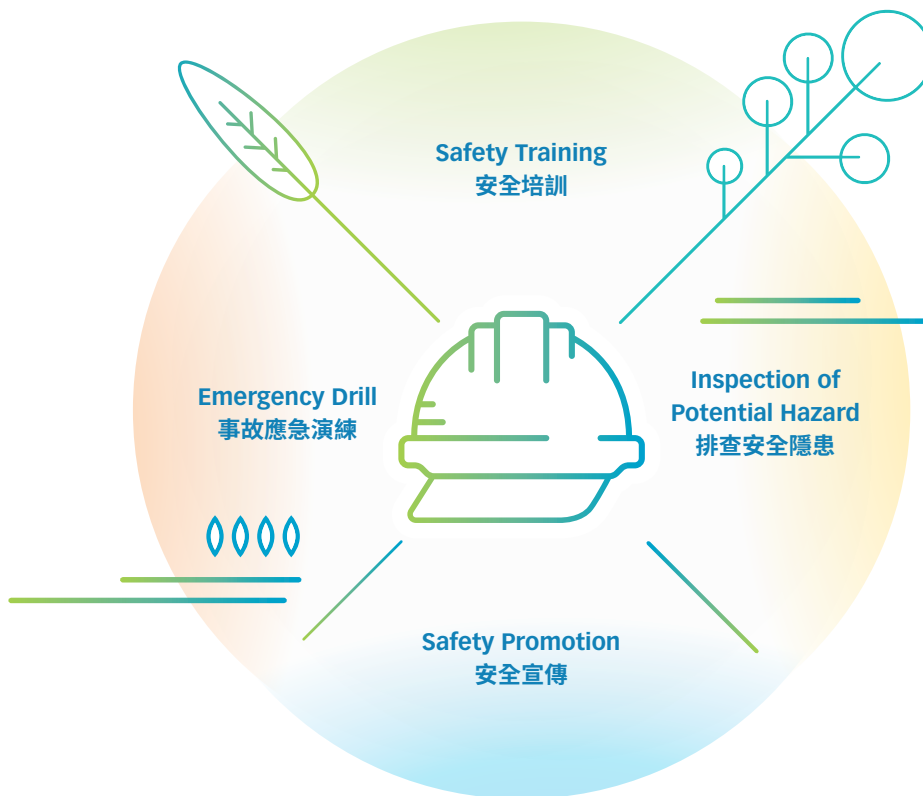
In addition to taking care of employees' dining, the Group has also started a "Cloud Classroom" which promotes epidemic prevention knowledge to help employees obtain the necessary prevention protocols and eliminate anxiety. We have also set up an examination for *Prevention of COVID-19 Knowledge* to enhance employee's confidence in the fight against the Pandemic.

除了照顧員工的飲食，本集團亦開設防疫知識「雲課堂」，推廣疫情防護知識網絡課堂，讓員工掌握必要的防護技能，減少人員恐慌心理。我們更開設《預防新型肺炎知識試題》考試，增強員工抗疫的信心。

## Establishing Safety Culture and Securing Operational Safety

The Group has set a long-term goal in 2018 and is committed to maintaining the work injury rate at less than 0.25 per year within five years (2018-2022). During the Reporting Period, the Group had continued to increase its efforts to carry out daily inspections of safety, environmental and occupational health, to inspect potential safety hazards, ensuring that all projects under construction and operation strictly implement the safety systems. The Group also holds regular emergency drills to make sure that workers are equipped with the skills to handle and deal with crises.

### Key Safety Actions



### "Safety Production Month" Activities in 2020

In 2020, we continued to organise the annual "Safety Production Month" and actively promoted employees to improve their safety knowledge and skills through special activities such as safety promotions, trainings, seminars and skills competitions which effectively prevented safety incidents.

## 建立安全文化 保障安全運營

本集團已於二零一八年制定了長期目標，致力將工傷率於五年間（二零一八至二零二二年）每年維持在0.25或以下。本集團於報告期內繼續加大力度開展安全、環境與職業健康的日常檢查工作，排查安全隱患，確保各在建及運營項目嚴格執行各項安全制度，並定期舉辦應急演習和演練，務求提高員工應對危機時的處理技巧。

### 安全行動重點

### 二零二零年「安全生產月」活動

二零二零年，我們繼續舉辦一年一度的「安全生產月」，積極透過安全宣傳、各類培訓、研討會、技能比武等特色活動，推動員工積極投入增進安全知識及技能，為有效防止安全事故提供了有力保障。

Emergency Drills 事故應急演練

### Fire Drills Organised in Can Tho Waste-to-energy Project 芹苴垃圾發電項目舉辦聯合消防演習



With the aims of strengthening employees' abilities to respond to fires and improving the project company's emergency management capability, the Can Tho Waste-to-energy Project organised large-scale fire drills with different local government units (including fire stations, public security bureaus, and hospitals, etc.) with the aims of improving employees' fire safety awareness and the overall emergency handling capability, as well as ensuring that the fire system is well functioning, the fire exits and evacuation routes are unblocked, and the backup support is sufficient, as well as strengthening the cooperation with external emergency rescue teams.

為加強員工應對火災的能力以及提高企業應急處置能力，芹苴垃圾發電項目與不同當地政府單位（包括消防局、公安局以及醫院等）組織了大型消防演練，旨在提高項目公司員工的消防安全意識以及整體應急響應能力，並確保消防系統正常運行，消防通道和逃生通道暢通，後勤保障充足，加強與對外救援團隊應急救援聯絡的合作。

### Flood Control Emergency Drills Conducted in Pei County Waste-to-energy Project 沛縣垃圾發電項目進行防洪防汛應急演練活動



The Pei County Waste-to-energy Project carried out emergency drills for flood prevention. Flooding due to sudden rainstorms was simulated on site, providing a comprehensive drill that covers the process from event occurrence, handling, and unblocking rainwater pipeline network in the plant. This greatly enhanced employees' awareness on flood prevention, control and avoidance, as well as their ability to respond to floods.

沛縣垃圾發電項目進行了防洪防汛應急演練活動，現場模擬因突降暴雨發生的水災事件，演練了從事故發生、處理至廠區雨水管網暢通的整個過程，大大增強了員工的防災、抗災、避災的意識以及應對汛的應急反應處理能力。

### “Biogas Poisoning Emergency Rescue Drill” Activity Conducted in Suqian Food Waste Treatment Project 宿遷餐廚垃圾處理項目進行「沼氣中毒應急救援演練」活動

Suqian Food Waste Treatment Project conducted the “Biogas Poisoning Emergency Rescue Drill” activity for all employees. With preliminary emergency rescue equipment and first aid trainings as the basis, trainees closely cooperated with each other, followed the command, and correctly used various emergency rescue equipment to rescue poisoned personnel. This training strengthened the safety skills and knowledge of employees and improved their emergency handling abilities.

宿遷餐廚垃圾處理項目為全體員工舉辦了「沼氣中毒應急救援演練」活動。有了前期的應急救援器材及急救知識培訓作為基礎，演練人員在是次演練活動中密切配合，聽從指揮，正確使用各種應急救援器材，搶救中毒人員，透過實踐，強化了基層員工的安全技能和知識和提升其應急救援能力。



### Limited Space Working Safety Emergency Drills Launched in Xinyi Waste Water Treatment Project 新沂污水處理項目開展有限空間作業安全事故應急演練

In order to familiarise the employees of waste water treatment plant with the working procedures to avoid accidents and emergency handling techniques, the Xinyi Waste Water Treatment Project launched an emergency drill for safety accidents in a limited space. The scene simulated an accident in a confined space. The trainees had to initiate emergency procedures and quickly enter the well to rescue the trapped person, and perform self-rescuing measures such as cardiopulmonary resuscitation. During the drill, observers watched and made records to single out the deficiencies of the drill and the precautionary steps to improve the rescue.

為了讓污水處理廠的員工熟悉掌握避免事故發生的工作程序和事故應急救援技巧，新沂污水處理項目展開了一場有限空間作業安全事故應急演練。現場模擬在受限空間發生安全事故，演練人員需啟動應急程序，迅速下井救出受困人員，以及在現場進行心肺復甦等自救措施，演練期間更有觀摩人員觀看以及作出記錄，指出演練的不足之處以及完善救援的注意事項與步驟。





### Car accident Emergency Drills Conducted in Weifang Waste-to-energy Project

濰坊垃圾發電項目開展車輛事故聯合應急救援演練



In order to better monitor vehicles at the unloading platform and to reduce operational risks, Weifang Waste-to-energy Project collaborated with Weifang City Garden Environmental Sanitation Service Centre to hold a joint emergency rescue drill for unloading platform vehicle accidents.

為做好卸料平台車輛監管，降低運行風險，濰坊垃圾發電項目協同濰坊市園林環衛服務中心組織開展了卸料平台車輛事故聯合應急救援演練。

After the drill, Weifang Waste-to-energy Project further analysed the problems and shortcomings of the existing emergency plan, thus supplemented and improved it, striving to make in-depth optimisations on the basis of the original

achievements to eliminate potential safety hazards and ensuring stable operational productions.

演練結束後，濰坊垃圾發電項目更分析了當前應急預案中存在的問題及不足，對應急救援預案做了補充及完善，力求在原有成果的基礎上進行深入優化，確保在今後的工作中消除安全隱患，穩定運營生產。

### Safety Hazards Inspection 排查安全隱患

### “Everyone is a Safety Officer Activity” Launched in Shengzhou Waste-to-energy Project

嵯州垃圾發電項目開展「人人都是安全員活動」

In order to promote “Safety Production Month” in a nationwide level, Shengzhou Waste-to-energy Project launched the “Everyone is a Safety Officer” event in July 2020, implementing the theme of “eliminating safety hazards and strengthening safety lines”. The employees eliminated a potential safety hazard every day and prevented other construction workers from habitual actions that violate regulations, in order to improve the safety and civilised construction level of the project. Employees also reported the image data before and after the potential hazard was eliminated to the Safety and Environmental Department, which were then used by the company to select the “Safety Star”.

為了深入宣傳全國「安全生產月」，嵯州垃圾發電項目組織在二零二零年七月開展「人人都是安全員活動」，貫徹「消除事故隱患，築牢安全防線」的主題。員工透過每天在現場消除一條安全隱患、制止其他施工人員一次習慣性違章作業等行動，以提高項目安全文明施工水平，並將安全隱患消除前後的影像資料上報安全環境部，公司以此為依據評選安全之星。



### Maintenance Work Conducted in Guoyang County Biomass Electricity and Heat Cogeneration Project

渦陽生物質熱電聯供項目開展檢修工作

The Guoyang County Biomass Electricity and Heat Cogeneration Project has carried out a biomass unit maintenance work that lasted for three days and nights. During the maintenance period, a total of five professional overhaul and maintenance work were completed for boilers, steam turbines, electric steam, instrument control, and chemical water, and a total of 66 maintenance work were completed for the pretext reservation for ultra-low emissions transformation, small boiler water side, and the flue gas side. This strengthened the safety red line awareness, enhanced emergency handling capabilities, and ensured the operation safety and stability of the unit.

渦陽生物質熱電聯供項目開展了為期「三天三夜」的生物質機組檢修工作。檢修期間一共完成了鍋爐、汽機、電汽、儀控、化水五個專業的檢修維護，以及超低排放改造藉口預留、小鍋爐水側、煙汽側對接等66個項目的檢修，以強化安全紅線意識，增強應急能力，確保機組安全穩定運行。

**“Disaster Prevention and Mitigation Promotion Week” Organised by Environmental Water**  
環保水務舉辦「防災減災宣傳周活動」



Environmental water held the “Disaster Prevention and Mitigation Promotion Week” in May 2020, aiming to raise employees’ awareness and knowledge on disaster prevention and mitigation, and enabling them to master the basic evacuation and rescuing skills.

環保水務於二零二零年五月舉辦了「防災減災宣傳周活動」，旨在提高員工防災減災安全意識和知識，使他們掌握逃生避險和自救互救的基本技能。

### Safety Trainings

By providing various training activities that are rich in content, the Group aims to increase employees’ cognitions and thinking about safety management, lifting safe production awareness and ensuring safe, systematic work. Certain projects have also established safety education experience areas, including fire simulation, VR experience for operating accidents, safety knowledge competition, safety test trainings, etc. Through actual simulation experiences, the Group strengthens employees’ understanding of various common accidents. Compared with traditional safety trainings, this also saves training time and could improve the safety awareness of all employees more effectively.

The Group also regularly collects feedback from employees on training activities and evaluates the content and effectiveness of the training activities in order to make timely improvements.

### 安全培訓

通過提供形式多樣、內容豐富的培訓活動，本集團期望提升員工對安全管理工作的認知與思考，提高安全生產意識，確保安全工作有序開展。個別項目更建立了安全教育體驗區，包括消防模擬、作業過程事故的VR體驗、安全知識搶答、安全考試培訓等內容，透過實際情境體驗，加深各級員工對各類常見事故的印象和理解，相對於傳統安全培訓，更大大節省了培訓時間和更有效提高全員安全意識。

本集團更定期收集員工對培訓活動的反饋意見，評估培訓活動的內容及成效，以便適時作出改善。

The Group's health and safety trainings cover the following:

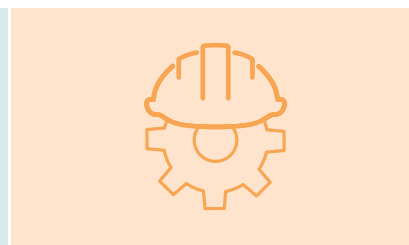
本集團為員工提供的健康與安全培訓涵蓋以下內容：



Health and Safety Laws  
and Regulations  
健康與安全方面的  
法律法規



ESHS Management System  
ESHS管理體系



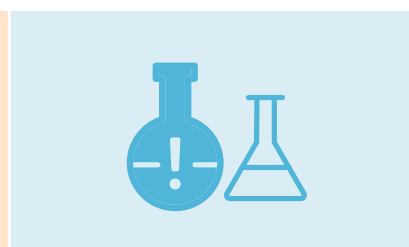
Safe Use of  
Equipment  
設備裝置的安全使用



Identification and Control of  
Sources of Hazards  
危險源的辨識和  
控制措施



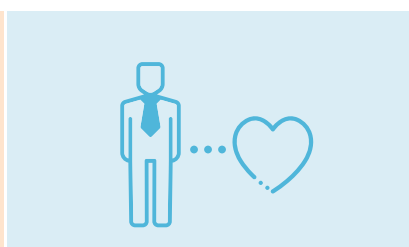
Risk Control and Troubleshoot by  
Risk Levels  
風險分級管控和  
隱患排查



Procurement and  
Storage of  
Hazardous Items  
採購及貯存危險物品



Accident  
Contingency Plan  
事故應急管理



Occupational Health  
Management  
職業健康管理



First Aid  
急救

We also provide training to third-party contractors and subcontractors working on-site, covering ESHS management systems and accident contingency management.

我們亦向第三方承包商及分包商駐場工人提供培訓，內容涵蓋ESHS管理體系及事故應急管理等。



### Occupational Health and Safety Statistics in 2020 二零二零年職業健康與安全數據統計

In 2020, the work injury rate for the Group's employees was **0.08**, a **55.56%** decrease compared to 2019.

二零二零年，本集團員工的工傷率為**0.08**，較二零一九下降約**55.56%**。

### Total working hours 工作總時數

Employees of Everbright Environment  
光大環境員工

**24,891,864** hours  
小時

Third-party contractors and subcontractors work  
第三方承包商及分包商駐場工人

**24,924,512** hours  
小時

### Employees 員工

Number of work-related fatalities 因工死亡個案	Rate of work-related fatalities <sup>(1)</sup> 因工死亡率 <sup>(1)</sup>	Number of high-consequence work-related injuries (excluding fatalities) <sup>(2)</sup> 嚴重工傷個案 (不包括死亡個案) <sup>(2)</sup>
<b>0</b>	<b>0</b>	<b>0</b>
Rate of high-consequence work-related injuries (excluding fatalities) <sup>(3)</sup> 嚴重工傷率 (不包括死亡個案) <sup>(3)</sup>	Number of work-related injuries <sup>(4)</sup> 工傷個案 <sup>(4)</sup>	Rate of work-related injuries <sup>(5)</sup> 工傷率 <sup>(5)</sup>
<b>0</b>	<b>10</b>	<b>0.08</b>
Days of absence from work due to work-related injury 因工傷缺勤日數	Number of occupational disease cases 職業病個案	Rate of occupational disease-related fatalities 因職業病死亡個案
<b>582</b>	<b>0</b>	<b>0</b>

### Third-Party Contractors and Subcontractors Working On-site<sup>(6)</sup> 第三方承包商及分包商駐場工人<sup>(6)</sup>

Number of work-related fatalities 因工死亡個案 <b>1</b>	Rate of work-related fatalities <sup>(1)</sup> 因工死亡率 <sup>(1)</sup> <b>0.01</b>	Number of high-consequence work-related injuries (excluding fatalities) <sup>(2)</sup> 嚴重工傷個案 (不包括死亡個案) <sup>(2)</sup> <b>0</b>
Rate of high-consequence work-related injuries (excluding fatalities) <sup>(3)</sup> 嚴重工傷率 (不包括死亡個案) <sup>(3)</sup> <b>0</b>	Number of work-related injuries <sup>(4)</sup> 工傷個案 <sup>(4)</sup> <b>5</b>	Rate of work-related injuries <sup>(5)</sup> 工傷率 <sup>(5)</sup> <b>0.04</b>
Days of absence from work due to work-related injury 因工傷缺勤日數 <b>175</b>	Number of occupational disease cases 職業病個案 <b>0</b>	Rate of occupational disease-related fatalities 因職業病死亡個案 <b>0</b>

Remarks:

- (1) Rate of work-related fatalities = (Total number of fatalities as a result of work-related injury/Total working hours) × 200,000.
- (2) High-consequence work-related injuries (excluding fatalities) refer to work-related injuries that result in an injury from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within 6 months.
- (3) Rate of high-consequence work-related injuries (excluding fatalities) = (Total number of high-consequence work-related injuries (excluding fatalities)/Total working hours) × 200,000.
- (4) Work-related injuries also include work-related fatalities and high-consequence work-related injuries.
- (5) Rate of work-related injuries = (Total number of work-related injuries/Total working hours) × 200,000.
- (6) Excludes construction workers of projects under construction.

附註：

- (1) 因工死亡率= (因工傷所造成的死亡個案總計 / 工作總時數) × 200,000。
- (2) 嚴重工傷 (不包括死亡個案) 是指導致工作者無法或難於六個月內恢復至受傷前健康狀態的工傷。
- (3) 嚴重工傷率 (不包括死亡個案) = (嚴重工傷個案總計 (不包括死亡個案) / 工作總時數) × 200,000。
- (4) 工傷亦包含因工死亡及嚴重工傷。
- (5) 工傷率 = (工傷個案總計 / 工作總時數) × 200,000。
- (6) 不包括在建項目的建築工人。

Building a  
**SUSTAINABLE ENVIRONMENT**  
and giving back to  
**THE SOCIETY**

創造**可持續環境**  
回饋**社會大眾**



**COMMUNITY INVOLVEMENT**  
**社區參與**

Everbright Environment adheres to the corporate pursuit of “To Create Better Investment Value and Undertake More Social Responsibility”, implements the *Environmental and Social Management System* and proactively takes up the responsibilities of a corporate citizen. We pay close attention to the needs of all social communities and maintain a found and long-term relationship with the communities from four perspectives, i.e., quality education, community engagement, poverty alleviation and climate action. We believe in the philosophy of responsible operation and actively promote a comprehensive development in local communities so as to give back to the stakeholders, build a more inclusive society, increase the efficiency of resource utilisation, and strengthen communities’ resilience against climate change and natural disasters. During the Reporting Period, we primarily took care of the stricken areas due to the Pandemic and stuck to our normal business operation to resist the Pandemic, to stand with the local communities to weather the storm together.

光 大環境秉持「創造更好投資價值，承擔更多社會責任」的企業追求、落實《環境與社會管理制度》，積極履行良好企業公民的責任。我們時刻關注社會各社群的需要，從優質教育、社區共融、扶貧濟困、氣候行動多方面入手，與社區維持緊密、長遠的關係。我們堅守負責任的經營理念，在業務運營中積極促進當地社區的綜合發展以回饋社會不同的持份者，建立更共融的社會、確保資源更有效被利用、加強社區抵禦氣候變化和自然災害的能力。報告期內，因應疫情，我們重點關注受災區域、同時堅持項目運作，與各地民眾風雨同舟。



**Battling Against the Pandemic**  
抗疫前線



**Community Engagement**  
社區共融



**Quality Education**  
優質教育



**Poverty Alleviation**  
扶貧濟困



**Climate Action**  
氣候行動

## Cumulative Social Contributions

### 累計社會貢獻

#### Since 2017

#### 自二零一七年起

Everbright Environment's projects received  
光大環境的項目共接待

**564,699** visitors  
參觀人士

**28,972** batches of visitors  
批次

Volunteer services of  
義工總時數

**6,395** hours  
小時

Total charitable donations (cash) of  
捐款總金額 (現金)

HKS  
港幣 **55,451,660** 元

Participated in  
參與了

**457** batches of employees  
批次

#### Since 2013

#### 自二零一三年起

Ex-gratia funds and financial aids accumulatively delivered by  
Everbright Environmental Protection Charitable Foundation  
光大環保愛心基金累計發於慰問金及救助金為

approximately RMB  
約人民幣 **8,500,000** 元

Total beneficiaries of Everbright Environmental  
Protection Charitable Foundation  
光大環保愛心基金累計受益人為

**1,778** people  
人次

#### Since 2011

#### 自二零一一年起

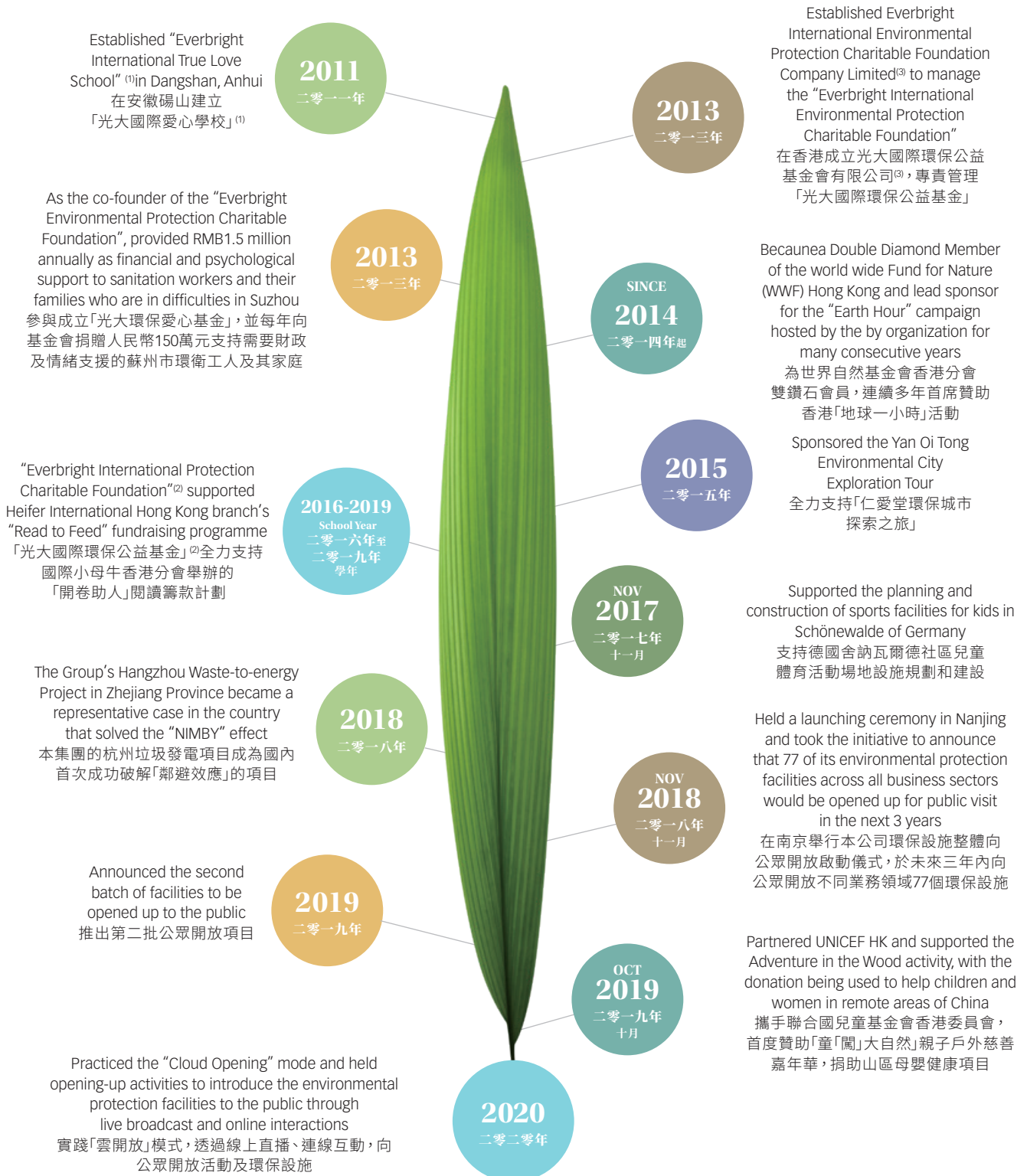
Anhui Dangshan No. 5 High School<sup>(1)</sup> has accumulatively provided educational opportunities for  
安徽蕩山縣第五中學<sup>(1)</sup>已累計提供教育機會予

**5,760** students  
學生

<sup>(1)</sup> The School was formerly known as "Everbright International True Love School".  
該學校前稱「光大國際愛心學校」。



## Key Activities 重點活動里程碑



Notes:

- (1) The school has been renamed as Anhui Dangshan No. 5 High School.
- (2) The foundation has been renamed as Everbright Environment Charitable Foundation since September 2020.
- (3) The Company has been renamed as Everbright Environment Charitable Foundation Company Limited since September 2020.

附註：

- (1) 該學校已更名為安徽蕩山縣第五中學。
- (2) 該基金會已於2020年9月更名為光大環境慈善基金會。
- (3) 該公司已於2020年9月更名為光大環境慈善公益基金會有限公司。

## Battling Against the Pandemic

Despite the global outbreak of the Pandemic in 2020, Everbright Environment fully utilised its competitive edge in the industry to make sure all project companies maintained normal operations, so as to treat municipal and medical waste while protecting the public's health and safety. Realising that the waste water, medical and domestic waste produced in hospitals and quarantine areas within the pandemic areas were likely to contain a high level of the virus, Everbright Environment, as a leading enterprise in environmental protection, shouldered the responsibilities and communicated with the local institutions for disease control and prevention to make sure safe and proper treatment of the waste and waste water, and fought at the anti-Pandemic forefront.

Everbright Environment not only has a number of hazardous waste treatment projects being designated as local emergency medical waste disposal units, but also has more than 100 household waste terminal treatment facilities all over the country, which took up the responsibility for the treatment of household waste from hospitals and disinfected medical waste, securing the last-ditch for the Pandemic prevention and control.

While ensuring public health and safety during the Pandemic, Everbright Environment also actively performed our social responsibility. We raised resources through various channels, and donated money and supplies, which worth RMB3.15 million in total, to the local healthcare and anti-Pandemic departments, charity foundations, hospitals, environmental and hygienic institutions and other units, providing solid support for the fight against the Pandemic. At the same time, all sectors and project companies under Everbright Environment made corporate and individual donations to the severely affected areas and project areas with the determination to overcome the Pandemic together with the local residents.

## 抗疫前線

儘管疫情於二零二零年衝擊全球各國，面對疫情，光大環境充分發揮自身行業優勢，旗下各項目公司在疫情爆發期間堅持正常運作，處理生活、醫廢垃圾，保障公共衛生安全。各地疫區專診醫院和疑似病例隔離區產生的醫療垃圾、生活垃圾及生活污水中，很可能含有大量病毒，光大環境作為環保領軍企業，及時溝通各地所屬防控指揮部、應急辦，確保相關垃圾和污水得到安全妥善處理，積極奮戰在抗疫前線。

光大環境不僅有多個危廢處置項目被指定為當地的應急醫療廢物處置單位，還有遍佈全國的百餘個生活垃圾終端處置設施，承擔著處置醫院生活垃圾和消毒後醫療垃圾的任務，為疫情防控守住最後一道關。

在保障疫情期間公共環境衛生安全的同時，光大環境積極履行社會責任，多方籌備資源，向有關地區衛生防疫部門、慈善基金會、醫院、環衛機構等單位積極捐款捐物，價值總計約人民幣315萬元，為抗擊疫情提供有力援助。與此同時，光大環境各板塊和各項目公司紛紛組織捐款，以單位、個人等多種形式向重點疫區和項目所在地捐款，與各地民眾一道，守望相助，共克時艱。

During the most urgent month after the outbreak of the Pandemic, Everbright Environment:  
疫情爆發最緊急的一箇月中，光大環境：



had  
有

**>200** 個

projects persisting in normal operation  
項目堅持正常生產

processed about  
處理約

**2.07** million tonnes  
百萬噸

of household waste  
生活垃圾

processed about  
處理約

**1,523** tonnes  
噸

of household waste from  
designated hospitals and quarantine areas  
定點醫院及隔離區生活垃圾

processed about  
處理約

**4,030** tonnes  
噸

of medical waste  
醫廢垃圾

processed about  
處理約

**87** tonnes  
噸

of used facial masks  
廢口罩

treated about  
處理約

**320,000** m<sup>3</sup>  
立方米

of leachate  
滲濾液

treated about  
處理約

**123.06** million m<sup>3</sup>  
百萬立方米

of waste water  
污水

supplied about  
提供上網電量約

**681.2** million kWh  
百萬千瓦時

of on-grid electricity  
上網電量

Community Involvement  
社區參與



Pei County Waste-to-energy Project donated  
Pandemic prevention supplies to Pei County  
Environmental Hygiene Office  
沛縣垃圾發電項目向沛縣環境衛生管理處捐贈防  
疫物資



Linshu Waste-to-energy Project donated RMB20,000  
to the Red Cross of Linshu County  
臨沭垃圾發電項目向臨沭縣紅十字會捐款人民幣  
2萬元



Xiao County Integrated Biomass and Waste-to-  
energy Project expressed consolation to the front-line  
medical personnel in Dingli Town  
蕭縣生物質及垃圾發電一體化項目慰問蕭縣丁裡  
鎮疫情防控一線人員



Tengzhou Waste-to-energy Project donated funds  
and supplies to the surrounding villages and towns  
滕州垃圾發電項目向周邊村鎮捐款及捐物

## Case Sharing 個案分享

**Nanjing Liuhe Project Received Municipal Waste Water from  
Liuhe District's Centralised Quarantine Area**

南京六合項目接收六合集中隔離觀察點產生的生活污水

The Pandemic prevention and control situation was at stake in the Liuhe District in Nanjing and the neighbouring Jiangbei New District during February 2020. The Group's Nanjing Liuhe Waste Water Treatment Project ("Nanjing Liuhe Project") received the first batch of municipal waste water from the quarantine areas on 10 February 2020. In order to ensure effective pandemic prevention and compliance with relevant discharge standards, Nanjing Liuhe Project implemented five control measures, including quarantine measures for the entire project, multiple daily disinfection and body temperature measurement; priority on the distribution of anti-Pandemic disinfectants for Nanjing Liuhe Project; inspection and maintenance of equipment; increase of chemicals inventory; and strict requirements on sampling and laboratory staff to wear full personal protective appliances.



二零二零年二月，南京市六合區和臨近的江北新區防控形勢比較嚴峻，而本集團的南京六合污水處理項目（「南京六合項目」）在二零二零年二月十日接收第一批隔離觀察點生活污水。為確保防疫有效與實行達標排放，南京六合項目實行五項管控措施，包括在全廠進行隔離管控、每日多次消毒、測量體溫；將防疫消毒物優先分配給南京六合項目；對設備進行排查和檢修；加大藥劑儲備量；並嚴格要求取樣及化驗人員穿戴全套防護裝備等。

Nanjing Liuhe Project's Pandemic prevention and control measures effectively treated the waste water in a standardised manner and eliminated the risk of secondary pollution.

南京六合項目的防疫管控有效地使接受的污水得到規範處理，杜絕了二次污染的可能性。

Case Sharing 個案分享

**Safe Disposal of Medical Waste  
in Lianyungang Hazardous Waste  
Incineration Project**  
連雲港危廢焚燒項目的醫療廢物安全  
處置工作



Facing the outbreak of the Pandemic, Lianyungang Hazardous Waste Incineration Project (“Lianyungang Project”) promptly established a leading team, launched an emergency plan, added special vehicles, reformulated the transportation routes, and carried out 16 rounds of circular operations every 24 hours to ensure timely reception and treatment of medical waste generated by medical institutions. In view of the Pandemic, all drivers took temperature and wore protective appliances in strict accordance with relevant requirements.

面對疫情爆發，連雲港危險廢物項目（「連雲港項目」）迅速組織成立領導小組，立即啟動應急預案，新增專用車輛，重新制定運輸路線及計劃，每24小時進行十六輪循環作業，確保能夠及時接收和處置各級醫療機構產生的醫療廢物。針對疫情情況，運輸駕駛員嚴格做好體溫檢測和佩戴安全防護裝備。

Lianyungang Project was responsible for the safe and timely treatment of daily medical waste from about 2,000 medical institutions in Lianyungang City. A large number of resources were invested to build a new automatic high-temperature sterilisation process line for the effective treatment of more medical waste. The project company also improved the collection, storage and transportation system, and redeployed transport vehicles for medical waste. In addition to different sterilisation equipment, GPS and HD probe monitoring systems were also equipped to plan for the best transportation route and ensure safe disposal of medical waste within 48 hours, eliminating the possibility of secondary pollution and complying with national standards.

連雲港項目負責整個連雲港市範圍內近2,000家醫療機構日常醫療廢物的安全及時處置工作，投放大量資源新建了一條全自動高溫蒸煮滅菌工藝線，有效處理更大量的醫療廢物，並完善收儲運體系，重新配置醫療廢物運勢車輛，除了配備不同的滅菌設施，亦設配了GPS定位系統以及高清探頭監控系統，規劃最佳運輸路線，確保醫療廢物能在48小時內得到安全處置，杜絕二次污染，達到國家規定的安全排放標準。

Case Sharing 個案分享



**Everbright Environment Offered Full Support to Anti-pandemic Effort in Poland**  
光大環境全力支持波蘭多地抗疫

During the global combat against the outbreak of the Pandemic, Everbright Environment not only performed well in the Pandemic control in China, but also committed to anti-Pandemic effort abroad where its projects are located. In April 2020, Everbright Environment delivered nine batches of urgently needed Pandemic prevention supplies to Poland through its subsidiary in Poland, NOVAGO Sp. z o.o. ("Novago"), with a total value of about RMB230,000. The supplies included masks, forehead thermometers, protective gear sets and other essential anti-Pandemic items, offering substantial support to the local effort in the Pandemic control.

在全球合力抗擊疫情的戰鬥中，光大環境在做好國內疫情防控工作的同時，亦積極投身海外項目所在地抗疫工作。二零二零年四月，光大環境通過位於波蘭的併購項目NOVAGO Sp. z o.o.向波蘭共寄送了9批次包括防護口罩、額溫槍、防護服等緊缺防疫物資，總價值約人民幣23萬元，為當地疫情防控提供必要保障。

**Quality Education**

We firmly believe that the young generations are full of potential to bring the country to a new bright future. Therefore, Everbright Environment has been continuously investing resources to support education, promote social inclusion and cultivate the future generations over the years. The Group has also been committed to raising public environmental awareness and bringing in green technologies to help solidify the foundation of the country's sustainable development.

**優質教育**

作為國家的未來棟樑，我們深信兒童和青少年充滿潛能。因此，光大環境多年來堅持投入資源支持教育工作、推動社會共融，致力栽培下一代。與此同時，我們積極普及環保知識、推廣綠色科技，為祖國的可持續發展作出貢獻。

### Donation for the Construction of Anhui Dangshan No. 5 High School

Quality education is the foundation for sustainable development. Over the years Everbright Environment has been supporting the operation of Anhui Dangshan No. 5 High School, which has provided educational opportunities for accumulatively 5,760 students in rural areas. During the Reporting Period, our 17th batch of volunteer teachers provided teaching support at the school to underprivileged students to give them access to better opportunities.

### Promoting Opening Up of Projects to the Public and Popularising Environmental Protection Education

Everbright Environment continuously utilises its project facilities in different locations as environmental education bases and science popularisation centres, which aims to promote sustainable development and green lifestyle to youngsters and the general public.

The public opening-up events cover primary and secondary schools, universities, local and international market peers, environmental protection organisations and communities. To further enhance the visiting procedures and quality, each project company has formulated policies including *Etiquette Guideline for Visits* and *Safety Guideline for Visits*, and set up a dedicated team managed by the integrated management department together with the production department which is responsible for all project opening-up events.

In 2020, despite the outbreak of the Pandemic, the Group persistently facilitated public visits to our environmental protection facilities under all of the Group's business sectors. Multiple project companies of the Group carried out project opening-up activities through virtual platforms to break the barriers of limitation brought by the Pandemic. These virtual activities aim at advocating environmental protection and sustainable development concepts to the public. During the Reporting Period, the Group's environmental protection projects played an important role in promoting environmental education, environmental science popularisation, circular economy and industrial tourism, with over 110,000 domestic and foreign visitors from all social circles visiting the projects.

### 捐建安徽碭山縣第五中學

優質的教育是創建可持續發展的堅實基礎。光大環境多年來捐助安徽碭山縣第五中學，累計已為5,760名偏遠地區的學生提供教育機會。報告期內，我們的第17批由熱心員工組成的義務教師到愛心學校提供教學支援，希望為有需要的學生提供更好的機會。

### 推動公眾開放，普及環保教育

光大環境持續利用項目公司於各地的設施作為環保教育基地和科普教育體驗中心並推動公眾開放，以增加年輕人和大眾對可持續發展和綠色生活方式的認識。

公眾開放的宣傳面覆蓋中小學生、大專院校、國內外同行企業、環保組織、社會民眾等。為進一步提高參觀接待流程化、標準化水平，各項目公司更先後制定了《參觀接待禮儀準則》、《參觀接待安全須知》等制度規範，成立以綜合管理部為主，生產相關部門為輔的公眾開放日接待小組。

二零二零年，儘管疫情肆虐，本集團仍然堅定地推動旗下各業務板塊環保設施向公眾開放的相關工作。本集團多個項目公司皆透過「線上」平台展開公眾開放活動，打破疫情限制，向公眾推廣及宣傳環境保護、可持續發展等議題。報告期內，本集團旗下環保項目積極承擔環境教育、環境科普、循環經濟及工業旅遊基地的重要角色，共接待國內外各界人士參觀考察超過110,000人次。



## In 2020

二零二零年

Our projects received over  
我們的項目共接待超過

**110,000** visitors  
參觀人士

exceeded  
超過

**7,000** batches of visitors  
批次

a total of  
共有

**25** 個

projects were recognised as “Environmental Education Hubs” or “Science Popularisation and Education Hubs”  
項目獲得「環境教育基地」或「科普教育基地」的稱號

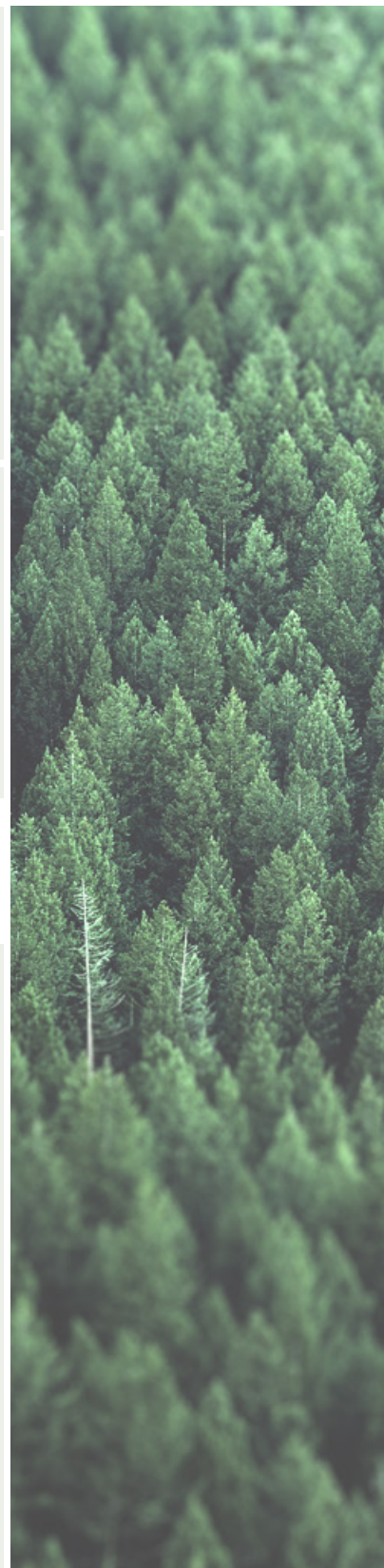
## As at 31 December 2020

截至二零二零年十二月三十一日

The Group had opened up  
本集團已向公眾開放

**102** 個

environmental protection projects to the public  
環保項目



Case Sharing 個案分享

“Cloud Tour” of Everbright Environment’s Environmental Protection Facilities  
「雲遊」光大環境的環保設施

Zoucheng Waste-to-energy Project  
鄒城垃圾發電項目

On 5 June 2020, Jining City in Shandong Province launched a virtual opening up of environmental protection facility to the public through a “Cloud” platform, in celebration of World Environment Day. Zoucheng Waste-to-energy Project (“Zoucheng Project”) made a stunning debut and stood out from the 17 participating environmental protection enterprises, winning the outstanding award.



Zoucheng Project guided the audience to explore the mystery of waste transformation through the webcast journey of environmental protection facilities. The online opening up created a relaxing and pleasant atmosphere for exploring the transformation of household waste, spreading the idea of ecological civilisation, and calling on all walks of life to protect the environment proactively. About 20,000 residents of Jining virtually visited the ecological and environmental protection facilities through the “Cloud Tour”, witnessing and participating in the efforts of protecting the ecology and the environment.

二零二零年六月五日，山東省濟寧市二零二零年環境日宣傳暨環保設施線上開放活動「雲」上啟動。鄒城垃圾發電項目（「鄒城項目」）首場驚艷亮相，並從與會的17家環保企業中脫穎而出，獲得優秀單位評選特等獎。

鄒城項目帶領觀眾通過直播鏡頭開啟線上環保之旅，在輕鬆愉悅的氛圍中探索垃圾變身的奧秘，傳播生態文明思想，號召各界積極自覺保護環境。約2萬濟寧市民通過此次活動「雲遊」環保設施，共同見證和參與生態環境保護工作。

Case Sharing 個案分享

**Zibo Hazardous Waste  
Incineration Project**  
淄博危廢焚燒項目

On 2 June 2020, Zibo Hazardous Waste Incineration Project (“Zibo Project”) held the first public open day of environmental protection facilities this year. Through volunteers’ on-site visits and “Cloud Streaming”, the audience had a more immersive experience to watch the industrial hazardous waste go through a series of harmless treatment processes in Zibo Project. During the webcast, the project team also answered questions from school, such as how to deal with domestic hazardous waste at home.



二零二零年六月二日，淄博危廢焚燒項目（「淄博項目」）舉辦年內第一次環保設施公眾開放日活動，通過環保志願者現場參觀及「雲直播」的方式，帶領大家「雲遊」淄博項目廠區，使公眾身臨其境地「雲參觀」工業危險廢棄物通過一系列無害化處理的流程。直播過程還現場連線在校學生，針對孩子們關注的「家庭生活中的危險廢物如何處理」等問題進行解答疑惑。

The online “Cloud Open Day” activity of Zibo Project attracted about 2,000 participants, including residents from the Linzi District, environment enthusiasts, primary and secondary school students, etc.

本次淄博項目線上「雲開放」活動吸引了臨淄區市民、環保愛好者、中小學在校學生等近2,000人線上觀看。

## Case Sharing 個案分享

### Guoyang Biomass Electricity and Heat Cogeneration Project

#### 渦陽生物質熱電聯供項目

In October 2020, Guoyang Biomass Electricity and Heat Cogeneration Project launched the “Cloud Open Day” activity. The event focused on introductions to issues that the public were concerned about, such as the process of biomass power generation, flue gas treatment and the emissions standards. Q&A sessions were also included in event. The project company adopted advanced equipment such as unmanned aerial vehicles (UAVs) to ensure the filming quality of the whole operation process of environmental protection facilities on the spot, bringing the public an immersive “Cloud Visit” experience.



二零二零年十月，渦陽生物質熱電聯供項目創新展開環保設施「雲開放」活動。是次活動圍繞生物質發電流程、廢氣處置過程和達標排放等公眾關心的議題進行詳細介紹，並設有問答與參觀生物質發電項目的環節。為確保環保設施運行全過程展示畫面的質量，項目公司更採用了無人機等先進設備實地拍攝環保設施運行全流程，帶給公眾身臨其境的「雲參觀」體驗。

### Nanjing Liuhe Waste Water Treatment Project

#### 南京六合污水處理項目

On 22 April 2020, the National Youth Charity Alliance cooperated with Nanjing Liuhe Project Company to launch an online live interactive “public science course” with the theme “People and the Environment, Water Purification Process”. The course led people to the Group’s Nanjing Liuhe Project through a “Cloud Streaming”. This “Cloud Open Day” event attracted more than 1,300 people to watch online and approximately 800 people to participate in the online Q&A session.



二零二零年四月二十二日，全國青少年公益聯盟與南京六合項目合作，通過線上直播互動的方式推出了主題為「人與環境，淨水寶寶養成記」的「益對疫公開科普課」，更以「雲直播」的方式帶領人們「雲遊」本集團的南京六合項目。是次「雲開放」活動吸引了超過1,300人線上觀看與近800人參與線上提出互動。

## Case Sharing 個案分享

**“Travel with Waste” – Zhecheng Integrated Biomass and Waste-to-energy Project Opened to the Public****跟著垃圾來「旅遊」－ 柘城生物質及垃圾發電一體化項目公眾開放**

From 23 October to 16 November 2020, about 600 visitors joined the environmental science popularisation and opening-up activities of Zhecheng Integrated Biomass and Waste-to-energy Project (“Zhecheng Project”). As a science education base for environmental protection, Zhecheng Project guided the delegation to visit the whole process of waste generation and treatment including flue gas purification, harmless treatment of leachate and fly ash, comprehensive utilisation of bottom ash, recovery and utilisation of waste heat, etc. The standards



of the power plant discharge and relevant environmental indicators were also illustrated. The delegation also watched the science educational video about the technology of domestic waste incineration. In the centralised control room and waste crane control room of the project, the delegation also looked at the automatic control process of waste disposal and incineration.

二零二零年十月二十三日至十一月十六日，柘城生物質及垃圾發電一體化項目（「柘城項目」）環保科普開放活動共接待參觀人員約600人次。作為環保科普教育基地，柘城項目帶領參觀團親身觀看垃圾產生和處理的全過程，內容包括了解生活垃圾焚燒發電過程如何進行煙氣淨化、滲濾液、飛灰的無害處理、爐渣綜合利用、回收餘熱利用以及發電廠排放物和環保指標要求等工藝流程，並在環保教育展廳觀看生活垃圾焚燒廠工藝的科普視頻。在中央控制室和垃圾吊控制室，參觀團現場觀看垃圾焚燒處理工藝中垃圾抓放和焚燒的自動化操控過程。

At present, Zhecheng Project has trained a number of professional tour guides for different guiding routes and presentation scripts when receiving visitors from different social circles, so as to meet the needs of different audiences. The project has also improved the reception flow, so as to enhance the quality of the opening up initiative and better cultivate the citizens with strong awareness of the ecology.

目前項目已經培訓多名專業講解人員，針對不同的參觀群體設計不同參觀路線、講解版本，以滿足不同受眾的要求，完善相關措施，提高環保設施開放工作水平，更好地發揮培養生態公民的作用。

**I didn't expect that the treatment of waste and leachate is so complicated.  
It's really a good project for the citizens in Zhecheng County!**

沒想到垃圾和滲濾液處理起來這樣複雜，真是柘城縣的好項目、民生項目！

— Visitors exclaimed after getting close to the environmental protection facilities  
參觀者在近距離接觸環保設施後感嘆

Case Sharing 個案分享

Promotion of “Waste Sorting” in Suzhou  
蘇州「垃圾分類」實施宣傳



On 1 June 2020, the *Suzhou City Regulations for Domestic Waste Sorting* was officially implemented, which set off a trend of waste sorting in Suzhou. In June, the volunteers of Suzhou Waste-to-energy Project (“Suzhou Project”) visited multiple communities in the city. They promoted the knowledge of waste sorting to the residents through promotion talks, game interactions and demonstration of the waste treatment process. Proposal and publicity materials on waste sorting were also distributed to raise awareness of the new trend of environmental protection.

二零二零年六月一日，《蘇州市生活垃圾分類實施條例》正式實施，全市掀起垃圾分類投放熱潮。六月份，蘇州垃圾發電項目（「蘇州項目」）的志願者們走訪市內多個社區，通過分類方式宣講、遊戲互動體驗、垃圾處置工藝等方式向居民宣導垃圾分類知識，並上門發放垃圾分類倡議書和宣傳材料，普及新時尚的環保理念。

Over the years, Suzhou Project, as the only domestic waste disposal terminal in Suzhou City (except the Wujiang District), has been taking environmental protection popularisation as its responsibility. They have been vigorously promoting the concept of environmental protection, and constantly boosting the quality of the city’s ecological civilisation.

多年來，蘇州項目作為蘇州市區（除吳江區外）唯一的生活垃圾處置終端，一直以環保科普和愛心關懷為己任，大力宣傳環保理念，不斷助推蘇州市生態文明建設的高品質發展。

## Community Engagement

Everbright Environment has been upholding its corporate pursuit of “Creating Better Investment Value and Undertaking More Social Responsibility” towards the road of sustainability. The Group not only strives to ensure safe and stable operations and compliant emissions of the projects, but also proactively integrates into the neighbouring communities of the projects. The Group has been actively engaging the local communities of the rural areas where its projects are operated for joint development, such as giving priority to the local residents when the projects have job openings, in order to improve the environment and facilitate industrial upgrading locally and in the surrounding areas.

To guarantee the Group’s projects in compliance with the international safeguarding principles and the requirements in the environmental and social aspects, the Group has taken the initiative to refer to the relevant requirements of ADB by including social concerns into the beginning phase of the project life cycle. This ensures that the Group will properly manage any resettlement associated with its projects in compliance with related laws, with all affected citizens receiving fair and adequate compensation and rehabilitation.

The Group’s ESHS Management System also includes a strict *Incident Reporting Procedure* to ensure that we thoroughly investigate public complaints, as well as properly follow up and resolve issues raised. In 2020, the Group had not received any complaints on our products and services.

## 社區共融

光大環境始終秉承「創造更好投資價值，承擔更多社會責任」的企業理念邁向可持續發展之路。本集團不但致力確保項目安全穩定運行、環保達標排放，更主動融入項目的周邊社區，積極實踐村企共建，優先考慮為當地居民提供就業機會，拉動周邊區域的環境改善和產業升級。

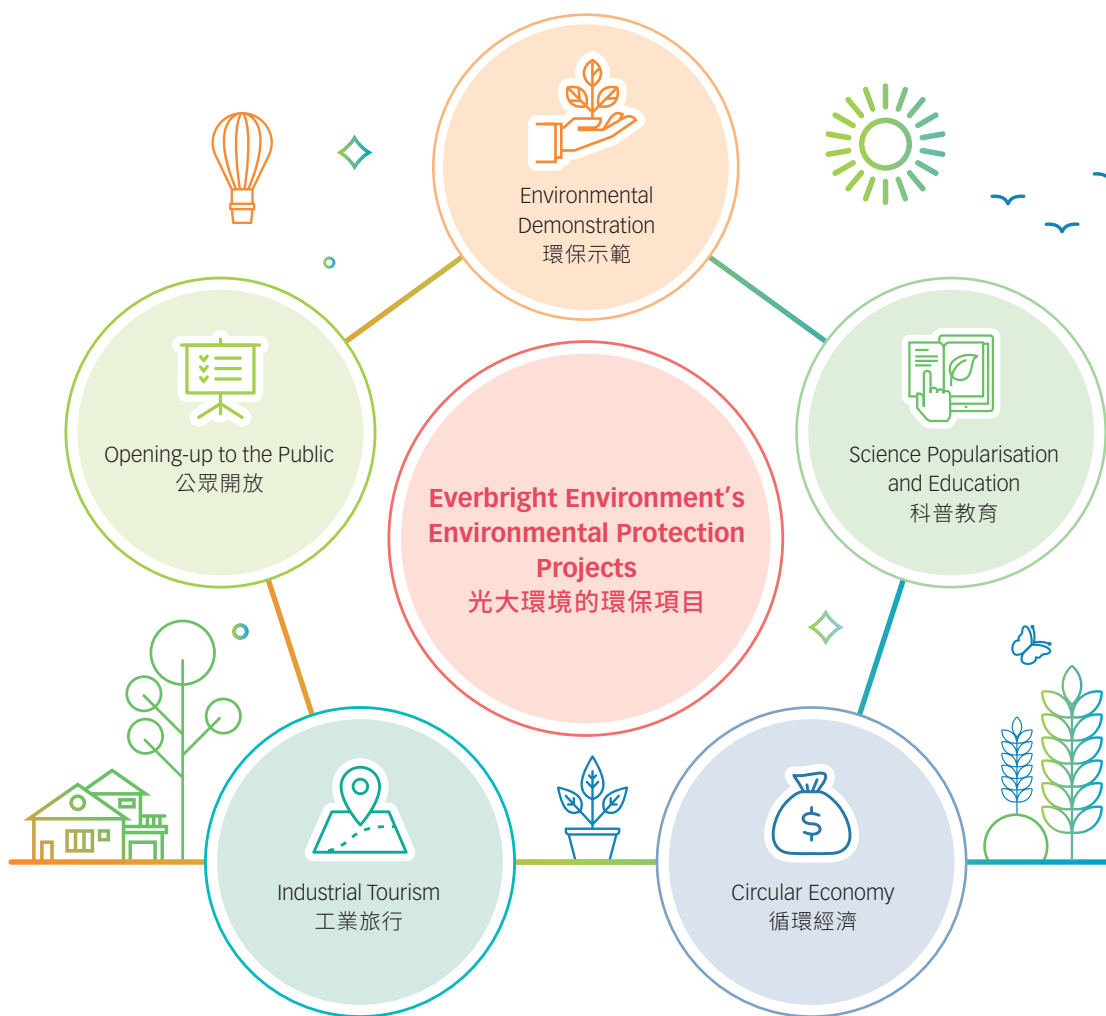
為確保本集團的垃圾發電項目能滿足國際上對環境及社會的保障原則和要求，本集團主動參照亞發行的相關要求，將社會關注點納入項目生命週期的初始階段，從而確保與項目開發相關的拆遷安置工作按照適用法律進行妥善管理，所有受影響人士將得到公平、充分的補償和修復安排。

本集團的ESHS管理體系中亦設有嚴格的《事故匯報程序》，以確保我們徹底調查公眾投訴，並妥善跟進及解決所提出的問題。本集團於二零二零年沒有接獲關於產品及服務的投訴。

Not only do the Group's projects serve as important extracurricular educational resources for universities, secondary and primary schools, the Group's environmental protection projects also actively welcome visits of people from different social sectors, with an aim to drive social and economic benefits through continuous improvement of project opening-up arrangement, promotion of industrial tourism, and encouragement of circular economy.

本集團旗下的環保項目不僅是各大高校和中小學生重要的課外教學資源，更積極接待社會各界代表團實地參觀考察，透過不斷健全公眾開放、推廣工業旅遊、鼓勵循環經濟，為當地社區帶來更佳的經濟與社會效益。

### Five Key Elements of Everbright Environment's Environmental Protection Projects 光大環境環保項目標竿示範基地五大要素





## Solving the “NIMBY” Effect

The Group’s urban-rural integration projects are aligned with the central government’s goal in achieving green development in rural areas. The introduction of advanced waste treatment facilities in rural areas has effectively prevented waste disposal and reduced pollution, laying the foundation for sustainable development in the Chinese villages. In addition, apart from the Group’s Hangzhou Waste-to-energy Project, Changzhou Waste-to-energy Project has opened its plant borders and again successfully tackled the NIMBY effect in China. Currently, the project is fenceless and equipped with public amenities, becoming an “living room of the city” for the public, which not only provides a leisure space for local residents but also sets an example for the development of waste-to-energy industry nationwide and provides a good reference for tackling the NIMBY effect.

## 破解「鄰避效應」

本集團的城鄉一體化項目響應中央政府推進鄉村綠色發展的方向，將先進的垃圾處理設施引入農村，預防廢物棄置並減少其相關污染問題，為中國農村的可持續發展奠定了基礎。除此以外，本集團的常州垃圾發電項目在本年度正式開放廠界，成為繼旗下杭州垃圾發電項目後又一成功破解「鄰避效應」的典型案列。現在，該項目建有合適的社區設施，成為向市民開放的「城市客廳」，不僅為當地居民提供休閒之所，更為國內垃圾發電行業的發展和化解「鄰避效應」提供有益借鑒。

### Case Sharing 個案分享

#### Waste-to-energy Plant Transformed into “Living Room of the City” – Opening Up of Changzhou Waste-to-energy Project 垃圾焚燒發電廠變身「城市客廳」—常州垃圾發電項目正式開放廠界

On 8 July 2020, Changzhou Waste-to-energy Project (“Changzhou Project”) completed its opening-up and upgrading work, making it China’s first fenceless community-friendly plant and an “living room of the City”, which is equipped with public amenities and complies with the ultra-low emissions standards. At the same time, the Qiubai Library, which was jointly constructed by Changzhou Project in the project areas, was also officially inaugurated.

二零二零年七月八日，常州垃圾發電項目（「常州項目」）廠區正式開放廠界，成為中國首座無圍牆、全開放、最近鄰區、超低排放、建有便民惠民設施的「鄰利型」垃圾發電廠，同時由常州項目於廠區內參建的秋白書苑（遙觀）圖書館也正式對外開放。



Case Sharing 個案分享

**Waste-to-energy Plant Transformed into “Living Room of the City” – Opening Up of Changzhou Waste-to-energy Project (Continued)**

垃圾焚燒發電廠變身「城市客廳」－常州垃圾發電項目正式開放廠界 (續)

Changzhou Project commenced operations in November 2008. Covering a land area of 75 mu, the project has an annual household waste processing capacity of 290,000 tonnes and an expected annual electricity generation capacity of approximately 87 million kWh. The project’s daily average level of online monitored gas emissions is superior to the Euro 2010 emissions standards. The waste leachate after treatment also complies with the *Integrated Wastewater Discharge Standard* and the reclaimed water is fully reused.

本集團的常州項目於二零零八年十一月投入運行，佔地面積75畝，年處理生活垃圾約29萬噸，年上網電量約8,700萬千瓦時，煙氣線上監測指標日均值優於歐盟2010排放標準；同時，垃圾滲濾液經處理後達到《污水綜合排放標準》，實現了滲濾液全回用。

Changzhou Project is China’s first waste-to-energy project built in residential communities. In the past 12 years since the project commenced operation, Changzhou Project ensured safe and compliant emissions, and was also dedicated to solving the NIMBY effect by honouring the principle that “waste-to-energy projects could be good neighbours of local communities”.

常州項目是國內首個建在居民社區裡的垃圾焚燒發電項目，投運十二年來，在確保安全和達標排放的同時，項目始終堅持「垃圾發電，與民為鄰」破解鄰避困局。

Everbright Environment and the Changzhou Municipal Government reached a consensus to jointly build a fenceless community-friendly plant with ultra-low emissions. The project has transformed from the “staff only” area to the “living room of the city” open to the residents with public amenities such as a children’s playground, a science popularisation centre, a basketball court, and a street garden. In addition, the fourth Qiubai library in Changzhou City was built within the plant area, adhering to the principle of “Government-led, Department-connected, Community-involved” to benefit the nearby residents. With a total area of about 1,000 m<sup>2</sup> and a collection of more than 30,000 books, the library has established a collaborative relationship with Changzhou Library on sharing book resources.

本次光大環境與常州市政府達成共識，攜手打造建在居民社區、建設便民惠民設施的「廠界開放+超低排放」項目，由原來「閒人免進」封閉場所變成現在面向市民開放的「城市客廳」，建有兒童樂園、環保科普館、籃球場、街心公園等。同時，廠區內建成常州市第4家秋白書苑，秉承「政府主導、部門聯動、社會參與」的原則，惠及周邊居民。書苑總面積約1,000平方米，藏書量約為3萬餘冊，與常州市圖書館通借通還、互聯互通。



Case Sharing 個案分享

Waste-to-energy Plant Transformed into “Living Room of the City” – Opening Up of Changzhou Waste-to-energy Project (Continued)

垃圾焚燒發電廠變身「城市客廳」—常州垃圾發電項目正式開放廠界 (續)



Changzhou Project also attracts a large number of visitors every year, helping more places to solve the “NIMBY” problem encountered in the construction of waste-to-energy plants. Looking forward, Everbright Environment will earnestly develop the project into an urban public service platform, which is designed to support an ecological equilibrium, involve the public and promote environmental protection knowledge, with a view to contributing to the construction of a beautiful Changzhou and China.

常州項目每年還吸引了大量參觀者，幫助更多地方解決了垃圾焚燒發電廠建設過程中遇到的「鄰避」難題。未來，光大環境將把常州項目進一步打造成集生態和諧、公眾融合、教育宣傳於一體的城市公共服務平台，為美麗常州、美麗中國建設貢獻光大智慧。

**After the removal of the plant borders, we not only feel more confident about the environmental protection proficiency of the project, but also have a good place for leisure and fitness. Everyone is happy about that.**

圍牆拆除後，我們不僅對項目的環保水平更加放心，而且還多了休閒健身的好去處，大家都很高興。

— Yang Yuhua, a 74-year-old resident  
74歲居民楊裕華

## Poverty Alleviation

2020 is the final year of China's "Poverty Alleviation" plan. Over the years, Everbright Environment has been continuously responding to national policies targeting poverty alleviation and reducing the urban-rural gap. In addition to donations from time to time, the Group is also committed to creating more job opportunities, supporting local economies and giving back to the society through its projects.

### Poverty Alleviation Industry Chain

The Group consistently encourages and promotes effective public and resident partnerships to address local problems. Through the integrated biomass utilisation projects, the Group has successfully established and improved the fuel collection and storage system, formulating the strategy of "increasing income for farmers, facilitating corporate development and gaining mutual benefit for multiple parties", and improving the local rural economy directly and indirectly and reducing the population in poverty. The local governments arranged underprivileged households to collect and sell biomass materials to the Group's operating projects as a way to provide extra income to the needy while at the same time helping to address the local waste treatment problems. The collaboration model has broken new ground to create a situation that benefits the environment, society and economy.

Moreover, the Group also actively implements and promotes poverty alleviation projects to fulfill the poverty alleviation goals. The Group's first ecological industry poverty alleviation project, Xinhua Waste-to-energy Project ("Xinhua project"), was commenced construction during the Reporting Period. It is committed to taking advantage of its leading position in the environmental protection industry and contribute to Everbright's poverty alleviation.

## 扶貧濟困

二零二零年是中國「脫貧攻堅」收官之年。一直以來，光大環境都積極響應國家有關精準扶貧的政策、縮短城鄉差距的號召，除定期提供捐款捐物外，更致力透過旗下項目創造就業、帶動當地經濟、回饋社會。

### 扶貧產業鏈

本集團透過不斷鼓勵和發展有效的公共和居民合作，解決當地問題。本集團通過生物質綜合利用項目燃料收儲體系的建立和完善，打造「農民增收、企業發展、多方共贏」的戰略，直接和間接帶動當地農村經濟，幫助人口脫貧。政府透過此模式組織貧困戶收集生物質原料出售予本集團的運營項目，為人們提供額外收入的同時有助解決當地的廢物處理問題，開創環境、社會和經濟效益三豐收的新格局。

此外，本集團亦積極研究推動及實施產業扶貧項目建設工作，全面落實脫貧攻堅的任務。本集團首個生態產業扶貧項目—新化垃圾發電項目（「新化項目」）於報告期內正式開工，致力於發揮環保行業領軍優勢，為脫貧攻堅戰貢獻光大量。

## In 2020, Integrated Biomass Utilisation Projects of Everbright Environment 二零二零年，光大環境的生物質綜合利用項目

directly and/or indirectly created over  
直接及／或間接提供工作崗位逾

**41,000** jobs  
個

increased farmers' income by approximately  
帶動農民增收約

RMB **1.48** billion  
人民幣 十億元

benefited over  
逾

**5.24** million farmers  
百萬名農民受益

### Xinhua Waste-to-energy Project Contributing to Poverty Alleviation 新化垃圾發電項目助力脫貧攻堅



In April 2020, the Group's Xinhua Project officially commenced construction. This project is the first ecological industry poverty alleviation project in PPP model between Everbright Environment and the Xinhua Urban Management Bureau, marking the Group's first project of this type taking root in Xinhua.

二零二零年四月，本集團的新化項目正式開工，該項目為光大環境與新化縣城管局的首個生態產業扶貧PPP項目，標誌著本集團首個生態產業扶貧項目在新化落地生根。

Xinhua Project is a key poverty alleviation project supported by Everbright Environment. The construction of Xinhua Project helps to facilitate local economic developments, lift local residents from poverty by offering more employment, improve the environmental condition and ensure environmental health and safety, playing a dual role in targeted poverty alleviation and pollution prevention.

新化項目是光大環境重點部署支持的脫貧攻堅項目。新化項目的建設，不但有助於促進地方經濟發展，幫助當地居民脫貧就業，且有利於改善環境建設，保障環境健康安全，對精準脫貧、污染防治起雙重促進作用。

**Xinhua Waste-to-energy Project Contributing to Poverty Alleviation** (Continued)  
新化垃圾發電項目助力脫貧攻堅 (續)

Everbright Environment has not only been conducting poverty alleviation work to facilitate the development of relevant industries, but also actively promoting collaborative poverty alleviation work from consumption and education aspects. The Group made donations to Caojia Town of Xinhua County for the construction of a village road and named it “Everbright Lianxin Road”. At the same time, the Group completed the construction of relevant infrastructure of two local schools and retrofitting works of eco-toilets, which gained great recognition and support from the local residents. In addition, the Group established cooperation with underprivileged residents and poverty alleviation enterprises for developing a supply chain network on supplying fruits, vegetables and daily necessities, hence boosting the dynamism and efficiency of the local economy in the impoverished areas.

一直以來，光大環境不僅展開產業扶貧工作，還積極推進消費、教育等協同扶貧工作。本集團對新化縣曹家鎮展開捐贈活動，完成村道建設，並將村道命名「光大連心路」，同時完成項目所在地兩所學校的基礎設施建設、實施生態廁所改建工程，得到當地居民的高度認可和支持。另一方面，本集團與貧困戶和扶貧企業建立蔬果供貨、日用品供貨聯繫，全力拉動貧困地區的經濟活力和經濟效能。



## Charitable Activities

Together with the Suzhou Environmental and Municipal Administration Bureau and the Suzhou Charity Federation, our project company in Suzhou established the “Everbright Environmental Protection Charitable Foundation”, which aims at helping sanitation workers and their families who are in need, and launching the promotion activities of caring for the workers. As of the end of 2020, the foundation had supported over 1,778 beneficiaries, which a total of RMB8.5 million of consolation money and financial aid were distributed.

## 慈善與公益

我們的蘇州項目公司與蘇州市市容市政管理局及蘇州市慈善總會共同發起成立「光大環保愛心基金」，用於慰問和救助貧困環衛工人及其家庭和展開關愛環衛工人的公益宣傳活動。截至二零二零年底，該基金已累計支持1,778名受益者，共計已發放超過人民幣850萬元慰問金及救助金。

### “Everbright Environmental Protection Charitable Fund” recognised as “The Most Influential Charity Project” at the 4th Suzhou Charity Awards 「光大環保愛心基金」榮獲第四屆蘇州慈善獎「最具影響力慈善項目」



In September 2020, “Everbright Environmental Protection Charitable Foundation” was recognised as “The Most Influential Charity Project” at the 4th Suzhou Charity Awards. This is another honour granted to the Suzhou Project Company after the project company won “the Most Caring Corporate Donor” award in 2019.

二零二零年九月，「光大環保愛心基金」榮獲第四屆蘇州慈善獎「最具影響力慈善項目」。這是蘇州項目公司繼二零一九年獲「最具愛心捐贈企業」後的又一殊榮。

Overview of Charity Work in 2020  
二零二零年慈善公益活動概覽

Participated in  
參與

192 charitable activities  
次慈善公益活動

Volunteer services  
義工總時數

1,506 hours  
小時

Volunteers' paid working hours amounted to  
義工有薪工時為

HK\$ 115,050 元  
港幣

Total charitable donation (cash)  
捐款總金額 (現金) 為

HK\$ 14,184,000 元  
港幣

In-kind giving  
物資捐贈為

HK\$ 929,982 元  
港幣

Management overheads  
管理費用為

HK\$ 4,031,248 元  
港幣





## Climate Action

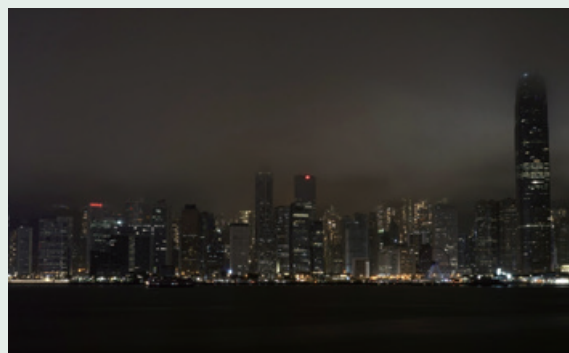
The Group continue to focus on the areas of environment, energy and resources, safeguard local residents' living and ecological environment, and work together with all social circles in better responding to climate change. As the lead sponsor for the seventh consecutive year, Everbright Environmental Protection Charitable Foundation fully supported the "Earth Hour" initiative to arouse the public's attention towards climate change hosted by WWF Hong Kong. During the Reporting Period, the Group's project companies organised plenty of environmental protection events to raise the public awareness of environmental protection, such as participating in volunteer activities to share and promote knowledge on science popularisation, and supporting a series of environmental protection events, including the "World Water Day" and World Environmental Day on 5th June.

## 氣候行動

本集團繼續深耕環境、能源和資源領域，保障各地人居與生態環境，與各界攜手更好地應對氣候變化。為喚起大眾對氣候變化的關注，光大環境公益基金會連續第七年作為首席贊助機構，全力支持由世界自然基金會香港分會主辦的「地球一小時」活動。於報告期內，本集團的項目公司亦組織了多項環保活動，如參與環保志願者活動以宣傳科普知識，響應「世界水日」及「六·五」世界環境日等環保節日，推動社會大眾的環保意識。

### Everbright Environmental Protection Charitable Foundation as Lead Sponsor of Earth Hour Hong Kong for the 7th Consecutive Years

光大環境環保公益基金會連續第七年首席贊助香港「地球一小時」活動



On 28 March 2020, the light-off and countdown of the Earth Hour Hong Kong, which Everbright Environmental Protection Charitable Foundation had supported as lead sponsor for seven consecutive years, was held at 8:30 pm.

二零二零年三月二十八日，由「光大環境環保公益基金會」連續第七年首席贊助的香港「地球一小時」熄燈倒數活動於當晚八時三十分舉行。

Themed with "Our Planet Our Business", the 2020 event aimed to urge business leaders and the public to make a change based on the concept of sustainable development and a zero-carbon lifestyle, so as to create an ecological future for mankind.

二零二零年的活動以「企業有備，地球無患」為主題，促請企業領袖及大眾做出改變，基於可持續發展及零碳生活的理念做出決策，為人類造生態未來。

Together for  
THE SUSTAINABLE DEVELOPMENT GOALS

攜手邁向  
可持續發展目標



TOGETHER FOR THE  
SUSTAINABLE DEVELOPMENT GOALS  
攜手邁向可持續發展目標

In 2015, the United Nations adopted the 2030 Agenda for Sustainable Development, which included 17 SDGs and emphasised the need to achieve overall sustainable development.

With the vision to become a world-leading ecological and environmental management group, Everbright Environment fully supports the SDGs of the United Nations, and is devoted to join hands to help address the world's most pressing environmental, social and economic issues.

聯合國於二零一五年通過二零三零年可持續發展議程，內容包括17項可持續發展目標，強調要全面達至整體可持續發展。

光大環境懷著邁向全球領先生態環境集團的宏願，全力支持聯合國可持續發展目標，致力攜手緩解世界上最迫切的環境、社會和經濟議題。

## Environment

### SDG 可持續發展目標



**Ensure healthy lives and promote well-being for all at all ages**  
確保健康的生活方式，促進各年齡段人群的福祉

**3.9**  
By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.  
到二零三零年，大幅減少危險化學品以及空氣、水和土壤污染導致的死亡和患病人數。

## 環境

### Our Contribution 我們的貢獻

The Group's waste-to-energy projects are designed and operated fully in compliance with the *Standard for Pollution Control on the Municipal Solid Waste Incineration* (GB18485-2014) with the daily average values of online continuously monitored parameters well below the respective emissions limits as stipulated under the Euro 2010 standards; all of the Group's biomass combustion operations meet the *Emission Standard of Air Pollutants for Thermal Power Plants* (GB13223-2011). Our hazardous and solid waste treatment business can safely process over 90% of hazardous waste types listed in the *National Catalogue of Hazardous Wastes*, hence effectively minimising public health risk.  
本集團的垃圾發電項目的設計及運營完全符合《生活垃圾焚燒污染控制標準》(GB18485-2014)，當中煙氣在線監測指標日均值全面優於「歐盟2010排放標準」中的相關排放限值；所有生物質燃燒的運營則達《火電廠大氣污染物排放標準》(GB13223-2011)。我們的危廢及固廢處置業務亦可安全處置《國家危險廢物名錄》超過90%的危廢種類，大大減低大眾的健康風險。

Effluent discharged from the majority of the Group's waste water treatment projects comply with Grade 1A standard of *Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant* (GB18918-2002).  
本集團大部分污水處理廠的出水均符合《城鎮污水處理廠污染物排放標準》(GB18918-2002)的一級A標準。

**SDG**  
可持續發展目標



**Ensure availability and sustainable management of water and sanitation for all**  
為所有人提供水和環境衛生並對其進行可持續管理

**6.4**

By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.  
到二零三零年，所有行業大幅提高用水效率，確保可持續取用和供應淡水，以解決缺水問題，大幅減少缺水人數。

**Our Contribution**  
我們的貢獻

Our waste water treatment projects effectively treat waste water strictly in compliance with national standards and produce high quality industrial reusable water to help soothe water quality and sanitation problems.

我們的污水處理項目嚴格按照國家標準有效處理污水，並生產高質量的工業回用水，以協助舒緩水質和衛生問題。

The Group treated a total of 1,559,096,000 m<sup>3</sup> of waste water and produced 24,330,000 m<sup>3</sup> of reusable water in 2020.

二零二零年，本集團共處理了約1,559,096,000立方米的污水和生產了約24,330,000立方米的回用水。



**Ensure access to affordable, reliable, sustainable and modern energy for all**  
確保人人獲得負擔得起的、可靠和可持續的現代能源

**7.1**

By 2030, ensure universal access to affordable, reliable and modern energy services.  
到二零三零年，確保人人都能獲得負擔得起的、可靠的現代能源服務。

We generate clean energy by utilising household waste and agricultural and forestry waste, thus relieving pressure on landfills and saving precious land resources.

我們利用生活垃圾、農業及林業廢棄物生產清潔能源，減少填埋量壓力，從而節省寶貴的土地資源。

Our greenergy sector leverages on its core product Everbright New Sodium Lamp, and focuses on building a full industry chain that includes the R&D and manufacturing of energy-saving street lamps, urban outdoor lighting projects and other types of energy-saving lighting products. Greenergy provides integrated lighting solutions to users based on three major business models, namely EMC, EPC and direct sales.

我們的光大照明板塊以光大新鈉燈為核心產品，專注節能路燈、城市亮化工程、節能照明產品研發及製造等全產業鏈佈局，通過EMC、EPC及產品直銷三種主要業務模式，為使用者提供照明整體解決方案。

SDG  
可持續發展目標



**Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation**

建造具備抵禦災害能力的基礎設施，促進具有包容性的可持續工業化，推動創新

**9.4**

By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with the increased resource use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, all countries taking action in accordance with their respective capabilities.

到二零三零年，所有國家根據自身能力採取行動，升級基礎設施，改進工業以提升其可持續性，提高資源使用效率，更多採用清潔和環保技術及產業流程。

**Our Contribution**  
我們的貢獻

We developed a unique business model of urban-rural integration combining biomass utilisation projects and waste-to-energy projects, providing one-stop services for integrated treatment of agricultural and forestry waste as well as rural household waste in a pioneering attempt to ecological environmental management in county areas.

我們開發出獨特的城鄉一體化業務模式，將生物質處理項目與垃圾焚燒發電項目融為一體建設，統籌處理農林廢棄物及農村生活垃圾，開創了縣域生態環境治理的先河。

The Group's river-basin ecological restoration projects construct more stable ecological environment, and thus improve the cities' resilience against regional water environment pollution, while "Sponge City" projects facilitate effective drainage and rainwater reuse, strengthen the urban ecosystem and promote sustainable development.

本集團的流域治理項目以構建更穩固的生態環境從而提升城市水污染抵禦能力；海綿城市項目則有助疏導和回用雨水、改善城市生態系統及促進可持續發展。

**SDG**  
可持續發展目標



**Make cities and human settlements inclusive, safe, resilient and sustainable**  
建設包容、安全、有抵禦災害能力和可持續的城市和人類住區

**11.6**

By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality, municipal and other waste management.

到二零三零年，減少城市的人均負面環境影響，包括特別關注空氣品質，以及城市廢物管理等。

**Our Contribution**  
我們的貢獻

Waste disposal is one of the most pressing environmental problems faced by modern society. The Group's waste-to-energy projects effectively reduce the volume of household waste through thermal treatment, while the majority of the bottom ash produced from waste incineration can be used to produce bricks, thus relieving pressure on landfills and resolving the waste crisis. Through its integrated biomass utilisation projects, the Group introduced advanced waste processing facilities in the rural villages, thereby laying a foundation to support sustainable rural development in China by preventing waste disposal and related pollution problems before they arise. 廢物處置是現代社會中面臨最逼切的环境問題之一。我們的垃圾發電項目透過熱處理有效地減少生活垃圾體積，而焚燒垃圾產生的爐渣則可用於製磚，從而減輕填埋場壓力。通過城鄉一體化項目，我們將先進的垃圾處理設施引入農村，預防垃圾及其相關污染問題發生，從而為中國農村的可持續發展奠定了基礎。

Through a series of water environment management services including raw water protection, municipal waste water treatment, industrial waste water treatment, water supply, reusable water, and sludge treatment and disposal projects, etc., the Group has contributed to the construction of sustainable cities and communities, and relieved the pressure on urban water supply and substantially minimised the impact of harmful substances on the aquatic and terrestrial ecosystems.

本集團透過一系列的水環境綜合治理服務，包括原水保護、市政污水處理、工業廢水處理、供水、中水回用及污泥處理處置等，為建設可持續城市和社區作出貢獻、舒緩城市的供水壓力、並將有害污染物對水體和陸上生態的影響降至最低。



**Ensure sustainable consumption and production patterns**  
採用可持續的消費和生產模式

**12.2**

By 2030, achieve sustainable management and efficient use of natural resources.

到二零三零年，實現自然資源的可持續管理和高效利用。

The eco-recycling sector is committed to expanding business in the areas of household waste sorting, environmental sanitation services and recyclable resources utilisation, aiming to provide front-end waste management services and the utilisation of recyclable resources.

本集團的生態資源板塊主要致力於拓展生活垃圾分類、環衛作業服務以及再生資源利用三個領域的相關業務，旨在提供固廢處置前端服務與再生資源綜合利用相關業務。

SDG  
可持續發展目標



**Take urgent action to combat climate change and its impacts**  
採取緊急行動應對氣候變化及其影響

**13.1**

Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

加強各國抵禦和適應氣候相關的災害和自然災害的能力。

**Our Contribution**  
我們的貢獻

Our waste-to-energy projects and integrated biomass utilisation projects offset GHG emissions through avoidance of fugitive release of methane generated from the degradation of household waste and biomass raw materials and the production of green electricity that replaces the use of fossil fuel power.

我們的垃圾發電項目及生物質綜合利用項目透過避免生活垃圾和生物質原材料的降解所引致的無組織甲烷釋放及產生綠色電力以替代化石燃料能源的使用，從而抵銷溫室氣體排放。

Besides, the Group's Qingdao Waste Water Treatment Project generates green electricity with biogas produced from sludge treatment so as to replace the consumption of fossil fuel and offset GHG emissions. GHG emissions offset is also attained through the reduction of nitrogen concentration carried out by waste water nitrogen removal treatment progress, and the reduction of N<sub>2</sub>O. Together with carbon offsets contributed by its waste-to-energy and integrated biomass utilisation projects, the Group's operations offset 15,273,840.27 tonnes of CO<sub>2</sub> equivalent emissions in 2020.

此外，本集團位於青島的污水處理項目利用污泥處理時所產生的沼氣產生綠色電力，以代替化石燃料的使用，從而抵銷溫室氣體排放；而我們亦透過污水除氮處理工藝降低污水出水的氮含量以及其所引致的氧化亞氮排放，以抵銷溫室氣體排放。二零二零年，連同垃圾發電和生物質綜合利用項目的碳抵銷貢獻，本集團的運營共抵銷了15,273,840.27噸二氧化碳當量排放。

The Group has also included climate change risk into its Risk Management System in order to formulate more comprehensive emergency and natural disaster contingency plans.

本集團更將氣候變化風險納入現有的風險管理體系中，以制定更完善的緊急與自然災害應變方案。

**SDG**  
可持續發展目標



**Conserve and sustainably use the oceans, seas and marine resources for sustainable development**  
保護和可持續利用海洋和海洋資源以促進可持續發展

**14.1**

By 2025, prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris and nutrient pollution.

到二零二五年，預防和大幅減少各類海洋污染，特別是陸上活動造成的污染，包括海洋廢棄物污染和營養鹽污染。

**Our Contribution**  
我們的貢獻

The Group's project site selection practice complies with stringent environmental impact assessment requirements, which prevent the water bodies and ecological sites nearby the project site from adverse impact. 我們的項目選址均符合嚴格的環評準則，防止對項目周邊的水體和動物棲息地帶來不利影響。



**SDG**  
可持續發展目標



**Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss**

保護、恢復和促進可持續利用陸地生態系統，可持續管理森林，防治荒漠化，制止和扭轉土地退化，遏制生物多樣性的喪失

**15.1**

By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.

到二零二零年，根據國際協定規定的義務，保護、恢復和可持續利用陸地和內陸的淡水公司及其服務，特別是森林、濕地、山麓和旱地。

**Our Contribution**  
我們的貢獻

Our waste-to-energy projects help tackle the waste problem in an environmentally sound manner. This results in the avoidance of waste in landfills which would otherwise cause environmental problems and affect ecosystems.

我們的垃圾發電項目以無害環境的方式應對垃圾問題，避免了垃圾於填埋傾倒所導致的環境問題及對生態系統的影響。

**SDG**  
可持續發展目標



**Strengthen the means of implementation and revitalise the global partnership for sustainable development**

加強執行手段，重振可持續發展全球夥伴關係

**17.8**

Fully operationalise the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology. 促成最不發達國家的技術庫和科學、技術和創新能力建設機制到二零一七年全面投入運行，加強促成科技特別是資訊和通信技術的使用。

**Our Contribution**  
我們的貢獻

We have been partnering with institutions such as ADB, China Development Bank, etc., to collaboratively promote clean energy and environmental protection.

我們一直與亞發行及國家開發銀行等機構合作，攜手宣揚清潔能源及環境保護。

## Social

### SDG 可持續發展目標



#### End poverty in all its forms everywhere 在全世界消除一切形式的貧困

##### 1.2

By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions. 到二零三零年，按各國標準界定的陷入各種形式貧困的各年齡段男女和兒童至少減半。執行適合本國國情的全民社會保障制度和措施、企業發展、多方共贏」的戰略，包括最低標準，到二零三零年在較大程度上覆蓋窮人和弱勢群體。

## 社會

### Our Contribution 我們的貢獻

Our biomass utilisation business not only solve the pollution problems caused by the burning of local agricultural and forestry straws, but also create jobs opportunities for local farmers and increase their sources of income through the establishment of the collection, storage and transportation of agricultural wastes. The Group has actively responded to the country's precision poverty alleviation policy. With the commencement of project operations and the establishment, improvement and development of the biomass intake and storage systems, the Group has developed a strategy of "Increasing Income for Farmers, Ensuring Development for the Enterprise, and Procuring Mutual Success for Multiple Parties" which drives the rural economy in direct and indirect ways to lift villagers from poverty.

我們的生物質業務除了解決當地農林秸稈焚燒帶來的污染問題，更通過成立農林廢棄物收儲運體系，為當地農民創造就業機會，增加收入來源，積極響應國家的精準扶貧方針。隨著項目的投產以及生物質收儲體系的建立、完善和發展，我們打造出「農民增收、企業發展、多方共贏」的戰略，直接和間接帶動農村經濟，幫助人口脫貧。



#### End hunger, achieve food security and improved nutrition and promote sustainable agriculture 消除饑餓，實現糧食安全，改善營養狀況和促進可持續農業

##### 2.1

By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round. 到二零三零年，消除饑餓，確保所有人，特別是窮人和弱勢群體，包括嬰兒，全年都有安全、營養和充足的食物。

The Group's food waste processing projects can turn food waste into compost, which can in turn support the agricultural development of the Group's project neighbourhoods. Our projects have a daily food waste processing capacity of 300 tonnes.

我們的餐廚垃圾處理項目把餐廚垃圾轉換為堆肥，從而支持鄰近地區的農業發展。我們的項目每天能夠處理300噸的餐廚垃圾。

**SDG**  
可持續發展目標



**Ensure healthy lives and promote wellbeing for all at all ages**

確保健康的生活方式，促進各年齡段人群的福祉

**3.9**

By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.  
加強對濫用藥物包括濫用麻醉藥品和有害使用酒精的預防和治療。

**Our Contribution**  
我們的貢獻

In order to cope with the difficult situations brought by the Pandemic in 2020, the Group had zero infection cases in the plant workplace and ensured full-speed operations of more than 200 environmental protection projects in operation, which are located in over 100 cities across China. These projects safeguarded the environmental safety and public health of the local communities, by treating household waste and waste water, as well as enhancing the treatment and disposal of medical waste.

針對二零二零年疫情的嚴峻形勢，本集團實現工作廠區零感染，確保國內100多個城市的200多個運營環保項目全速運轉，保障生活垃圾、污水處理，強化醫療廢棄物處置，守護了當地社區的環境安全和民眾健康。

Many environmental protection projects of the Group volunteered to facilitate the local authorities and institutions to conduct safe treatment of medical waste, waste water, as well as waste from hospitals and quarantine areas.

本集團旗下多個環保項目亦主動請纓，全力協助各地相關部門和機構進行醫療廢物、廢水、醫院及隔離區垃圾的安全處置工作。

SDG  
可持續發展目標



**Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all**  
確保包容和公平的優質教育，讓全民終身享有學習機會

**4.4**

By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.

到二零三零年，大幅增加掌握就業、體面工作和創業所需相關技能，包括技術性和職業性技能的青年和成年人數。

**Our Contribution**  
我們的貢獻

The Group's environmental protection projects have been selected as environmental popularisation and education hubs and act as demonstration sites for circular economy and industrial tourism. The Group also proactively opens up its projects for public visits, offering every individual with opportunities to understand how environmental infrastructures tackle pollution and improve the community's living environment. During the Reporting Period, the Group's environmental protection projects received over 110,000 domestic and foreign visitors from all social circles.

我們的環保項目被選為環保科普教育基地，並作為循環經濟和工業旅遊的示範項目。我們亦積極開放項目供公眾參觀，給予大眾機會以了解環保基礎設施如何處理污染及改善社區的居住環境。報告期內，我們的項目共接待國內外各界人士超過110,000人次。

In 2020, multiple project companies of the Group had carried out project opening-up activities through virtual platforms to break the barriers of limitation brought by the Pandemic. These virtual activities advocated environmental protection and sustainable development concepts to the public with higher flexibility.

二零二零年，我們的項目公司積極透過「線上」平台展開公眾開放活動，打破疫情限制，更加靈活地向公眾推廣環境保護。

As at 31 December 2020, the Group's "Dangshan No. 5 High School" in Anhui Province had accumulatively provided educational opportunities for 5,760 students.

截至二零二零年十二月三十一日，我們的安徽「碭山縣第五中學」累計為5,760學生提供教育機會。

**SDG**  
可持續發展目標



**Achieve gender equality and empower all women and girls**

實現性別平等，增強所有婦女和女童的權能

**5.1**

End all forms of discrimination against women and girls everywhere.

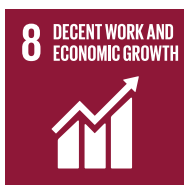
在全球消除對婦女和女童一切形式的歧視。

**Our Contribution**

**我們的貢獻**

We ensure that its human resources management structure, including compensation, training opportunity, career prospect, etc., is not affected by gender biases, thus achieving gender equality.

我們確保我們的人力資源管理架構，如薪酬水平、訓練機會及就業前景等不受性別影響，從而實現性別平等。



**Promote sustained, inclusive and sustainable economic growth, facilitate full and productive employment and decent work for all**

促進持久、包容和可持續經濟增長，促進充分的生產性就業和人人獲得體面工作

**8.2**

Achieve higher levels of productivity of economies through diversification, technological upgrading and innovation, including through a focus on high value added and labor-intensive sectors.

通過多樣化經營、技術升級和創新，包括重點發展高附加值和勞動密集型行業，實現更高水準的經濟生產力。

Through investment, construction and operation of advanced waste-to-energy facilities, we drive the development of upstream waste collection industries as well as downstream metal and bottom ash recycling industries, completing a sustainable waste management industry chain.

我們透過投資、建造及運營先進的垃圾發電設施帶動了上游垃圾清運行業及下游金屬和爐渣回收行業，形成完整的可持續廢物管理產業鏈。

Our integrated biomass utilisation projects are located in rural areas, where the Group's operations can foster local economic development through job opportunities and improved infrastructure services.

我們的生物質綜合利用項目都是位於市郊地區，因此我們的運營可以提供當地就業機會及改善基礎設施，從而推動當地經濟發展。

In addition, to foster local economic development and employment opportunities, the Group has paid special attention to local talents. During the Reporting Period, many new employees hired are from local regions.

另外，為了促進當地經濟發展和就業機會，我們特別關顧本地人才，報告期內聘請的許多新員工均來自本地。

SDG  
可持續發展目標



**Reduce inequality within  
and among countries**  
減少國家內部和國家之間的不  
平等

**10.2**

By 2030, empower and promote the social, economic and political inclusion of all irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

到二零三零年，增強所有人的權能，促進他們融入社會、經濟和政治生活，而不論其年齡、性別、殘疾與否、種族、族裔、出身、宗教信仰、經濟地位或其他任何區別。

**Our Contribution**  
我們的貢獻

We implement a fair and competitive remuneration and welfare system. The remuneration is determined based on qualification, experience, nature of work, performance and market conditions to strive to create equal employment opportunities.

我們實施公平及具競爭力的薪酬福利制度，薪酬乃根據資歷、經驗、工作性質、表現以及市場情況計算釐定，致力締造平等的就業機會。

We also pay special attention to adopting methods to ensure that the Group's project operations do not affect the dignity, rights, livelihood, or culture of indigenous peoples. Local ethnic minorities and Han ethnic group are treated with the same respect and treatment at work.

我們亦特別關注採取措施以確保項目運營不會影響原住民族的尊嚴、權利、生計或文化。當地少數民族和漢族在工作上均受到同樣尊重和對待。

**SDG**  
可持續發展目標



**Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels**  
創建和平、包容的社會以促進可持續發展，讓所有人都能訴諸司法，在各級建立有效、負責和包容的機構

**16.5**  
Substantially reduce corruption and bribery in all their forms.  
大幅減少一切形式的腐敗和賄賂行為。

**16.10**  
Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.  
根據國家立法和國際協議，確保公眾獲得各種資訊，保障基本自由。

**Our Contribution**  
我們的貢獻

To uphold the public's right to know and to appreciate the importance of public supervision, the Group promotes environmental justice by initiating disclosure of air emissions data of the Group's operating waste-to-energy projects on the public domain on an hourly basis.

為了維護公眾的知情權和公眾監督的重要性，我們通過按小時向大眾公佈各垃圾發電運營項目的煙氣排放數據，從而倡導環境正義。

In terms of social justice, the Group follows the requirements of ADB to mainstream social concerns into the entire project life cycle, thus ensuring that any resettlement associated with the Group's project development is properly managed in compliance with applicable laws, and all affected people are received fair and adequate compensation and rehabilitation. 在社會正義方面，我們遵循亞發行的要求，將社會關注點納入項目生命週期的整個階段，從而確保與項目開發相關的搬遷安置工作將按照適用法律進行妥善管理，受影響人士將得到公平、充分的補償和修復安排。

The Group also strives to promote a peaceful and inclusive working environment. The Group's *Staff Handbook* and *Code of Conduct* prohibit unethical issues such as corruption, bribery (including any form of facilitating payment), conflict of interest and discrimination within the Group's working environment. 我們亦致力創建和平及包容的工作環境。我們的《員工手冊》及《員工守則》禁止我們的工作環境內出現貪污、受賄、利益衝突和歧視等不道德問題。



## Long-term Targets of the Group

## 集團的長期目標

Material Topics 實質性議題	Targets 目標	Progress as at 31 December 2020 截至二零二零年 十二月三十一日的進度	Relevant SDGs 相關聯合國 可持續發展目標
<b>Technological R&amp;D</b> 科研及開發	To reach accumulated technological R&D investment of RMB1 billion throughout the 5-year period of 2018-2022. 科研及開發於五年間(二零一八至二零二二年)的累計投放資金達人民幣10億元。	Accumulated technological R&D investment reached RMB675 million (i.e. about 67.5% of the target achieved). 累計投放科研及開發資金達人民幣6.75億元(已完成目標約67.5%)。	
<b>Social Integration</b> 社區共融	To receive 120,000 visitors at our environmental protection facilities in every year throughout the 5-year period of 2018-2022. 環保設施於五年間(二零一八至二零二二年)每年接待參觀人數達120,000人次。	In 2020, the Group's environmental protection facilities received over 110,000 domestic and foreign visitors from all social circles. 於二零二零年,環保設施共接待國內外各界人士參觀考察超過110,000人次。  Due to the Pandemic, the number of visitors received during the Reporting Period was unable to meet the target. 受限於疫情,報告期內的接待參觀人次未能達標。	 
<b>Occupational Health and Safety</b> 職業健康與安全	To maintain the rate of work-related injuries of employees at 0.25 or below in every year throughout the 5-year period of 2018-2022. 員工工傷率於五年間(二零一八至二零二二年)每年維持在0.25或以下。	The rate of work-related injuries of employees was 0.08 in 2020. 二零二零年員工工傷率為0.08。	

## Review of 2020 Targets

## 二零二零年目標回顧

Aspect 範疇	Targets 目標	Achieved 已達成	
Environment 環境	Total GHG emissions offset 總溫室氣體排放抵銷量	increase by 10% compared with the previous year 較去年增長10%	✓
	Direct GHG emissions (scope 1) from sources other than household waste incineration <sup>(1)</sup> 由生活垃圾焚燒以外來源引致的 直接溫室氣體排放 (範疇一) <sup>(1)</sup>	not more than 375,000 tonnes CO <sub>2</sub> e 不多於375,000噸二氧化碳當量	✓
	Energy indirect GHG emissions (scope 2) 能源引致的間接溫室氣體排放 (範疇二)	not more than 480,000 tonnes CO <sub>2</sub> e 不多於480,000噸二氧化碳當量	✓
	Total non-renewable energy consumption 非再生能源消耗總量	not more than 5,400,000 GJ 不多於5,400,000吉焦	✓
	Total fresh water consumption 淡水消耗總量	not more than 77,000,000 m <sup>3</sup> 不多於77,000,000立方米	✓
	Total waste disposed 廢棄物棄置總量	not more than 1,400,000 tonnes 不多於1,400,000噸	✓

Note:

<sup>(1)</sup> GHG emissions (scope 1) from the incineration of household waste were calculated based on the fraction of fossil carbon in total carbon content of the household waste. The amount of such GHG emissions may substantially fluctuate from time to time due to the varying composition of the household waste received, which was beyond Everbright Environment's control.

附註：

<sup>(1)</sup> 生活垃圾焚燒引致的溫室氣體排放 (範疇一) 以生活垃圾中化石碳佔總碳的比例為計算基礎。因此，生活垃圾成分的差異可對此溫室氣體排放不時造成大幅波動，這不屬於光大環境的控制範圍之內。

Aspect 範疇	Targets 目標	Achieved 已達成	
<b>Society</b> 社會	Average training hours per employee 員工平均培訓時數	10 hours 10小時	✓
	Rate of work-related fatalities (employees) 員工工傷率	at a level not higher than the average of the past three years 不高於過去三年的平均水平	✓
	Overall customer satisfaction rate 客戶整體滿意度	Score 8.5 out of 10 8.5分 (滿分為10分)	✓
<b>Operation</b> 運營	Effective complaints from the public 有效的公眾投訴	not more than 5 cases 不多於5宗	✓
	Contractors and suppliers participated in sustainability risk assessment 參與可持續發展風險評估的供應商和承包商	amounting to 10% of the total contract values 佔總合同價值的10%	✓

## Key Statistics 主要數據

### Economic Performance

### 經濟表現

		2020 HK\$'000 港幣千元	2019 HK\$'000 港幣千元	2018 HK\$'000 港幣千元
<b>Direct Economic Value Generated</b>	<b>產生的直接經濟價值</b>			
Revenue	收益	<b>42,926,426</b>	37,557,635	27,227,998
Other Income <sup>(1)</sup>	其他收益 <sup>(1)</sup>	<b>717,493</b>	765,649	738,914
Other Income and gains/(losses), net	其他收入及收益／(虧損)淨額	<b>(621,614)</b>	(30,211)	(57,139)
<b>Economic Value Distributed</b>	<b>分配的經濟價值</b>			
Staff Costs	員工開支	<b>2,874,560</b>	2,484,700	1,577,256
Other Costs <sup>(1)</sup>	其他成本 <sup>(1)</sup>	<b>27,282,060</b>	24,840,127	17,330,171
Finance Costs	財務費用	<b>2,279,149</b>	1,830,798	1,376,010
Dividends	股息	<b>1,842,893</b>	1,597,174	1,275,082
Taxes <sup>(2)</sup>	稅項 <sup>(2)</sup>	<b>924,496</b>	644,192	507,194
Profit attributable to non-controlling interests	非控股權益應佔盈利	<b>1,211,097</b>	1,164,871	950,540
Charitable donations <sup>(3)</sup>	慈善捐款 <sup>(3)</sup>	<b>14,184</b>	10,772	7,558
<b>Economic Value Retained</b>	<b>留存的經濟價值</b>			
Retained for Everbright Environment's sustainable operation and development	留存作光大環境的可持續運營和發展	<b>6,593,866</b>	5,720,439	4,885,962

### Operational Performance

### 運營表現

		Unit 單位	2020	2019	2018
<b>Business Performance</b>	<b>業務表現</b>				
On-grid green electricity supplied	綠色上網電量	kWh 千瓦時	<b>15,004,327,000</b>	10,713,049,000	8,294,419,000
Steam supplied	蒸汽供應量	Tonne 噸	<b>1,344,000</b>	819,000	363,000
Household waste processed	生活垃圾處理量	Tonne 噸	<b>31,545,000</b>	24,739,000	20,062,000
Biomass raw materials processed	生物質原材料處理量	Tonne 噸	<b>6,708,000</b>	4,636,000	3,160,000
Hazardous waste and solid waste processed	危廢及固廢處置量	Tonne 噸	<b>182,000</b>	198,000	127,000
Waste water treated <sup>(4)</sup>	污水處理 <sup>(4)</sup>	m <sup>3</sup> 立方米	<b>1,559,096,000</b>	1,433,805,000	1,271,248,000
Leachate treated <sup>(5)</sup>	滲濾液處理量 <sup>(5)</sup>	m <sup>3</sup> 立方米	<b>7,094,000</b>	5,210,000	4,349,000
COD reduction	COD減排量	Tonne 噸	<b>579,000</b>	513,000	692,000
Average on-grid green electricity supplied per tonne of waste (Environmental Energy – waste-to-energy projects)	平均每噸垃圾綠色上網電量 (環保能源—垃圾發電項目)	kWh/Tonne 千瓦時／噸	<b>320.46</b>	302.75	297.01
<b>Project Overview</b>	<b>項目概覽</b>				
Total number of projects	項目總數	No. 個	<b>458</b>	399	324

Environmental Performance<sup>(6)</sup>環境表現<sup>(6)</sup>

		Unit 單位	2020	2019	2018
<b>GHG Emissions<sup>(7)</sup></b>		<b>溫室氣體排放<sup>(7)</sup></b>			
Scope 1 (direct emissions)	範疇一 (直接排放)	Tonne CO <sub>2</sub> e 噸二氧化碳當量	<b>10,717,354.60</b>	8,992,913.41 (re-stated) (經重列)	8,833,333.51 (re-stated) (經重列)
— incineration of household waste <sup>(8)</sup>	— 生活垃圾焚燒 <sup>(8)</sup>	Tonne CO <sub>2</sub> e 噸二氧化碳當量	<b>10,548,374.40</b>	8,852,663.65 (re-stated) (經重列)	8,746,843.59 (re-stated) (經重列)
— other sources	— 其他來源	Tonne CO <sub>2</sub> e 噸二氧化碳當量	<b>168,980.20</b>	140,249.76 (re-stated) (經重列)	86,489.92 (re-stated) (經重列)
Scope 2 (energy indirect emissions)	範疇二 (能源引致的間接排放)	Tonne CO <sub>2</sub> e 噸二氧化碳當量	<b>454,575.00</b>	344,331.55 (re-stated) (經重列)	367,134.02 (re-stated) (經重列)
Scope 3 (other indirect emissions) <sup>(9)</sup>	範疇三 (其他間接排放) <sup>(9)</sup>	Tonne CO <sub>2</sub> e 噸二氧化碳當量	<b>42,076.01</b>	13,554.36	27,317.40
Total GHG emissions	溫室氣體排放總量	Tonne CO <sub>2</sub> e 噸二氧化碳當量	<b>11,214,005.61</b>	9,350,799.32 (re-stated) (經重列)	9,227,784.92 (re-stated) (經重列)
GHG emissions intensity	溫室氣體排放強度	kg CO <sub>2</sub> e/kWh 公斤二氧化碳當量 /千瓦時	<b>0.75</b>	0.87 (re-stated) (經重列)	1.11 (re-stated) (經重列)
GHG emissions offset <sup>(10)</sup>	溫室氣體排放抵銷量 <sup>(10)</sup>	Tonne CO <sub>2</sub> e 噸二氧化碳當量	<b>15,273,840.27</b>	10,561,808.35 (re-stated) (經重列)	9,456,250.18 (re-stated) (經重列)
GHG emissions reductions <sup>(11)</sup>	溫室氣體減排量 <sup>(11)</sup>	Tonne CO <sub>2</sub> e 噸二氧化碳當量	<b>4,059,834.66</b>	1,211,009.03	228,465.25
<b>Key Air Emissions<sup>(12)</sup></b>		<b>主要煙氣排放<sup>(12)</sup></b>			
Particulate matter	顆粒物	Tonne 噸	<b>457.09</b>	330.13	275.82
Sulphur dioxide (SO <sub>2</sub> )	二氧化硫	Tonne 噸	<b>2,595.33</b>	1,658.34	1,497.44
Nitrogen oxides (NO <sub>x</sub> )	氮氧化物	Tonne 噸	<b>15,463.35</b>	9,337.01	7,993.22
<b>Direct Energy Consumption<sup>(13)</sup></b>		<b>直接能源消耗<sup>(13)</sup></b>			
Natural gas	天然氣	GJ 吉焦	<b>1,032,927.88</b>	123,653.59	64,175.16
Diesel	柴油	GJ 吉焦	<b>850,165.78</b>	651,514.50	2,425,927.64
Gasoline	汽油	GJ 吉焦	<b>367,534.63</b>	85,336.74	468,537.30
Liquefied Petroleum Gas	液化石油氣	GJ 吉焦	<b>253.50</b>	70,197.29	Data not available 沒有相關數據
Biogas	沼氣	GJ 吉焦	<b>104.56</b>	235,576.41	181,488.69
Non-renewable electricity	非再生能源電力	GJ 吉焦	<b>4,897,377.95</b>	2,090,069.26	1,687,357.22
Renewable electricity	可再生電力	GJ 吉焦	<b>8,653,699.65</b>	7,351,678.61	3,618,791.23
Total non-renewable energy consumed	非再生能源消耗總量	GJ 吉焦	<b>4,897,377.95</b>	3,020,771.38	4,645,997.32
Non-renewable energy intensity	非再生能源消耗強度	kJ/kWh 千焦/千瓦時	<b>326.40</b>	281.97	560.14
Total energy consumed	總能源消耗量	GJ 吉焦	<b>13,551,077.61</b>	10,608,026.40	8,446,277.24
Energy intensity	能源強度	kJ/kWh 千焦/千瓦時	<b>903.14</b>	990.20	1,018.31

## Key Statistics

## 主要數據

		Unit 單位	2020	2019	2018
<b>Water Consumption</b>		<b>耗水</b>			
Total freshwater consumed	淡水消耗總量	m <sup>3</sup> 立方米	<b>61,859,696.87</b>	45,317,154.05	49,894,568.65
Freshwater intensity	淡水消耗強度	m <sup>3</sup> /kWh 立方米/千瓦時	<b>0.004</b>	0.004	0.01
<b>Hazardous Waste Generated</b>		<b>有害廢棄物產生</b>			
Fly ash generated from waste-to-energy projects and integrated biomass utilisation projects (waste-to-energy)	垃圾發電項目和生物質綜合利用項目(垃圾發電)所產生的飛灰	Tonne 噸	<b>891,953.08</b>	678,567.40	634,277.55
Fly ash and bottom ash generated from hazardous waste incineration projects	危廢處置項目所產生的飛灰及爐渣	Tonne 噸	<b>85,919.91</b>	8,077.69	7,633.81
Total hazardous waste generated	有害廢棄物產生總量	Tonne 噸	<b>977,872.99</b>	686,645.09	641,911.36
Hazardous waste intensity	有害廢棄物強度	Tonne/MWh 噸/兆瓦時	<b>0.07</b>	0.06	0.08
<b>Non-Hazardous Waste Generated</b>		<b>無害廢棄物產生</b>			
Furnace ash generated from integrated biomass utilisation projects (biomass)	生物質綜合利用項目(生物質)所產生的爐灰	Tonne 噸	<b>362,950.97</b>	100,485.23	163,431.90
Bottom ash generated from waste-to-energy projects and integrated biomass utilisation projects	垃圾發電項目和生物質綜合利用項目所產生的爐渣	Tonne 噸	<b>6,891,301.07</b>	4,835,991.34	4,337,424.15
Sludge generated from waste water treatment projects, waste-to-energy projects, solid waste treatment projects, and integrated biomass utilisation projects <sup>(14)</sup>	污水處理項目、垃圾發電項目、固廢處置項目和生物質綜合利用項目所產生的污泥 <sup>(14)</sup>	Tonne 噸	<b>1,808,958.91</b>	1,158,264.40	980,411.55
General waste generated <sup>(15)</sup>	一般廢物產生量 <sup>(15)</sup>	Tonne 噸	<b>3,248.78</b>	3,230.45	604.00
Total non-hazardous waste generated	無害廢棄物產生總量	Tonne 噸	<b>9,066,459.73</b>	6,097,971.42	5,481,871.60
Non-hazardous waste intensity	無害廢棄物強度	Tonne/MWh 噸/兆瓦時	<b>0.60</b>	0.57	0.66

## Water Withdrawal, Discharge and Consumption

## 取水量、排水量及耗水量

		2020	
		All areas 所有地區	Areas with water stress 具水資源壓力 的地區
<b>Water Withdrawal</b> 取水量			
<b>Water withdrawal by source (m<sup>3</sup>)</b> 依來源劃分取水量 (立方米)	<b>Surface water (total)</b> 地表水 (總量)	<b>31,847,531.17</b>	<b>12,307,742.90</b>
	≤1,000 mg/L Total Dissolved Solids ≤1,000 mg/L總溶解固體	31,847,531.17	12,307,742.90
	>1,000 mg/L Total Dissolved Solids >1,000 mg/L總溶解固體	–	–
	<b>Groundwater (total)</b> 地下水 (總量)	<b>2,032,614.00</b>	<b>1,209,398.40</b>
	≤1,000 mg/L Total Dissolved Solids ≤1,000 mg/L總溶解固體	2,032,614.00	1,209,398.40
	>1,000 mg/L Total Dissolved Solids >1,000 mg/L總溶解固體	–	–
	<b>Seawater (total)</b> 海水 (總量)	–	–
	≤1,000 mg/L Total Dissolved Solids ≤1,000 mg/L總溶解固體	–	–
	>1,000 mg/L Total Dissolved Solids >1,000 mg/L總溶解固體	–	–
	<b>Produced water (total)</b> 產出水 (總量)	–	–
	≤1,000 mg/L Total Dissolved Solids ≤1,000 mg/L總溶解固體	–	–
	>1,000 mg/L Total Dissolved Solids >1,000 mg/L總溶解固體	–	–
	<b>Third-party water (total)</b> 第三方的水 (總量)	<b>27,979,551.70</b>	<b>13,375,326.43</b>
	≤1,000 mg/L Total Dissolved Solids ≤1,000 mg/L總溶解固體	27,979,551.70	13,375,326.43
>1,000 mg/L Total Dissolved Solids >1,000 mg/L總溶解固體	–	–	
<b>Total third-party water withdrawal by withdrawal source</b> 依取水來源劃分第三方的 總取水量			
Surface water 地表水	27,979,551.70	13,375,326.43	
Groundwater 地下水	0	0	
Seawater 海水	0	0	
Produced water 產出水	0	0	
<b>Total water withdrawal (m<sup>3</sup>)</b> 總取水量 (立方米)	<b>Surface water (total) + groundwater (total) + seawater (total) + produced water (total) + third-party water (total)</b> 地表水 (總量) + 地下水 (總量) + 海水 (總量) + 產出水 (總量) + 第三方的水 (總量)	<b>61,859,696.87</b>	<b>26,892,467.73</b>
<b>Water consumption</b> 耗水量			
<b>Total freshwater consumption (m<sup>3</sup>)</b> 淡水消耗總量 (立方米)		61,859,696.87	26,892,467.73

Key Statistics  
主要數據

		2020	
		All areas 所有地區	Areas with water stress 具水資源壓力 的地區
<b>Water discharge</b> 排水量			
<b>Water discharge by destination (m<sup>3</sup>)</b> 依終點劃分排水量 (立方米)	Surface water 地表水	1,190,225,366.21	1,111,074,057.00
	Groundwater 地下水	–	–
	Seawater 海水	154,517,183.00	154,517,183.00
	Third-party water (total) 第三方的水 (總量)	109,587,495.25	101,566,006.08
	Third-party water sent for use to other organisations 供其他組織使用的第三方的水	11,638,473.00	10,636,412.00
<b>Total water discharge (m<sup>3</sup>)</b> 總排水量 (立方米)	<b>Surface water + groundwater + seawater + third-party water (total)</b> 地表水 + 地下水 + 海水 + 第三方的水 (總量)	<b>1,454,230,044.46</b>	<b>1,367,157,246.08</b>
<b>Water discharge by freshwater and other water (m<sup>3</sup>)</b> 依總溶解固體濃度劃分之排水量 (立方米)	≤1,000 mg/L Total Dissolved Solids ≤1,000 mg/L總溶解固體	1,299,712,861.46	1,212,640,063.08
	>1,000 mg/L Total Dissolved Solids >1,000 mg/L總溶解固體	154,517,183.00	154,517,183.00



## Social Performance

## 社會表現

Employee Profile<sup>(16)</sup>員工概況<sup>(16)</sup>

				2020	2019	2018			
<b>Total number of employees</b>		<b>員工總數</b>		<b>12,732</b>	13,250	9,821			
<b>By gender</b>		<b>按性別劃分</b>							
Male		男性		<b>9,812</b>	10,292	7,686			
Female		女性		<b>2,920</b>	2,958	2,135			
<b>By age</b>		<b>按年齡劃分</b>							
30 and below		30歲及以下		<b>5,037</b>	5,828	4,488			
31 – 40		31 – 40歲		<b>5,475</b>	5,124	3,653			
41 – 50		41 – 50歲		<b>1,690</b>	1,742	1,319			
51 and above		51歲及以上		<b>530</b>	556	361			
<b>By Employment Contract</b>		<b>按合約類別劃分</b>							
Permanent contract	長期合約	Male	男性	<b>2,017</b>	1,694 (re-stated) (經重列)	1,006 (re-stated) (經重列)			
			Female	<b>687</b>	599 (re-stated) (經重列)	376 (re-stated) (經重列)			
		Mainland China	中國大陸	<b>2,159</b>	1,886	1,309			
			Hong Kong	香港	<b>73</b>	68	68		
			Singapore	新加坡	<b>4</b>	4	0		
			Vietnam	越南	<b>17</b>	3	5		
			Poland	波蘭	<b>451</b>	332	Data not available 沒有相關數據		
		Temporary/ fixed-term contract	臨時／定期合約	Male	男性	<b>7,783</b>	8,595 (re-stated) (經重列)	6,680 (re-stated) (經重列)	
					Female	<b>2,245</b>	2,358 (re-stated) (經重列)	1,759 (re-stated) (經重列)	
				Mainland China	中國大陸	<b>9,988</b>	10,808	8,421	
					Hong Kong	香港	<b>0</b>	0	0
					Singapore	新加坡	<b>0</b>	0	4
					Vietnam	越南	<b>40</b>	46	14
Poland	波蘭				<b>0</b>	99	Data not available 沒有相關數據		

Key Statistics  
主要數據

		2020	2019	2018
<b>By employment type</b>	<b>按受聘類別劃分</b>			
Full-time	全職	12,732	13,249	9,818
Part-time	兼職	0	1	3
<b>By employee ranking</b>	<b>按員工職級劃分</b>			
Senior management	高級管理人員	465	574	477
Middle-level management	中層管理人員	1,697	1,579	1,264
General and technical staff	一般及技術員工	10,570	11,097	8,080
<b>By location</b>	<b>按地區劃分</b>			
Mainland China	中國大陸	12,147	12,695	9,730
Hong Kong	香港	73	71	68
Singapore	新加坡	4	4	4
Vietnam	越南	57	49	19
Poland	波蘭	451	431	Data not available 沒有相關數據
Local Employees <sup>(17)</sup>	本地員工 <sup>(17)</sup>	9,620	9,965	7,341
Non-local Employees <sup>(17)</sup>	非本地員工 <sup>(17)</sup>	3,112	3,285	2,480
<b>By ethnicity</b>	<b>按民族劃分</b>			
Chinese (Han)	中國人 (漢族)	11,908	12,458	9,641
Chinese (Ethnic minorities)	中國人 (少數族裔)	316	312	163
Vietnamese (Non-minority group)	越南人 (非少數族裔)	57	49	17
Polish (Non-minority group)	波蘭人 (非少數族裔)	451	431	Data not available 沒有相關數據

Employee Diversity

員工多元化

		2020
<b>Percentage of female employees by positions</b>	<b>按職位劃分的女性員工比率</b>	
All management positions	所有管理人員	16.70%
Senior management	高級管理人員	18.03%
Middle-level management	中級管理人員	11.83%
Management in revenue-generating functions	創收職能中的管理人員	17.49%
STEM-related positions	科學、科技、工程及數學相關職位	33.33%

		2020	
<b>Percentage of employees by ethnicity</b>	<b>按民族劃分的員工比率</b>		
Chinese (Han)	中國人 (漢族)	All full-time employee 所有全職員工 93.53%	All management positions 所有管理人員 97.22%
Chinese (Ethnic minorities)	中國人 (少數族裔)	2.48%	2.04%
Vietnamese (Non-minority group)	越南人 (非少數族裔)	0.45%	0.05%
Polish (Non-minority group)	波蘭人 (非少數族裔)	3.54%	0.69%

		2020
Percentage of employees with disabilities	殘疾員工比率	0.16%

## New Hires and Employee Turnover

## 新聘及離職員工

		2020		2019		2018	
		Total number of persons 總人數	Percentage of employees in this category 佔該類別員工百分比	Total number of persons 總人數	Percentage of employees in this category 佔該類別員工百分比	Total number of persons 總人數	Percentage of employees in this category 佔該類別員工百分比
<b>Total number of new hires</b>	<b>新聘員工總數</b>	<b>1,978</b>	<b>15.54%</b>	4,227	31.9%	2,914	29.67%
<b>By gender</b>	<b>按性別劃分</b>						
Male	男性	1,570	16.00%	3,263	31.70%	2,317	30.15%
Female	女性	408	13.97%	964	32.59%	597	27.96%
<b>By age</b>	<b>按年齡劃分</b>						
30 and below	30歲及以下	1,155	22.93%	2,399	41.16%	1,809	40.31%
31 – 40	31 – 40歲	681	12.44%	1,466	28.61%	906	24.80%
41 – 50	41 – 50歲	119	7.04%	299	17.16%	171	12.96%
51 and above	51歲及以上	23	4.34%	63	11.33%	28	7.76%
<b>By location</b>	<b>按地區劃分</b>						
Mainland China	中國內地	1,900	15.64%	4,132	32.55%	2,899	29.79%
Hong Kong	香港	10	13.7%	6	8.45%	13	19.12%
Singapore	新加坡	0	0%	1	25.00%	0	0%
Vietnam	越南	17	29.82%	18	36.73%	2	10.53%
Poland	波蘭	51	11.31%	70	16.24%		
						Data not available 沒有相關數據	Data not available 沒有相關數據
Local Employees <sup>(17)</sup>	本地員工 <sup>(17)</sup>	1,486	15.45%	3,126	31.37%	2,106	28.69%
Non-local Employees <sup>(17)</sup>	非本地員工 <sup>(17)</sup>	492	15.81%	1,101	33.52%	808	32.58%
<b>Total number of employee turnover (resigned/retired)</b>	<b>員工流失(離職/退休)總數</b>	<b>2,094</b>	<b>16.45%</b>	1,168	8.82%	801	8.16%
<b>By gender</b>	<b>按性別劃分</b>						
Male	男性	1,737	17.70%	932	9.06%	634	8.25%
Female	女性	357	12.23%	236	7.98%	167	7.82%
<b>By age</b>	<b>按年齡劃分</b>						
30 and below	30歲及以下	1,011	20.07%	594	10.19%	422	9.40%
31 – 40	31 – 40歲	771	14.08%	398	7.77%	246	6.73%
41 – 50	41 – 50歲	230	13.61%	105	6.03%	70	5.31%
51 and above	51歲及以上	82	15.47%	71	12.77%	63	17.45%
<b>By location</b>	<b>按地區劃分</b>						
Mainland China	中國內地	2,038	16.78%	1,067	8.40%	797	8.19%
Hong Kong	香港	5	6.85%	6	8.45%	4	5.88%
Singapore	新加坡	0	0%	1	25.00%	0	0%
Vietnam	越南	15	26.32%	12	24.49%	0	0%
Poland	波蘭	36	7.98%	82	19.03%		
						Data not available 沒有相關數據	Data not available 沒有相關數據

## Training and Development

## 培訓及發展

		2020 Hours 小時	2019 Hours 小時	2018 Hours 小時
<b>Total training hours</b>	<b>總培訓時數</b>	<b>875,520.98</b>	367,447	774,006
<b>Average training hours</b>	<b>人均培訓時數</b>	<b>68.77</b>	27.73	78.81
<b>By gender</b>	<b>按性別劃分</b>			
Male	男性	61.87	28.14	79.12
Female	女性	91.95	26.31	77.72
<b>By employee ranking</b>	<b>按員工職級劃分</b>			
Senior management	高級管理人員	26.34	18.94	58.89
Middle-level management	中層管理人員	28.17	23.83	71.32
General and technical staff	一般及技術員工	77.15	28.74	81.16

## Health and Safety

## 健康與安全

		2020	2019	2018
<b>Employees</b>	<b>員工</b>			
Number of work-related fatalities	因工死亡個案	0	0	2
Rate of work-related fatalities <sup>(18)</sup>	因工死亡率 <sup>(18)</sup>	0	0	0.02
Number of occupational disease cases	職業病個案	0	0	0
Number of high-consequence work-related injuries (excluding fatalities) <sup>(19)</sup>	嚴重工傷個案 (不包括死亡個案) <sup>(19)</sup>	0	0	3
Rate of high-consequence work-related injuries (excluding fatalities) <sup>(20)</sup>	嚴重工傷率 (不包括死亡個案) <sup>(20)</sup>	0	0	0.03
Number of work-related injuries <sup>(21)</sup>	工傷個案 <sup>(21)</sup>	10	24	12
Rate of work-related injuries <sup>(22)</sup>	工傷率 <sup>(22)</sup>	0.08	0.18	0.13
Days of absence from work due to work-related injury	因工傷缺勤日數	582	1,343	651
<b>Third-Party Contractors and Sub-Contractors Working On-site<sup>(23)</sup></b>	<b>第三方承包商及分商駐場工人<sup>(23)</sup></b>			
Number of work-related fatalities	因工死亡個案	1	1	0
Rate of work-related fatalities <sup>(18)</sup>	因工死亡率 <sup>(18)</sup>	0.01	0.01	0
Number of occupational disease cases	職業病個案	0	0	0
Number of high-consequence work-related injuries (excluding fatalities) <sup>(19)</sup>	嚴重工傷個案 (不包括死亡個案) <sup>(19)</sup>	0	0	0
Rate of high-consequence work-related injuries (excluding fatalities) <sup>(20)</sup>	嚴重工傷率 (不包括死亡個案) <sup>(20)</sup>	0	0	0
Number of work-related injuries <sup>(21)</sup>	工傷個案 <sup>(21)</sup>	5	6	7
Rate of work-related injuries <sup>(22)</sup>	工傷率 <sup>(22)</sup>	0.04	0.07	0.12
Days of absence from work due to work-related injury	因工傷缺勤日數	175	304	109

## Remuneration

## 薪酬

		2020	2019	2018
<b>Annual Remuneration and Ratio</b>	<b>年度總薪酬及比例數據</b>			
Total remuneration of the highest-paid individual (HK\$)	最高薪人士的薪酬總額 (港幣元)	6,112,130.99	7,808,000.00	7,174,400.00
The median of the total remuneration of all employees (excluding the highest-paid individual) (HK\$)	全體員工薪酬總額的中位數 (不包括最高薪人士) (港幣元)	107,844.48	91,359.77	90,215.48
Ratio of the total remuneration of the highest-paid individual to the median of the total remuneration of all employees (excluding the highest-paid individual)	最高薪人士的薪酬總額與全體員工 (不包括最高薪人士) 薪酬總額的中位數的比例	56.68:1	85.46:1	79.53:1
Ratio of the annual percentage increase in total remuneration of the highest-paid individual to the median percentage increase in annual total remuneration of all employees (excluding the highest-paid individual)	最高薪人士薪酬總額的年度百分比增長與全體員工 (不包括最高薪人士) 薪酬總額中位數的年度百分比增長的比例	-33.68:1	6.96:1	4.37:1

		2020	2019	2018
<b>Average Remuneration by Employee Ranking (HK\$) 各級員工職級的平均薪酬 (港幣)</b>				
<b>Senior Management 高級管理人員</b>				
Basic salary of senior management (male)	高級管理人員的基本工資 (男)	<b>302,245.66</b>	279,807.95	Data not available 沒有相關數據
Basic salary of senior management (female)	高級管理人員的基本工資 (女)	<b>307,199.02</b>	319,200.96	Data not available 沒有相關數據
Ratio of the basic salary of senior management (female) to the basic salary of senior management (male)	高級管理人員的基本工資 (女) 與高級管理人員的基本工資 (男) 的比例	<b>1.02:1</b>	1.14:1	Data not available 沒有相關數據
Basic salary and bonus of senior management (male)	高級管理人員的基本工資和獎金 (男)	<b>520,581.94</b>	480,660.75	503,071.59
Basic salary and bonus of senior management (female)	高級管理人員的基本工資和獎金 (女)	<b>562,143.08</b>	568,618.08	416,087.14
Ratio of the basic salary and bonus of senior management (female) to the basic salary and bonus of senior management (male)	高級管理人員的基本工資和獎金 (女) 與高級管理人員的基本工資和獎金 (男) 的比例	<b>1.08:1</b>	1.18:1	0.83:1
<b>Middle-Level Management 中層管理人員</b>				
Basic salary of middle-level management (male)	中層管理人員的基本工資 (男)	<b>196,558.08</b>	184,359.41	Data not available 沒有相關數據
Basic salary of middle-level management (female)	中層管理人員的基本工資 (女)	<b>170,140.23</b>	168,640.59	Data not available 沒有相關數據
Ratio of the basic salary of middle-level management (female) to the basic salary of middle-level management (male)	中層管理人員的基本工資 (女) 與中層管理人員的基本工資 (男) 的比例	<b>0.87:1</b>	0.91:1	Data not available 沒有相關數據
Basic salary and bonus of middle-level management (male)	中層管理人員的基本工資和獎金 (男)	<b>291,846.48</b>	278,859.53	253,679.25
Basic salary and bonus of middle-level management (female)	中層管理人員的基本工資和獎金 (女)	<b>259,936.01</b>	252,064.74	242,957.34
Ratio of the basic salary and bonus of middle-level management (female) to the basic salary and bonus of middle-level management (male)	中層管理人員的基本工資和獎金 (女) 與中層管理人員的基本工資和獎金 (男) 的比例	<b>0.89:1</b>	0.90:1	0.96:1
<b>General and Technical Staff 一般及技術員工</b>				
Basic salary of general and technical staff (male)	一般及技術員工的基本工資 (男)	<b>95,261.21</b>	92,922.97	Data not available 沒有相關數據
Basic salary of general and technical staff (female)	一般及技術員工的基本工資 (女)	<b>79,943.62</b>	78,521.80	Data not available 沒有相關數據
Ratio of the basic salary of general and technical staff (female) to the basic salary of general and technical staff (male)	一般及技術員工的基本工資 (女) 與一般及技術員工的基本工資 (男) 的比例	<b>0.84:1</b>	0.85:1	Data not available 沒有相關數據
Basic salary and bonus of general and technical staff (male)	一般及技術員工的基本工資和獎金 (男)	<b>120,472.38</b>	116,027.47	99,998.80
Basic salary and bonus of general and technical staff (female)	一般及技術員工的基本工資和獎金 (女)	<b>102,758.62</b>	99,621.18	91,597.86
Ratio of the basic salary and bonus of general and technical staff (female) to the basic salary and bonus of general and technical staff (male)	一般及技術員工的基本工資和獎金 (女) 與一般及技術員工的基本工資和獎金 (男) 的比例	<b>0.85:1</b>	0.86:1	0.92:1

## Notes:

- (1) Represents other costs, share of profits of joint ventures and share of profits/losses of associates but excludes depreciation and amortisation for the year.
- (2) Represents current income tax and the under or over the provision in prior years but excludes deferred tax for the year.
- (3) All donations in 2020 were in cash.
- (4) Waste water treatment includes all operating municipal and industrial waste water treatment projects under environmental water.
- (5) Leachate treatment includes all operating waste-to-energy projects and integrated biomass utilisation projects.
- (6) Due to rounding off, the numbers may not add up to the total, and there may be a slight discrepancy between the items of the statistics table and the corresponding analysed data as shown in other chapters of the Report.
- (7) The calculation of GHG emissions and offset is referenced to CDM methodologies *ACM0022: Alternative Waste Treatment Processes (Version 2.0)*, *AM0080: Mitigation of Greenhouse Gases Emissions with Treatment of Wastewater in Aerobic Wastewater Treatment Plants (Version 1.0)*, *ACM0018: Electricity Generation from Biomass Residues in Power-Only Plants (Version 3.0)*, *ACM0006: Electricity and Heat Generation from Biomass (Version 14.0)* and *AMS-I.C.: Thermal Energy Production With or Without Electricity (Version 20.0)*.
- (8) GHG emissions (scope 1) from the incineration of household waste are calculated based on the fraction of fossil carbon in total carbon content of the household waste. The amount of such GHG emissions may substantially fluctuate from time to time due to the varying composition of the household waste received, which is beyond Everbright Environment's control. The calculations of waste-to-energy and integrated biomass utilisation projects have undergone substantial changes during the Reporting Period. Please refer to the "Environmental Protection" chapter for details.
- (9) GHG emissions from air travel are calculated by International Civil Aviation Organization Carbon Emissions Calculator.
- (10) Due to revision of the calculation method, there may be some discrepancies between the data reported and those stated in our Annual Report 2020.
- (11) GHG emissions reductions is GHG emissions offset minus total GHG emissions.

## 附註：

- (1) 代表年度的其他成本、所佔合營企業盈利及所佔聯營公司虧損，但不包括年度的折舊及攤銷。
- (2) 代表本期所得稅及過往年度撥備過剩／撥備不足，但不包括本年度的遞延稅項。
- (3) 二零二零年所有捐款均為現金。
- (4) 污水處理包括環保水務所有運營生活及工業污水處理項目。
- (5) 滲濾液處理包括所有運營垃圾發電項目及生物質綜合利用項目。
- (6) 由於捨入關係，數值加起來可能不等於總計，而表內個別項目的數字經分析計算後可能與本報告其他章節內的相關數據略有出入。
- (7) 溫室氣體的排放及抵銷的計算參照CDM方法《ACM0022：多選垃圾處理方式（2.0版）》、《AM0080：透過在有氧污水處理廠處理污水減少溫室氣體排放（1.0版）》、《ACM0018：純發電廠利用生物廢棄物發電（3.0版）》、《ACM0006：生物質熱電聯供（14.0版）》及《AMS-I.C.：電力或非電力用戶提供熱能（20.0版）》。
- (8) 生活垃圾焚燒引致的溫室氣體排放（範疇一）以生活垃圾中化石碳佔總碳的比例為計算基礎。因此，生活垃圾成分的差異可對此溫室氣體排放不時造成大幅波動，這不屬於光大環境的控制範圍之內。報告期間，垃圾發電及生物質綜合利用項目的相關計算經重大更改，詳請參閱「環境保護」章節。
- (9) 飛機差旅的溫室氣體排放以國際民航組織的碳排放計算器計算得出。
- (10) 由於估算方法的修訂，部分數據與我們的二零二零年年報內所註或有出入。
- (11) 溫室氣體減排量是指溫室氣體排放抵銷量減去溫室氣體排放總量。

(12) Includes all projects of environmental energy and greentech sectors that involve combustion and incineration operations.	(12) 包括環保能源及綠色環保板塊的所有燃燒和焚燒運營項目。
(13) Relevant energy conversion factors from <i>China Energy Statistical Yearbook 2018</i> are adopted.	(13) 能量轉換計算採用《中國能源統計年鑒2018》的相關能量轉換因子。
(14) Includes all operating environmental energy's waste-to-energy projects, greentech's integrated biomass utilisation projects and sold waste treatment projects, and environmental water's waste water treatment projects.	(14) 包括環保能源所有的運營垃圾發電項目、綠色環保的生物質合利用項目和固廢處置項目，及環保水務所有的運營污水處理項目。
(15) Does not include operations in Vietnam.	(15) 不包括越南的運營。
(16) Data as at 31 December 2020.	(16) 數據截至二零二零年十二月三十一日。
(17) Employees hired from the same province in Mainland China are regarded as local employees, whereas the employees hired from other provinces in Mainland China are regarded as non-local employees.	(17) 在中國內地同省受聘的員工被視為本地員工，而在中國內地外省受聘的員工則被視為非本地員工。
(18) Rate of work-related fatalities = (Total number of fatalities as a result of work-related injury/Total working hours) x 200,000.	(18) 因工死亡率 = (因工傷所造成的死亡個案總計 / 工作總時數) x 200,000。
(19) High-consequence work-related injuries (excluding fatalities) refer to work-related injuries that result in an injury from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within 6 months.	(19) 嚴重工傷(不包括死亡個案)是指導致工作者無法或難於六個月內恢復至受傷前健康狀態的工傷。
(20) Rate of high-consequence work-related injuries (excluding fatalities) = (Total number of high-consequence work-related injuries (excluding fatalities)/Total working hours) x 200,000.	(20) 嚴重工傷率(不包括死亡個案) = (嚴重工傷個案總計(不包括死亡個案) / 工作總時數) x 200,000。
(21) Work-related injuries also include work-related fatalities and high-consequence work-related injuries.	(21) 工傷亦包含因工死亡及嚴重工傷。
(22) Rate of work-related injuries = (Total number of work-related injuries/Total working hours) x 200,000.	(22) 工傷率 = (工傷個案總計 / 工作總時數) x 200,000。
(23) Excludes construction workers of projects under construction.	(23) 不包括在建項目的建築工人。



## VERIFICATION STATEMENT

### Scope and Objective

Hong Kong Quality Assurance Agency ("HKQAA") was commissioned by China Everbright Environment Group Limited ("Everbright Environment") to undertake an independent verification for the Sustainability Report 2020 (hereinafter called the "Report"). The Report stated the sustainability performance of Everbright Environment in the period of 1<sup>st</sup> January 2020 to 31<sup>st</sup> December 2020.

The aim of this verification is to provide a reasonable assurance on the reliability of the Report contents. The Report has been prepared in accordance with the Global Reporting Initiative ("GRI") Standards: Comprehensive option, as well as Rule 13.91 and Appendix 27 "Environmental, Social and Governance Reporting Guide ("ESG Reporting Guide")" of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "SEHK Listing Rules").

### Level of Assurance and Methodology

The process applied in this verification was based on the International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board. Our evidence gathering process was designed to obtain a reasonable level of assurance as set out in the standard for the purpose of devising the verification conclusion. The extent of this verification process undertaken covered the criteria set in the GRI Standards: Comprehensive option, and the SEHK Listing Rules (Rule 13.91 and Appendix 27 the ESG Reporting Guide).

HKQAA's verification process included verifying the mechanisms for collecting, calculating and reporting the sustainability performance information, reviewing relevant documented information, interviewing responsible personnel with accountability for preparing the Report and verifying selected representative samples of data and information. Raw data and supporting evidence of the selected samples were also thoroughly examined during the verification process.

### Independence

Everbright Environment is responsible for the collection and preparation of the information presented. HKQAA did not involve in the collection and calculation of data or the compilation of the Report contents. Our verification activities were entirely independent and there was no relationship between HKQAA and Everbright Environment that would affect the impartiality of the verification.

### Conclusion

Based on the verification results and in accordance with the verification procedures undertaken, HKQAA has obtained reasonable assurance and is in the opinion that:

- The Report has been prepared in accordance with the GRI Standards: Comprehensive option, as well as the SEHK Listing Rules (Rule 13.91 and Appendix 27 the ESG Reporting Guide);
- The Report illustrates the sustainability performance of Everbright Environment, covering all material aspects, in a balanced, clear, comparable and timely manner; and
- The data and information disclosed in the Report are reliable and complete.

Nothing has come to HKQAA's attention that the selected sustainability performance information and data contained in the Report has not been prepared and presented fairly and honestly, in all material aspects, in accordance with the verification criteria.

In conclusion, the Report reflects truthfully of Everbright Environment's sustainability performance that is commensurate with the sustainability context and materiality of the company.

Signed on behalf of Hong Kong Quality Assurance Agency

Meico Cheong  
General Manager, Intelligence Business  
30 June 2021





## 核實聲明

### 範圍及目的

香港品質保證局已對中國光大環境（集團）有限公司（「光大環境」）二零二零年可持續發展報告（「報告」）的全部內容進行獨立驗證。該報告陳述了光大環境於二零二零年一月一日至二零二零年十二月三十一日期間，有關可持續發展方面工作的表現。

此核實聲明的目的是對報告所記載之內容提供合理保證。報告是根據全球報告倡議組織（GRI）的《可持續發展報告標準》的全面選項，及香港聯合交易所有限公司證券上市規則（「聯交所上市規則」）第 13.91 條及附錄二十七所載的《環境、社會及管治報告指引》的要求編制。

### 保證程度和核實方法

此次驗證工作是依據 International Auditing and Assurance Standards Board (國際審計與核證準則委員會) 發佈的 International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information (《國際核證聘用準則 3000 (修訂版), 歷史財務資料審計或審閱以外的核證聘用》) 執行。收集核實證據的過程是參考國際準則所訂立進行合理保證的原則而制定以確保能擬定核實結論。此外，核實的內容是按照全球報告倡議組織(GRI) 的《可持續發展報告標準》的全面選項，及聯交所上市規則（第 13.91 條和附錄二十七《環境、社會及管治報告指引》) 而定。

香港品質保證局的核實過程包括驗證了光大環境的可持續發展表現資料收集、計算和彙報的機制，檢閱有關文件資料，與負責編制報告的代表面談，選取具有代表性的數據和資料進行查核。相關原始數據和支援證據亦於核實過程中經過詳細審閱。

### 獨立性

光大環境負責收集和準備所有在報告內陳述的資料。香港品質保證局不涉及收集和計算此報告內的數據或參與編撰此報告。就提供此核實服務而言，香港品質保證局與光大環境之間並無任何會影響核實公正的關係，我們的核實過程是完全獨立的。

### 結論

基於是次的核實結果，香港品質保證局對報告作出合理保證並總結：

- 報告是按照 GRI 的《可持續發展報告標準》的全面選項，及聯交所上市規則（第 13.91 條和附錄二十七《環境、社會及管治報告指引》) 的要求編制；
- 報告平衡、清晰、具比較性和及時地將光大環境的可持續發展表現包括所有重要的可持續發展範疇闡述；
- 報告內的數據和資料可靠完整。

根據驗證準則，香港品質保證局沒有發現在報告內闡述的可持續發展表現資訊和資料並非公平和如實地按照核實標準在主要範疇作出披露。

總體而言，此報告能如實地反映光大環境的可持續發展表現並與其具體的可持續發展情況和重要性相稱。

### 香港品質保證局代表簽署

蔣齊仲  
總經理

二零二一年六月三十日

# Appendix I - Reporting Boundary 附錄I—報告邊界

## 環境數據

## Environmental Statistics

Business Sector 業務板塊	GHG Emissions 溫室氣體排放	GHG Emissions Offset 溫室氣體排放抵銷	Air Emissions 廢氣排放	Direct Energy Consumption 直接能源消耗	Water Consumption and Discharge 耗水及排水	Hazardous Waste Generated 有害廢棄物產生		Non-Hazardous Waste Generated 無害廢棄物產生			Materials Consumption 物料使用	Waste Recycling 廢棄物回收	
						Fly ash and bottom ash generated from hazardous waste incineration projects 危險廢棄物項目所產生的飛灰及爐渣	Fly ash generated from waste-to-energy projects and integrated biomass utilisation projects (waste-to-energy) 垃圾發電項目和生物質綜合利用項目(垃圾發電)所產生的飛灰	Furnace ash generated from integrated biomass utilisation projects (biomass) 生物質綜合利用項目(生物質)所產生的爐灰	Bottom ash generated from waste-to-energy projects and integrated biomass utilisation projects 垃圾發電項目和生物質綜合利用項目所產生的爐渣	Sludge generated from water treatment projects, waste-to-energy projects and integrated biomass utilisation projects 污水處理項目、垃圾發電項目及生物質綜合利用項目所產生的污泥			General waste 一般廢物產生
Environmental Energy 環保能源	Waste-to-energy/ 垃圾發電	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
	Food and kitchen waste treatment 餐館及廚餘垃圾處理	✓	△		✓			✓		✓		✓	
	Sludge treatment and disposal 污泥處理處置	✓		△	✓			✓	✓	✓		✓	
	Leachate treatment 滲濾液處理	✓		△	✓				△	△		✓	
	Methane-to-energy 沼氣發電	✓	△	△	✓				△	△		✓	
	Fecal treatment* 糞便處理*												
	Fly ash landfill 飛灰填埋	✓			✓				✓	✓	✓	✓	✓
	Medical waste treatment 醫療廢棄物處理				✓				✓	✓	✓		✓
	Solid waste 固廢處理	✓		△	✓				△	△	△		△

Business Sector 業務板塊	GHG Emissions 溫室氣體排放	GHG Emissions Offset 溫室氣體排放抵銷	Air Emissions 廢氣排放	Direct Energy Consumption 直接能源消耗	Water Consumption and Discharge 耗水及排水	Hazardous Waste Generated 有害廢棄物產生		Non-Hazardous Waste Generated 無害廢棄物產生			Materials Consumption 物料使用	Waste Recycling 廢棄物回收
						Fly ash generated from waste-to-energy projects and integrated biomass utilisation projects (waste-to-energy) 垃圾發電項目和生物質綜合利用項目(垃圾發電)所產生的飛灰	Fly ash and bottom ash generated from hazardous waste incineration projects 危險廢物項目所產生的飛灰及爐渣	Furnace ash generated from integrated biomass utilisation projects (biomass) 生物質綜合利用項目(生物質)所產生的爐灰	Bottom ash generated from waste-to-energy projects and integrated biomass utilisation projects 垃圾發電項目和生物質綜合利用項目所產生的爐渣	Sludge generated from waste water treatment projects, waste-to-energy projects and integrated biomass utilisation projects 污水處理項目、垃圾發電項目及生物質綜合利用項目所產生的污泥		
Business Sector 業務板塊	Integrated biomass utilisation 生物質綜合利用	✓	✓	✓	✓					✓		✓
	Hazardous waste and solid waste treatment 危險及固廢處置	✓	✓	✓	✓	✓	✓					✓
	Leachate treatment 滲濾液處理	✓	✓	Δ	✓	✓				Δ		✓
	Environmental remediation 環境修復	✓			✓	✓				✓		✓
Greentech 綠色環保	Solar energy 光伏發電	✓	✓	✓	✓					✓		✓
	Wind power 風電	✓	✓	✓	✓					✓		✓
	Environmental protection company 環保企業											

Appendix I – Reporting Boundary  
附錄I—報告邊界

Business Sector 業務板塊	Hazardous Waste Generated 有害廢棄物產生		Non-Hazardous Waste Generated 無害廢棄物產生				Materials Consumption 物料使用	Waste Recycling 廢棄物回收
	Fly ash generated from waste-to-energy projects and integrated biomass utilisation projects (waste-to-energy) 垃圾發電項目和生物質綜合利用項目(垃圾發電)所產生的飛灰	Fly ash and bottom ash generated from hazardous waste incineration projects 危險廢棄物項目所產生的飛灰及爐渣	Furnace ash generated from integrated biomass utilisation projects (biomass) 生物質綜合利用項目(生物質)所產生的爐灰	Bottom ash generated from waste-to-energy projects and integrated biomass utilisation projects 垃圾發電項目和生物質綜合利用項目所產生的爐渣	Sludge generated from waste water treatment projects, waste-to-energy projects and integrated biomass utilisation projects 污水處理項目、垃圾發電項目及生物質綜合利用項目所產生的污泥	General waste 一般廢物產生		
	GHG Emissions 溫室氣體排放	GHG Emissions Offset 溫室氣體排放抵銷	Air Emissions 廢氣排放	Direct Energy Consumption 直接能源消耗	Water Consumption and Discharge 耗水及排水			
Environmental Water 環保水務	Municipal waste water treatment 市政污水處理	✓	✓		✓	✓		✓
	Industrial waste water treatment 工業廢水處理	✓			✓	✓		✓
	Reusable water 中水回用	✓			✓	✓		✓
	River-basin ecological restoration 流域治理	✓			✓	✓		✓
	Water supply 供水	✓			✓	✓		✓
	Waste water source heat pump 污水源熱泵	✓			✓	✓		✓
	Raw water protection 原水保護							
	Leachate treatment 滲濾液處理	✓		△	✓	✓	✓	✓

Business Sector 業務板塊	GHG Emissions 溫室氣體排放		GHG Emissions Offset 溫室氣體排放抵銷	Air Emissions 廢氣排放	Direct Energy Consumption 直接能源消耗	Water Consumption and Discharge 耗水及排水	Hazardous Waste Generated 有害廢棄物產生		Non-Hazardous Waste Generated 無害廢棄物產生			Materials Consumption 物料使用	Waste Recycling 廢棄物回收
	GHG Emissions 溫室氣體排放	Air Emissions 廢氣排放					Fly ash and bottom ash generated from hazardous waste incineration 危險廢物項目所 產生的飛灰及爐渣	Furnace ash generated from integrated biomass utilisation projects (biomass) 項目(生物質) 所產生的爐灰	Bottom ash generated from waste-to- energy projects and integrated biomass utilisation projects 垃圾發電項目和 生物質綜合利用 項目(垃圾發電) 所產生的飛灰	Sludge generated from waste water treatment projects, waste- to-energy projects and integrated biomass utilisation projects 污水處理項目、 垃圾發電項目及 生物質綜合利用 項目所產生的污泥	General waste 一般廢棄物產生		
Equipment Manufacturing 裝備製造	✓	△			✓	✓					✓	✓	✓
Eco-recycling 生態資源	✓				✓	✓					✓	✓	✓
Greenery 光大照明	✓				✓	✓					✓	✓	✓
Envirotech 綠色科創	✓				✓	✓					✓	✓	✓
Environmental Planning 環境規劃	✓				✓	✓					✓	✓	✓
Headquarters and Representative Offices 總部及代表處	✓				✓	✓					✓	✓	✓

\* Under preparatory stage  
在籌建階段

✓ Fully disclosed  
全面披露

△ Insignificant  
不顯著

■ Not applicable  
不適用

社會數據

Social Statistics

Business Sector 業務板塊	Employee Profile 員工概況 (total number of employees, new hires and employee turnover, employee eligible for retirement) (員工總數、新聘及離職員工、合資格退休員工)	Training Hours 培訓時數	Maternity/ Paternity Leave Statistics 產假/侍產假數據	Health and Safety Statistics 健康與安全數據		Community Engagement 社會貢獻		Supply Chain 供應鏈		Remuneration Statistics 薪酬數據
				Employees 員工	Third-party contractors and sub-contractors working on-site 第三方承包商及分包商駐場工人	Visitors received by our environmental projects 環保項目參觀人次	Volunteer services 義工總時數	Number of suppliers 供應商數目	Number of outsourced service workers 外判服務工人數目	
Environmental Energy 環保能源	Waste-to-energy 垃圾發電	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Food and kitchen waste treatment 餐廚及廚餘垃圾處理	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Sludge treatment and disposal 污泥處理處置	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Leachate treatment 滲濾液處理	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Methane-to-energy 沼氣發電	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Fecal treatment* 糞便處理*	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Fly ash landfill 飛灰填理	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Medical waste treatment 醫療廢物處理	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Solid waste 固廢處理	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Integrated biomass utilisation 生物質綜合利用	✓	✓	✓	✓	✓	✓	✓	✓	✓
Greentech 綠色環保	Hazardous waste and solid waste treatment 危險及固廢處置	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Environmental remediation 環境修復	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Solar energy 光伏發電	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Wind power 風電	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Environmental protection company 環保企業	✓	✓	✓	✓	✓	✓	✓	✓	✓

Business Sector 業務板塊	Employee Profile 員工概況 (total number of employees, new hires and employee eligible for retirement) (員工總數、新聘及離職員工、合資格退休員工)	Training Hours 培訓時數	Maternity/ Paternity Leave Statistics 產假/待產假數據	Health and Safety Statistics 健康與安全數據		Community Engagement 社會貢獻		Supply Chain 供應鏈		Remuneration Statistics 薪酬數據
				Employees 員工	Third-party contractors and sub-contractors working on-site 第三方承包商及分包商駐場工人	Visitors received by our environmental projects 環保項目參觀人次	Volunteer services 義工總時數	Number of suppliers 供應商數目	Number of outsourced service workers 外判服務工人數目	
Business Sector 業務板塊	Municipal waste water treatment 市政污水處理	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Industrial waste water treatment 工業廢水處理	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Reusable water 中水回用	✓	✓	✓	✓	✓	✓	✓	✓	✓
	River-basin ecological restoration 流域治理	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Water supply 供水	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Waste water source heat pump 污水源熱泵	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Raw water protection 原水保護	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Leachate treatment 滲濾液處理	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Equipment Manufacturing 裝備製造	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Eco-recycling 生態資源	✓	✓	✓	✓	✓	✓	✓	✓	✓
Greenery 光大照明	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Envirotech 綠色科創	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Environmental Planning 環境規劃	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Headquarters and Representative Offices 總部及代表處	✓	✓	✓	✓	✓	✓	✓	✓	✓	

\* Under preparatory stage  
在籌建階段

✓ Fully disclosed  
全面披露

■ Not applicable  
不適用

**Key Associations Joined by  
Everbright Environment  
光大環境參與的主要協會**

**Key Activities in 2020  
二零二零年重點活動**

**China Biomass Energy Industry  
Promotion Association  
中國產業發展促進會生物質能產業分會**

**Corporate Ambition  
協會抱負**

To explore the innovative development of biomass energy and to promote energy transition in China. 探索生物質能創新發展，推動中國能源轉型。

- **Participated in the discussions with the National Development and Reform Commission on the development of waste-to-energy and agricultural and forestry waste energy industries, providing feedbacks on the development status of the biomass energy industry**  
參與國家發展改革委員會對垃圾發電和農林廢棄物發電行業發展意見的討論，積極提供反饋生物質發電產業發展現狀
- **Cooperated with the Association to submit the *Emergency Report on the Impact of the COVID-19 Pandemic on the Biomass Energy Industry* to the National Development and Reform Commission and other industry authorities, promptly reflecting the impact of the COVID-19 pandemic on the industry and to propose responsive measures**  
配合協會向國家發展改革委員會等行業主管部門遞交《關於新冠肺炎疫情對生物質能行業影響的緊急報告》，第一時間反映新冠肺炎疫情對行業的影響並提出應對措施
- **Participated in the compilation of *China Biomass Energy Industry Development Report 2020*, providing in-depth analysis of the opportunities and challenges of the biomass energy industry**  
參與編寫《二零二零年中國生物質發電產業發展報告》，深入解析生物質發電行業的機遇與挑戰

**Total amount contributed in 2020: RMB200,000**  
二零二零年總貢獻費用：人民幣200,000元

**E20 Environmental Platform –  
China Solid Waste Web  
E20 環境平台—中國固廢網**

**Corporate Ambition  
協會抱負**

To utilise the platform to support the growth of environmental companies and to assist local governments to actively explore environmental solutions. 利用平台的力量幫助環保企業成長，協助地方政府積極探索環境解決方案。

- **Attended the annual Solid Waste Forum**  
參與年度固廢論壇
- **Recognised as the “Top Ten Most Influential Enterprises” in solid waste industry**  
獲評固廢行業十大影響力企業

**Total amount contributed in 2020: RMB300,000**  
二零二零年總貢獻費用：人民幣300,000元



**Key Associations Joined by  
Everbright Environment**  
光大環境參與的主要協會

**Key Activities in 2020**  
二零二零年重點活動

**E20 Environmental Platform –  
China Water Web**  
E20 環境平台—中國水網

**Corporate Ambition**  
協會抱負

To utilise the platform to support the growth of environmental companies and to assist local governments to actively explore environmental solutions.  
利用平台的力量幫助環保企業成長，協助地方政府積極探索環境解決方案。

- **Recognised as the “Top Ten Most Influential Enterprises” in China’s water industry in 2020**  
獲評二零二零年度中國水業十大影響力企業

**Total amount contributed in 2020: RMB120,000**  
二零二零年總貢獻費用：人民幣120,000元

**Chinese Society for Environmental  
Sciences**  
中國環境科學學會

**Corporate Ambition**  
協會抱負

To enhance the public’s scientific knowledge, and create positive scientific and cultural atmosphere for contribution to ecological civilisation and environmental protection.  
提高全民科學知識，營造良好科學文化氛圍，為生態文明建設和環保事業貢獻。

- **Hosted an eco-environmental interpreter contest**  
舉辦生態環境講解員大賽
- **Attended the “14th Five-Year” Eco-environmental Technological Development Planning Seminar**  
參與「十四五」生態環境科技發展規劃論證討論會
- **Attended the annual meeting**  
參加年會
- **Participated in the training for and the declaration of the National Environmental Protection Education Hubs in 2020**  
參與二零二零年全國環保科普教育基地的培訓及申報工作
- **Participated in technological appraisal**  
參與科技鑒定工作

**Total amount contributed in 2020: RMB1,500,000**  
二零二零年總貢獻費用：人民幣1,500,000元

**Key Associations Joined by  
Everbright Environment**  
光大環境參與的主要協會

**China Ecological Civilisation  
Research and Promotion  
Association**

中國生態文明研究與促進會

**Corporate Ambition**  
協會抱負

To in-depth study the challenges of ecological civilisation construction, and to actively promote the construction of ecological civilisation.

深入研究生態文明建設的挑戰，積極推進生態文明建設。

**Key Activities in 2020**  
二零二零年重點活動

- Hosted "June Fifth" World Environmental Day activities with the theme of "I am the Enabler for a Beautiful China" for over 100 universities  
舉辦「美麗中國 我是行動者」百所高校「六·五」世界環境日主題活動

**Total amount contributed in 2020: RMB1,500,000**  
二零二零年總貢獻費用：人民幣1,500,000元

**World Environment Magazine**  
世界環境雜誌社

**Corporate Ambition**  
協會抱負

To unite all forces to participate in environmental protection work together, and to promote the development of China's environmental business.

團結各方面的力量，共同參與環保工作，促進中國環境事業發展。

- Hosted the "Pollution Control in Yangtze River" event  
舉辦「治污攻堅長江行」活動

**Total amount contributed in 2020: RMB500,000**  
二零二零年總貢獻費用：人民幣500,000元



For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report. The service was performed on the English version of the report.

GRI於本次實質性披露服務(Materiality Disclosures Service)確認GRI內容索引清晰，披露項102-40至102-49亦與本報告相應的章節相符。本次服務按本報告的英文版本進行。

Disclosure Number 披露編號	Description 描述	Relevant Chapter(s) or Other References/Explanation 有關章節或其他參考/說明	Page Number 頁數
<b>GRI 101: Foundation 基礎 2016</b>			
GRI 101 does not include any disclosures 不包含任何揭露			
<b>GRI 102: General Disclosures 一般揭露 2016</b>			
<b>Organizational Profile 組織概況</b>			
102-1	Name of the organization 組織名稱	About This Report 關於本報告	2-3
102-2	Activities, brands, products, and services 活動、品牌、產品與服務	About This Report, About Everbright Environment 關於本報告、關於光大環境	2-3, 12-31
102-3	Location of headquarters 總部位置	About This Report 關於本報告	2-3
102-4	Location of operations 運營活動地點	About Everbright Environment, Sustainable Operations Management 關於光大環境、可持續的運營管理	12-31, 42-57
102-5	Ownership and legal form 所有權與法律形式	Annual Report 2020 二零二零年年報	-
102-6	Markets served 提供服務的市場	About Everbright Environment, Sustainable Operations Management 關於光大環境、可持續的運營管理	12-31, 42-57
102-7	Scale of the organization 組織規模	About Everbright Environment, Sustainable Operations Management, Talent Development, Annual Report 2020 關於光大環境、可持續的運營管理、人才發展、二零二零年年報	12-31, 42-57, 124-141
102-8	Information on employees and other workers 員工與其他工作者的資訊	Sustainable Operations Management, Talent Development, Key Statistics 可持續的經營管理、人才發展、主要數據  There are no significant variations in the number of employees 僱用人數沒有重大變化	42-57, 124-141, 202-213
102-9	Supply chain 供應鏈	Sustainable Operations Management 可持續的運營管理	42-57
102-10	Significant changes to the organization and its supply chain 組織與其供應鏈的重大改變	Message from the Chairman of the Board, Sustainable Operations Management 董事會主席致辭、可持續的運營管理	4-7, 42-57
102-11	Precautionary Principle or approach 預警原則或方針	Sustainable Operations Management, Environmental Protection 可持續的運營管理、環境保護	42-57, 58-123
102-12	External initiatives 外部倡議	Environmental Protection, Together for the Sustainable Development Goals 環境保護、攜手邁向可持續發展目標	58-123, 184-201
102-13	Membership of associations 公協會的會員資格	Appendix II – Main Corporate Memberships 附錄II – 主要企業會籍	222-224
<b>Strategy 策略</b>			
102-14	Statement from senior decision-maker 決策者的聲明	Message from the Chairman of the Board 董事會主席致辭	4-7
102-15	Key impacts, risks, and opportunities 關鍵衝擊、風險及機會	Message from the Chairman of the Board, Sustainable Operations Management 董事會主席致辭、可持續的運營管理	4-7, 42-57
<b>Ethics and Integrity 倫理與誠信</b>			
102-16	Values, principles, standards, and norms of behavior 價值、原則、標準及行為規範	About Everbright Environment, Sustainable Operations Management 關於光大環境、可持續的運營管理	12-31, 42-57
102-17	Mechanisms for advice and concerns about ethics 關於倫理之建議與顧慮的機制	About Everbright Environment, Sustainable Operations Management 關於光大環境、可持續的運營管理	12-31, 42-57

Disclosure Number 披露編號	Description 描述	Relevant Chapter(s) or Other References/Explanation 有關章節或其他參考/說明	Page Number 頁數
<b>Governance 治理</b>			
102-18	Governance structure 治理結構	Sustainable Operations Management, Annual Report 2020 可持續的運營管理、二零二零年年報	42-57
102-19	Delegating authority 委任權責	Sustainable Operations Management, Annual Report 2020 可持續的運營管理、二零二零年年報	42-57
102-20	Executive-level responsibility for economic, environmental, and social topics 管理階層負責經濟、環境和社會主題	Sustainable Operations Management 可持續的運營管理	42-57
102-21	Consulting stakeholders on economic, environmental, and social topics 與利害關係人諮商經濟、環境和社會主題	Stakeholder Engagement 持份者參與	32-41
102-22	Composition of the highest governance body and its committees 最高治理單位與其委員會的組成	Annual Report 2020 二零二零年年報	–
102-23	Chair of the highest governance body 最高治理單位的主席	Annual Report 2020 二零二零年年報	–
102-24	Nominating and selecting the highest governance body 最高治理單位的提名與遴選	Annual Report 2020 二零二零年年報	–
102-25	Conflicts of interest 利益衝突	Annual Report 2020 二零二零年年報	–
102-26	Role of highest governance body in setting purpose, values, and strategy 最高治理單位在設立宗旨、價值觀及策略的角色	Sustainable Operations Management, Annual Report 2020 – Corporate Governance Report 可持續的運營管理、二零二零年年報—企業管治報告	42-57
102-27	Collective knowledge of highest governance body 最高治理單位的群體知識	Sustainable Operations Management, Annual Report 2020 – Corporate Governance Report 可持續的運營管理、二零二零年年報—企業管治報告	42-57
102-28	Evaluating the highest governance body's performance 最高治理單位的績效評估	Sustainable Operations Management, Annual Report 2020 – Corporate Governance Report 可持續的運營管理、二零二零年年報—企業管治報告	42-57
102-29	Identifying and managing economic, environmental, and social impacts 鑑別與管理經濟、環境和社會衝擊	Stakeholder Engagement, Sustainable Operations Management, Annual Report 2020 – Corporate Governance Report 持份者參與、可持續的運營管理、二零二零年年報—企業管治報告	32-41, 42-57
102-30	Effectiveness of risk management processes 風險管理程序的有效性	Sustainable Operations Management, Annual Report 2020 – Corporate Governance Report 可持續的運營管理、二零二零年年報—企業管治報告	42-57
102-31	Review of economic, environmental, and social topics 經濟、環境和社會主題的檢視	Sustainable Operations Management, Annual Report 2020 – Corporate Governance Report 可持續的運營管理、二零二零年年報—企業管治報告	42-57
102-32	Highest governance body's role in sustainability reporting 最高治理單位於永續性報導的角色	Sustainable Operations Management 可持續的運營管理	42-57
102-33	Communicating critical concerns 溝通重要關鍵議題	Stakeholder Engagement, Sustainable Operations Management 持份者參與、可持續的運營管理	32-41, 42-57
102-34	Nature and total number of critical concerns 關鍵議題的性質與總數	Annual Report 2020 – Corporate Governance Report – Risk Management and Internal Controls 二零二零年度報告—企業管治報告—風險管理及內部監控	–
102-35	Remuneration policies 薪酬政策	Sustainable Operations Management, Annual Report 2020 – Notes to Financial Statements 二零二零年年報—財務報表附註	–
102-36	Process for determining remuneration 薪酬決定的流程	Sustainable Operations Management, Annual Report 2020 – Notes to Financial Statements 二零二零年年報—財務報表附註	–
102-37	Stakeholders' involvement in remuneration 利害關係人的參與	Annual Report 2020 二零二零年年報	–
102-38	Annual total compensation ratio 年度總薪酬比率	Key Statistics 主要數據  The main business of the Group and more than 95% of its employees are located in the Mainland China. Therefore, we do not report compensation data broken down by region. 本集團的主要業務，以及超過95%的員工均位於中國內地，因此我們沒有匯報按地區劃分的薪酬數據。	210-211
102-39	Percentage increase in annual total compensation ratio 年度總薪酬比率之增加百分比	Key Statistics 主要數據  The main business of the Group and more than 95% of its employees are located in the Mainland China. Therefore, we do not report compensation data broken down by region. 本集團的主要業務，以及超過95%的員工均位於中國內地，因此我們沒有匯報按地區劃分的薪酬數據。	210-211

Disclosure Number 披露編號	Description 描述	Relevant Chapter(s) or Other References/Explanation 有關章節或其他參考／說明	Page Number 頁數
<b>Stakeholder Engagement 利害關係人溝通</b>			
102-40	List of stakeholder groups 利害關係人團體	Stakeholder Engagement 持份者參與	33-36
102-41	Collective bargaining agreements 團體協約	There are no formal collective bargaining agreements in place within the Group. 本集團內部沒有正式的集體談判協議。	–
102-42	Identifying and selecting stakeholders 鑑別與選擇利害關係人	Stakeholder Engagement 持份者參與	33-36
102-43	Approach to stakeholder engagement 與利害關係人溝通的方針	Stakeholder Engagement 持份者參與	33-41
102-44	Key topics and concerns raised 提出之關鍵主題與關注事項	Stakeholder Engagement 持份者參與	33-41
<b>Reporting Practice 報導實務</b>			
102-45	Entities included in the consolidated financial statements 合併財務報表中所包含的實體	Annual Report 2020 – Notes to Financial Statements (Page 331 - 341) 二零二零年年報—財務報表附註 (331 - 341頁)	–
102-46	Defining report content and topic boundaries 界定報告書內容與主題邊界	Stakeholder Engagement 持份者參與	37-41
102-47	List of material topics 重大主題表列	Stakeholder Engagement 持份者參與	37-41
102-48	Restatements of information 資訊重編	The amount of GHG emissions and offset, and the total number of employees by employment contract in 2018 and 2019 were restated in this Report. 本報告涉及二零一八年至二零一九年有關溫室氣體排放及抵銷量、以及按合約類別劃分的員工總數的重列。	203, 207
102-49	Changes in reporting 報導改變	Stakeholder Engagement 持份者參與  In 2020, newly added material topics included GHG management and climate change mitigation, economic performance, rights of indigenous peoples, and technological R&D; while removed topics include employee training and employee welfare. 二零二零年，本集團新增的實質性議題包括溫室氣體管理及氣候變化的應對、經濟績效、原住民權利及技術研發；而被移除的議題包括員工培訓及員工福利。	37-41
102-50	Reporting period 報導期間	About This Report 關於本報告	2
102-51	Date of most recent report 上一次報告書的日期	3 July 2020 二零二零年七月三日	–
102-52	Reporting cycle 報導週期	About This Report 關於本報告	2-3
102-53	Contact point for questions regarding the report 可回答報告書相關問題的聯絡人	About This Report 關於本報告	3
102-54	Claims of reporting in accordance with the GRI Standards 依循GRI準則報導的宣告	About This Report 關於本報告	2
102-55	GRI Content Index GRI內容索引	Appendix III – GRI Content Index 附錄III—GRI內容索引	225-233
102-56	External assurance 外部保證／確信	Verification Statement 審核聲明	214-215

Topic-specific Disclosure

特定主題準則

Disclosure Number 披露編號	Description 描述	Relevant Chapter(s) or Other References/Explanation 有關章節或其他參考/說明	Page Number 頁數
<b>GRI 200: Economic 經濟</b>			
<b>Economic Performance 經濟績效</b>			
<b>GRI 103: Management Approach 管理方針 2016</b>			
103-1	Explanation of the material topic and its Boundary 解釋重大主題及其邊界	Stakeholder Engagement 持份者參與	32-41
103-2	The management approach and its components 管理方針及其要素	Message from the Chairman of the Board 董事會主席致辭	4-7
103-3	Evaluation of the management approach 管理方針的評估	Message from the Chairman of the Board 董事會主席致辭	4-7
<b>GRI 201: Economic Performance 經濟績效 2016</b>			
201-1	Direct economic value generated and distributed 直接產生和分配的經濟價值	Key Statistics 主要數據	202
201-2	Financial implications and other risks and opportunities due to climate change 氣候變化帶來的財務影響以及風險及機遇	Environmental Protection 環境保護	68-88
201-3	Defined benefit plan obligations and other retirement plans 義務性固定福利計劃和其他退休計劃	Annual Report 2020 – Report of the Directors 二零二零年年報—董事會報告	–
201-4	Financial assistance received from government 政府給予的財政補貼	Annual Report 2020 – Notes to Financial Statements 二零二零年年報—財務報表附註	–
<b>GRI 300: Environment 環境</b>			
<b>Energy 能源</b>			
<b>GRI 103: Management Approach 管理方針 2016</b>			
103-1	Explanation of the material topic and its Boundary 解釋重大主題及其邊界	Stakeholder Engagement 持份者參與	32-41
103-2	The management approach and its components 管理方針及其要素	Environmental Protection 環境保護	58-123
103-3	Evaluation of the management approach 管理方針的評估	Environmental Protection 環境保護	58-123
<b>GRI 302: Energy 能源 2016</b>			
302-1	Energy consumption within the organization 組織內部的能源消耗量	Environmental Protection, Key Statistics 環境保護、主要數據	101-104, 202-203
		Energy consumption within the organisation includes electricity consumption. The Group also sells steam; but no cooling is sold. 組織內部的能源消耗量包括電力消耗。集團另有出售蒸汽；沒有出售製冷。	
		Total energy consumption with the organisation: 13,551,077.61 GJ 組織內部能源消耗總量：13,551,077.61吉焦	
302-2	Energy consumption outside the organization 組織外部的能源消耗量	Environmental Protection, Key Statistics 主要數據	202
		Energy consumption outside the organisation includes the Group's on-grid electricity and amount of steam supplied. 組織外部的能源消耗量包括集團的上網電量及蒸氣供應量。	
302-3	Energy intensity 能源密集度	Key Statistics 主要數據	203
		Energy intensity only includes those within the organisation 能源密集度只包括組織內部	
302-4	Reduction of energy consumption 減少能源消耗	Environmental Protection 環境保護	101-104
302-5	Reductions in energy requirements of products and services 降低產品和服務的能源需求	Environmental Protection 環境保護	101-104

Disclosure Number 披露編號	Description 描述	Relevant Chapter(s) or Other References/Explanation 有關章節或其他參考/說明	Page Number 頁數
<b>Water and Effluents 水資源與污水</b>			
<b>GRI 103: Management Approach 管理方針 2016</b>			
103-1	Explanation of the material topic and its Boundary 解釋重大主題及其邊界	Stakeholder Engagement 持份者參與	32-41
103-2	The management approach and its components 管理方針及其要素	Environmental Protection 環境保護	58-123
103-3	Evaluation of the management approach 管理方針的評估	Environmental Protection 環境保護	58-123
<b>GRI 303: Water and Effluents 水資源與污水 2018</b>			
303-1	Interactions with water as a shared resource 組織與水 (作為共有資源) 的相互影響	Environmental Protection 環境保護  The Group's operations in the Mainland China make use of municipal water supply, groundwater, surface water and reclaimed water. Among them, the main source of municipal water supply is surface water. Part of the waste water will be reused in the plant, and the rest will be discharged to public or private waste water treatment facilities, surface water and the ocean in accordance with applicable discharge permits and discharge standards. 本集團在中國內地的業務會使用市政供水、地下水、地表水及重用中水。其中，市政供水主要源自地表水。部分污水會於廠內回用，其餘則按照適用的排放許可證及排放標準排放至公共或私有的污水處理設施、地表水及海洋。  The Vietnam operation of the environmental energy sector mainly uses surface water, followed by municipal water supply; where the local municipal water supply also mainly comes from surface water. The Poland operation of this sector uses municipal water supply and groundwater; according to the Polish National Water Agency, the local freshwater sources are mainly surface water, groundwater and from catchment areas. All water used in Vietnam and Poland is consumed and reused in plant, thus there is no discharge. 環保能源板塊的越南業務主要使用地表水，其次為市政供水；而當地的市政供水亦主要源自地表水。該板塊位於波蘭的業務則使用市政供水及地下水；根據波蘭國家水務局，當地的淡水來源主要為地表水、地下水及集水區。越南及波蘭業務的所有用水均為廠內消耗及回用，因此沒有排放。  The Group's operation in Hong Kong uses water from the Water Supplies Department, including freshwater for potable use, cooling, washing, toilet and landscaping, and seawater for flushing. Hong Kong's two main sources of freshwater are rainfall from natural catchments and Dongjiang water from Guangdong Province. All effluents are discharged to public sewers and/or the sea in accordance with applicable discharge licences. 本集團在香港的業務所使用的水均來自水務署，包括用於飲用水、冷卻、洗滌、洗手間和澆灌的淡水，以及用於沖廁的海水。香港的兩個主要淡水來源是自然流域的降雨和廣東省的東江水。根據適用的排放許可證，所有廢水均排入公共污水收集系統和/或海洋。  The Group's operation in Singapore uses water from third-party water source(s) supplied by the Public Utilities Board ("PUB"). According to PUB, Singapore's water demand is currently met by water from local catchment areas, imported water, NEWater and desalinated water. The waste water from Singapore's operation is collected by public sewers. 本集團在新加坡的業務所使用的水均由公用事業局第三方水源提供。根據公用事業局，新加坡目前可透過使用當地集水區的水、進口水、「新生水」和化淡水來滿足對水的需求。新加坡的業務的污水均由公共污水收集系統收集。	106-112
303-2	Management of water discharge-related impacts 管理與排水相關的影響	Environmental Protection 環境保護	106-112
303-3	Water withdrawal 取水	Environmental Protection, Key Statistics 環境保護、主要數據	106-112, 204-206
303-4	Water discharge 排水	Environmental Protection, Key Statistics 環境保護、主要數據	106-112, 204-206
303-5	Water consumption 耗水	Environmental Protection, Key Statistics 環境保護、主要數據	106-112, 204-206

Appendix III – GRI Content Index  
附錄III—GRI內容索引

Disclosure Number 披露編號	Description 描述	Relevant Chapter(s) or Other References/Explanation 有關章節或其他參考/說明	Page Number 頁數
<b>Emissions 排放</b>			
<b>GRI 103:</b>	<b>Management Approach 管理方針 2016</b>		
103-1	Explanation of the material topic and its Boundary 解釋重大主題及其邊界	Stakeholder Engagement 持份者參與	32-41
103-2	The management approach and its components 管理方針及其要素	Environmental Protection 環境保護	58-123
103-3	Evaluation of the management approach 管理方針的評估	Environmental Protection 環境保護	58-123
<b>GRI 305:</b>	<b>Emissions 排放 2016</b>		
305-1	Direct (Scope 1) GHG emissions 直接(範疇1) 溫室氣體排放	Environmental Protection, Key Statistics 環境保護、主要數據  Calculations are based on the global warming potentials published in the IPCC (Intergovernmental Panel on Climate Change) <i>Fifth Assessment Report, 2014 (AR5)</i> ; calculation of GHG emissions include carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ) and nitrous oxides (N <sub>2</sub> O). Emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF <sub>6</sub> ) and nitrogen trifluoride (NF <sub>3</sub> ) are not significant. 計算參考IPCC (政府間氣候變化專門委員會)《第五次評估報告》(AR5)中發佈的相對全球變暖潛能; 溫室氣體排放量的計算包括二氧化碳(CO <sub>2</sub> )、甲烷(CH <sub>4</sub> )及氧化亞氮(N <sub>2</sub> O)。氫氟碳化物(HFCs)、全氟化碳(PFCs)、六氟化硫(SF <sub>6</sub> )及三氟化氮(NF <sub>3</sub> )的排放並不顯著。  Scope 1 GHG emissions by biogenic/non-biogenic source: 按生物源/非生物源劃分的範疇1溫室氣體排放量:  Biogenic emissions: 59,378.49 tonnes CO <sub>2</sub> equivalent 生物源排放量: 59,378.49噸二氧化碳當量  Non-biogenic emissions: 10,657,976.11 tonnes CO <sub>2</sub> equivalent 非生物源排放量: 10,657,976.11噸二氧化碳當量	89-100, 203
305-2	Energy indirect (Scope 2) GHG emissions 能源間接(範疇2) 溫室氣體排放	Environmental Protection, Key Statistics 環境保護、主要數據	89-100, 203
305-3	Other indirect (Scope 3) GHG emissions 其他間接(範疇3) 溫室氣體排放	Environmental Protection, Key Statistics 環境保護、主要數據  Calculations are based on the global warming potentials published in the IPCC (Intergovernmental Panel on Climate Change) <i>Fifth Assessment Report, 2014 (AR5)</i> ; calculation of GHG emissions include carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ) and nitrous oxides (N <sub>2</sub> O). Emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF <sub>6</sub> ) and nitrogen trifluoride (NF <sub>3</sub> ) are not significant. 計算參考IPCC (政府間氣候變化專門委員會)《第五次評估報告》(AR5)中發佈的相對全球變暖潛能; 溫室氣體排放量的計算包括二氧化碳(CO <sub>2</sub> )、甲烷(CH <sub>4</sub> )及氧化亞氮(N <sub>2</sub> O)。氫氟碳化物(HFCs)、全氟化碳(PFCs)、六氟化硫(SF <sub>6</sub> )及三氟化氮(NF <sub>3</sub> )的排放並不顯著。  We do not have scope 3 biogenic emissions 我們沒有範疇3生物源排放	89-100, 203
305-4	GHG emissions intensity 溫室氣體排放強度	Environmental Protection, Key Statistics 環境保護、主要數據  Calculations are based on the global warming potentials published in the IPCC (Intergovernmental Panel on Climate Change) <i>Fifth Assessment Report, 2014 (AR5)</i> ; calculation of GHG emissions include carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ) and nitrous oxides (N <sub>2</sub> O). Emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF <sub>6</sub> ) and nitrogen trifluoride (NF <sub>3</sub> ) are not significant. 計算參考IPCC (政府間氣候變化專門委員會)《第五次評估報告》(AR5)中發佈的相對全球變暖潛能; 溫室氣體排放量的計算包括二氧化碳(CO <sub>2</sub> )、甲烷(CH <sub>4</sub> )及氧化亞氮(N <sub>2</sub> O)。氫氟碳化物(HFCs)、全氟化碳(PFCs)、六氟化硫(SF <sub>6</sub> )及三氟化氮(NF <sub>3</sub> )的排放並不顯著。	89-100, 203
305-5	Reduction of GHG emissions 溫室氣體減排量	Environmental Protection, Key Statistics 環境保護、主要數據	89-100, 203
305-6	Emissions of ozone-depleting substances (ODS) 臭氧消耗物質 (ODS) 的排放	The Group's operation does not involve emissions of significant ozone-depleting substances (ODS). 本集團的運營並不涉及顯著的臭氧消耗物質(ODS)排放。	-



Disclosure Number 披露編號	Description 描述	Relevant Chapter(s) or Other References/Explanation 有關章節或其他參考／說明	Page Number 頁數
305-7	Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions 氮氧化物 (NO <sub>x</sub> )、硫氧化物 (SO <sub>x</sub> ) 和其他重大氣體排放	Environmental Protection, Key Statistics 環境保護、主要數據  The Group monitors emissions of heavy metals and dioxins by sampling. Thus, there is no data on total emissions. Nevertheless, all emissions are lower than the threshold as stated in the <i>Standard for Pollution Control on the Municipal Solid Waste Incineration</i> (GB18485-2014), complying with national standards. 本集團以採樣檢驗的方式監測重金屬和二噁英的排放，因此未有排放總量的數據。然而，所有排放均低於《生活垃圾焚燒污染控制標準》(GB18485-2014)中所列的限值，符合國家標準。  We could not quantify fugitive emissions, such as volatile organic compounds (VOCs) and odour pollutants. Nonetheless, we ensure all emissions comply with all applicable local standards. 我們未能量化無組織氣體，例如揮發性有機化合物及惡臭污染物的排放。儘管如此，我們確保排放符合所有適用的當地標準。	89-100, 203
<b>Waste 廢棄物</b>			
<b>GRI 103: Management Approach 管理方針 2016</b>			
103-1	Explanation of the material topic and its Boundary 解釋重大主題及其邊界	Stakeholder Engagement 持份者參與	32-41
103-2	The management approach and its components 管理方針及其要素	Environmental Protection 環境保護	58-123
103-3	Evaluation of the management approach 管理方針的評估	Environmental Protection 環境保護	58-123
<b>GRI 306: Waste 廢棄物 2020</b>			
306-1	Waste generation and significant waste-related impacts 廢棄物的產生及廢棄物相關重大影響	Environmental Protection 環境保護	113-120
306-2	Management of significant waste-related impacts 廢棄物相關重大影響的管理	Environmental Protection 環境保護	113-120
306-3	Waste generated 產生的廢棄物	Environmental Protection 環境保護	113-120
306-4	Waste diverted from disposal 從處置中轉移的廢棄物	Environmental Protection 環境保護	113-120
306-5	Waste directed to disposal 進入處置的廢棄物	Environmental Protection 環境保護	113-120
<b>Environmental Compliance 有關環境保護的法規遵循</b>			
<b>GRI 103: Management Approach 管理方針 2016</b>			
103-1	Explanation of the material topic and its Boundary 解釋重大主題及其邊界	Stakeholder Engagement 持份者參與	32-41
103-2	The management approach and its components 管理方針及其要素	Environmental Protection 環境保護	58-123
103-3	Evaluation of the management approach 管理方針的評估	Environmental Protection 環境保護	58-123
<b>GRI 307: Environmental Compliance 有關環境保護的法規遵循 2016</b>			
307-1	Non-compliance with environmental laws and regulations 違反環保法規	Appendix V – Compliance with Relevant Laws and Regulations that have a Significant Impact on Everbright Environment 附錄V—對光大環境有重大影響的相關法律及規例的遵守情況	238-240
<b>GRI 400: Social 社會</b>			
<b>Occupational Health and Safety 職業安全衛生</b>			
<b>GRI 103: Management Approach 管理方針 2016</b>			
103-1	Explanation of the material topic and its Boundary 解釋重大主題及其邊界	Stakeholder Engagement 持份者參與	32-41
103-2	The management approach and its components 管理方針及其要素	Safety Culture 安全文化	142-155
103-3	Evaluation of the management approach 管理方針的評估	Safety Culture 安全文化	142-155

Disclosure Number 披露編號	Description 描述	Relevant Chapter(s) or Other References/Explanation 有關章節或其他參考/說明	Page Number 頁數
<b>GRI 403:</b>	<b>Occupational Health and Safety 職業安全衛生 2018</b>		
403-1	Occupational health and safety management system 職業安全衛生管理系統	Safety Culture 安全文化  The Group's ESHS management system was formulated in accordance with the <i>Labour Law of the PRC</i> , <i>Work Safety Law of the PRC</i> , <i>Criminal Law of the PRC</i> , <i>the Social Insurance Law of the PRC</i> , <i>Occupational Health and Safety Management System Specifications</i> (GB/T28001-2001), <i>Environmental Management Systems – Requirements with Guidance for Use</i> (GB/T24001-2004), etc. 集團的ESHS管理體系乃依據《中國勞動法》、《中國安全生產法》、《中國刑法》、《中國社會保險法》、《職業健康安全管理体系規範》(GB/T28001-2001)、《環境管理體系要求及使用指南》(GB/T24001-2004)等編製。	142-155
403-2	Hazard identification, risk assessment, and incident investigation 危害辨識、風險評估、及事故調查	Safety Culture 安全文化	142-155
403-3	Occupational health services 職業健康服務	Safety Culture 安全文化	142-155
403-4	Worker participation, consultation, and communication on occupational health and safety 有關職業安全衛生之工作者參與、諮商與溝通	Safety Culture 安全文化	142-155
403-5	Worker training on occupational health and safety 有關職業安全衛生之工作者訓練	Safety Culture 安全文化	142-155
403-6	Promotion of worker health 工作者健康促進	Talent Development, Safety Culture 人才發展、安全文化	124-141, 142-155
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships 預防和減輕與業務關係直接相關聯之職業安全衛生的衝擊	Safety Culture 安全文化	142-155
403-8	Workers covered by an occupational health and safety management system 職業安全衛生管理系統所涵蓋之工作者	The Group's ESHS management system covers all employees of the group, third-party contractors and subcontractors working on-site; but excludes construction workers of projects under construction. 本集團的ESHS管理體系覆蓋了集團所有員工、第三方承包商及分包商駐場工人；但不包括在建項目的建築工人。  The Group conducts annual internal audit for the ESHS system, but has not yet conducted external audits. 本集團每年對ESHS體系進行內部審核，但暫未進行外部審核。	–
403-9	Work-related injuries 職業傷害	Safety Culture, Key Statistics 安全文化、主要數據  The major risks of work-related injury in the waste to energy and integrated biomass utilisation industry include musculoskeletal injuries, fractures, and ocular trauma; while that of the water industry include slip and fall, and hearing loss. 垃圾發電及生物質綜合利用行業的主要工傷風險包括肌肉骨骼損傷、骨折、及穿透性眼外傷；水務行業的主要工傷風險則包括滑倒、跌倒、及聽力損害。	142-155, 210
403-10	Work-related ill health 職業病	Safety Culture, Key Statistics 安全文化、主要數據  The major risks of work-related ill health in the waste to energy and integrated biomass utilisation industry include skin and gastrointestinal disorders, and exposure to concerning substances, such as respirable quartz dust, dioxins, bioaerosols and carcinogens; while that of the water industry include waterborne disease, airborne infection, and skin ailments. 垃圾發電及生物質綜合利用行業的主要職業病風險包括皮膚和腸胃疾病、以及由接觸有害物質，例如石英粉塵、二噁英、生物氣溶膠和致癌物等而引發的疾病；水務行業的主要職業病風險包括水源性疾病、空氣傳播疾病、及皮膚病。	142-155, 210
<b>Child Labor 童工</b>			
<b>GRI 103:</b>	<b>Management Approach 管理方針 2016</b>		
103-1	Explanation of the material topic and its Boundary 解釋重大主題及其邊界	Stakeholder Engagement 持份者參與	32-41
103-2	The management approach and its components 管理方針及其要素	Talent Development 人才發展	124-141
103-3	Evaluation of the management approach 管理方針的評估	Talent Development 人才發展	124-141

Disclosure Number 披露編號	Description 描述	Relevant Chapter(s) or Other References/Explanation 有關章節或其他參考/說明	Page Number 頁數
<b>GRI 408: Child Labor 童工 2016</b>			
408-1	Operations and suppliers at significant risk for incidents of child labor 運營據點和供應商使用童工之重大風險	Sustainable Operations Management, Talent Development 可持續的經營管理、人才發展	42-57, 124-141
<b>Forced or Compulsory Labor 強迫或強制勞動</b>			
<b>GRI 103: Management Approach 管理方針 2016</b>			
103-1	Explanation of the material topic and its Boundary 解釋重大主題及其邊界	Stakeholder Engagement 持份者參與	32-41
103-2	The management approach and its components 管理方針及其要素	Talent Development 人才發展	124-141
103-3	Evaluation of the management approach 管理方針的評估	Talent Development 人才發展	124-141
<b>GRI 409: Forced or Compulsory Labor 強迫或強制勞動 2016</b>			
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor 具強迫或強制勞動事件重大風險的運營據點和供應商	Talent Development 人才發展	124-141
<b>Rights of Indigenous Peoples 原住民權利</b>			
<b>GRI 103: Management Approach 管理方針 2016</b>			
103-1	Explanation of the material topic and its Boundary 解釋重大主題及其邊界	Stakeholder Engagement 持份者參與	32-41
103-2	The management approach and its components 管理方針及其要素	Community Engagement 社區參與	156-183
103-3	Evaluation of the management approach 管理方針的評估	Community Engagement 社區參與	156-183
<b>GRI 411: Rights of Indigenous Peoples 原住民權利 2016</b>			
411-1	Incidents of violations involving rights of indigenous peoples 涉及侵害原住民權利的事件	The Group had no incidents of violations involving rights of indigenous peoples in 2020. 本集團於二零二零年沒有侵害原住民權利的事件。	-
<b>Socioeconomic Compliance 社會經濟法規遵循</b>			
<b>GRI 103: Management Approach 管理方針 2016</b>			
103-1	Explanation of the material topic and its Boundary 解釋重大主題及其邊界	Stakeholder Engagement 持份者參與	32-41
103-2	The management approach and its components 管理方針及其要素	Community Engagement 社區參與	156-183
103-3	Evaluation of the management approach 管理方針的評估	Community Engagement 社區參與	156-183
<b>GRI 419: Socioeconomic Compliance 社會經濟法規遵循 2016</b>			
419-1	Non-compliance with laws and regulations in the social and economic area 違反社會與經濟領域之法律和規定	Appendix V – Compliance with Relevant Laws and Regulations that have a Significant Impact on Everbright Environment, Annual Report 2020 附錄V—對光大環境有重大影響的相關法律及規例的遵守情況、二零二零年年報	238-240

## Appendix IV – Stock Exchange ESG Reporting Guide Content Index 附錄IV—聯交所《環境、社會及管治報告指引》內容索引

Subject Areas, Aspects, General Disclosures and KPIs ESG層面	Description 描述	Relevant Chapter(s) of the Report and/or Other Explanation(s) 報告章節/聲明
<b>A. Environment 環境</b>		
<b>Aspect A1: Emissions 層面A1: 排放物</b>		
<b>General Disclosure 一般披露</b>	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste. 有關廢氣及溫室氣體排放、向水及土地的排污、有害及無害廢棄物的產生等的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。	Environmental Protection, Appendix V – Compliance with Relevant Laws and Regulations that have a Significant Impact on Everbright Environment 環境保護；附錄V—對光大環境有重大影響的相關法律及規例的遵守情況
<b>KPI A1.1</b>	The types of emissions and respective emissions data. 排放物種類及相關排放數據。	Environmental Protection, Key Statistics 環境保護、主要數據  Flue Gas Emissions <sup>7</sup> : 煙氣排放量:  Particulate Matter (PM): 顆粒物(PM): 457.09 tonnes 457.09噸  Sulphur Dioxide (SO <sub>2</sub> ): 二氧化硫(SO <sub>2</sub> ): 2,595.33 tonnes 2,595.33噸  Nitrogen Oxides (NO <sub>x</sub> ): 氮氧化物(NO <sub>x</sub> ): 15,463.35 tonnes 15,463.35噸  Hydrochloric Acid (HCL): 鹽酸(HCL): 609.35 tonnes 609.35噸  Carbon Monoxide (CO): 一氧化碳(CO): 1,571.01 tonnes 1,571.01噸  The Group monitors other emissions by sampling. Thus, there is no data on total emissions. Nevertheless, all emissions prevail international and national standards. 本集團以採樣檢驗的方式監測其他排放物，因此未有排放總量的數據。然而，所有排放均優於國際及國家標準。
<b>KPI A1.2</b>	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). 直接(範圍1)及能源間接(範圍2)溫室氣體排放量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。	Environmental Protection, Key Statistics 環境保護、主要數據
<b>KPI A1.3</b>	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). 所產生有害廢棄物總量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。	Environmental Protection, Key Statistics 環境保護、主要數據
<b>KPI A1.4</b>	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). 所產生無害廢棄物總量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。	Environmental Protection, Key Statistics 環境保護、主要數據
<b>KPI A1.5</b>	Description of emissions target(s) set and steps taken to achieve them. 描述所訂立的排放量目標及為達到這些目標所採取的步驟。	Environmental Protection, Together for the Sustainable Development Goals 環境保護、攜手邁向可持續發展目標
<b>KPI A1.6</b>	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them. 描述處理有害及無害廢棄物的方法，及描述所訂立的減廢目標及為達到這些目標所採取的步驟。	Environmental Protection, Together for the Sustainable Development Goals 環境保護、攜手邁向可持續發展目標  Hazardous waste is mainly comprised of fly ash generated from the incineration of household waste. The amount of fly ash generated is highly dependent on the quantity and composition of household waste received, which are beyond Everbright Environment's control. 有害廢棄物主要包括焚燒生活垃圾所產生的飛灰。飛灰的數量主要取決於接收生活垃圾的數量及成分，而這些因素均不在光大環境的控制範圍之內。

<sup>7</sup> Includes all projects of Environmental Energy and Greentech sectors that involve combustion and incineration operations

<sup>7</sup> 涵蓋環保能源及綠色環保的所有燃燒和焚燒運營項目。

Appendix IV – Stock Exchange ESG Reporting Guide Content Index  
附錄IV—聯交所《環境、社會及管治報告指引》內容索引

Subject Areas, Aspects, General Disclosures and KPIs ESG層面	Description 描述	Relevant Chapter(s) of the Report and/or Other Explanation(s) 報告章節/聲明
<b>Aspect A2: Use of Resources 層面A2：資源使用</b>		
<b>General Disclosure 一般披露</b>	Policies on the efficient use of resources, including energy, water and other raw materials. 有效使用資源 (包括能源、水及其他原材料) 的政策。	Environmental Protection 環境保護
<b>KPI A2.1</b>	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility). 按類型劃分的直接及/或間接能源 (如電、氣或油) 總耗量 (以千個千瓦時計算) 及密度 (如以每產量單位、每項設施計算)。	Environmental Protection, Key Statistics 環境保護、主要數據
<b>KPI A2.2</b>	Water consumption in total and intensity (e.g. per unit of production volume, per facility). 總耗水量及密度 (如以每產量單位、每項設施計算)。	Total Water Consumption: 61,859,696.87 m <sup>3</sup> 總耗水量: 61,859,696.87 立方米  Total Water Intensity: 0.004 m <sup>3</sup> /kWh 總耗水強度: 0.004 立方米/千瓦時
<b>KPI A2.3</b>	Description of energy use efficiency target(s) set and steps taken to achieve them. 描述所訂立的能源使用效益目標及為達到這些目標所採取的步驟。	Environmental Protection, Together for the Sustainable Development Goals 環境保護、攜手邁向可持續發展目標
<b>KPI A2.4</b>	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them. 描述求取適用水源上可有任何問題, 以及所訂立的用水效益目標及為達到這些目標所採取的步驟。	Environmental Protection, Together for the Sustainable Development Goals 環境保護、攜手邁向可持續發展目標  Regarding water sourcing, all of the Group's projects under construction and operation have obtained the respective environmental impact assessment approvals and water-drawing permits. There are no issues related to sourcing water that is fit for purpose. 在取水方面, 本集團的所有在建及運營項目均已獲得相關的環評批覆及取水證, 本集團在獲得適用水源上沒有發現任何問題。
<b>KPI A2.5</b>	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced. 製成品所用包裝材料的總量 (以噸計算) 及 (如適用) 每生產單位佔量。	The main products of the Group are clean energy and clean effluent, no packaging materials are used. 本集團的主要產物為清潔能源及潔淨出水, 並不使用包裝物料。
<b>Aspect A3: The Environment and Natural Resources 層面A3：環境及天然資源</b>		
<b>General Disclosure 一般披露</b>	Policies on minimising the issuer's significant impact on the environment and natural resources. 減低發行人對環境及天然資源造成重大影響的政策。	Environmental Protection 環境保護
<b>KPI A3.1</b>	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them. 描述業務活動對環境及天然資源的重大影響及已採取管理有關影響的行動。	Environmental Protection 環境保護
<b>Aspect A4: Climate Change 層面A4：氣候變化</b>		
<b>General Disclosure 一般披露</b>	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer. 識別及應對已經及可能會對發行人產生影響的重大氣候相關事宜的政策。	Environmental Protection 環境保護
<b>KPI A4.1</b>	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them. 描述已經及可能會對發行人產生影響的重大氣候相關事宜, 及應對行動。	Environmental Protection 環境保護
<b>B. Social 社會</b>		
<b>Employment and Labour Practices 僱傭及勞工常規</b>		
<b>Aspect B1: Employment 層面B1：僱傭</b>		
<b>General Disclosure 一般披露</b>	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare. 有關薪酬及解僱、招聘及晉升、工作時數、假期、平等機會、多元化、反歧視以及其他待遇及福利的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。	Talent Development, Appendix V – Compliance with Relevant Laws and Regulations that have a Significant Impact on Everbright Environment 人才發展、附錄V – 對光大環境有重大影響的相關法律及規例的遵守情況
<b>KPI B1.1</b>	Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region. 按性別、僱傭類型 (如全職或兼職)、年齡組別及地區劃分的僱員總數。	Talent Development, Key Statistics 人才發展、主要數據
<b>KPI B1.2</b>	Employee turnover rate by gender, age group and geographical region. 按性別、年齡組別及地區劃分的僱員流失比率。	Talent Development, Key Statistics 人才發展、主要數據

## Appendix IV – Stock Exchange ESG Reporting Guide Content Index

### 附錄IV—聯交所《環境、社會及管治報告指引》內容索引

Subject Areas, Aspects, General Disclosures and KPIs ESG層面	Description 描述	Relevant Chapter(s) of the Report and/or Other Explanation(s) 報告章節/聲明
<b>Aspect B2: Health and Safety 層面B2：健康與安全</b>		
<b>General Disclosure 一般披露</b>	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards. 有關提供安全工作環境及保障僱員避免職業性危害的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。	Safety Culture, Appendix V – Compliance with Relevant Laws and Regulations that have a Significant Impact on Everbright Environment 安全文化、附錄V—對光大環境有重大影響的相關法律及規例的遵守情況
<b>KPI B2.1</b>	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year. 過去三年(包括匯報年度)每年因工亡故的人數及比率。	Safety Culture, Key Statistics 安全文化、主要數據
<b>KPI B2.2</b>	Lost days due to work injury. 因工傷損失工作日數。	Safety Culture, Key Statistics 安全文化、主要數據
<b>KPI B2.3</b>	Description of occupational health and safety measures adopted, and how they are implemented and monitored. 描述所採納的職業健康與安全措施，以及相關執行及監察方法。	Safety Culture 安全文化
<b>Aspect B3: Development and Training 層面B3：發展及培訓</b>		
<b>General Disclosure 一般披露</b>	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. 有關提升僱員履行工作職責的知識及技能的政策。描述培訓活動。	Talent Development 人才發展
<b>KPI B3.1</b>	The percentage of employees trained by gender and employee category (e.g. senior management, middle management). 按性別及僱員類別(如高級管理層、中級管理層等)劃分的受訓僱員百分比。	Male 男: 100% Female 女: 100% Senior management 高級管理層: 100% Middle level management 中級管理層: 100% General and technical staff 一般員工: 100%
<b>KPI B3.2</b>	The average training hours completed per employee by gender and employee category. 按性別及僱員類別劃分，每名僱員完成受訓的平均時數。	Talent Development, Key Statistics 人才發展、主要數據
<b>Aspect B4: Labour Standards 層面B4：勞工準則</b>		
<b>General Disclosure 一般披露</b>	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour. 有關防止童工或強制勞工的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。	Talent Development, Appendix V – Compliance with Relevant Laws and Regulations that have a Significant Impact on Everbright Environment 人才發展；附錄V—對光大環境有重大影響的相關法律及規例的遵守情況
<b>KPI B4.1</b>	Description of measures to review employment practices to avoid child and forced labour. 描述檢討招聘慣例的措施以避免童工及強制勞工。	Talent Development 人才發展  The Group regularly reviews its employment practice to ensure compliance with applicable laws and regulations in preventing child and forced labour. 本集團定期檢討其招聘措施以確保遵守適用於有關避免童工及強制勞工的法律及規例。
<b>KPI B4.2</b>	Description of steps taken to eliminate such practices when discovered. 描述在發現違規情況時消除有關情況所採取的步驟。	The Group has zero tolerance towards such practice. Violations are subject to internal disciplinary actions or handled by relevant authorities. 本集團並不容忍此違規情況。如有發現，將進行內部處分或送官究治。
<b>Operating Practices 運營慣例</b>		
<b>Aspect B5: Supply Chain Management 層面B5：供應鏈管理</b>		
<b>General Disclosure 一般披露</b>	Policies on managing environmental and social risks of the supply chain. 管理供應鏈的環境及社會風險政策。	Sustainable Operations Management 可持續的運營管理
<b>KPI B5.1</b>	Number of suppliers by geographical region. 按地區劃分的供應商數目。	Sustainable Operations Management 可持續的運營管理
<b>KPI B5.2</b>	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored. 描述有關聘用供應商的慣例，向其執行有關慣例的供應商數目，以及相關執行及監察方法。	Sustainable Operations Management 可持續的運營管理
<b>KPI B5.3</b>	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored. 描述有關識別供應鏈每個環節的環境及社會風險的慣例，以及相關執行及監察方法。	Sustainable Operations Management 可持續的運營管理
<b>KPI B5.4</b>	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored. 描述在揀選供應商時促使多用環保產品及服務的慣例，以及相關執行及監察方法。	Sustainable Operations Management 可持續的運營管理

Appendix IV – Stock Exchange ESG Reporting Guide Content Index  
附錄IV—聯交所《環境、社會及管治報告指引》內容索引

Subject Areas, Aspects, General Disclosures and KPIs ESG層面	Description 描述	Relevant Chapter(s) of the Report and/or Other Explanation(s) 報告章節/聲明
<b>Aspect B6: Product Responsibility 層面B6：產品責任</b>		
<b>General Disclosure 一般披露</b>	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress. 有關所提供產品和服務的健康與安全、廣告、標籤及私隱事宜以及補救方法的： (a)政策；及 (b)遵守對發行人有重大影響的相關法律及規例的資料。	Sustainable Operations Management, Environmental Protection, Appendix V – Compliance with Relevant Laws and Regulations that have a Significant Impact on Everbright Environment 可持續的運營管理、環境保護、附錄V—對光大環境有重大影響的相關法律及規例的遵守情況  The Group has not identified material concerns in its operations regarding advertising and labelling matters, thus dedicated policies are not in place. 本集團並未發現運營中有關廣告及標籤事宜的重大問題，故此，本集團並無相關專門政策。  There are no laws and regulations that have a significant impact on the Group regarding advertising and labelling matters relating to products and services provided by the Group. 本集團並無有關廣告及標籤事宜的相關法律及規例對其構成重大影響。
<b>KPI B6.1</b>	Percentage of total products sold or shipped subject to recalls for safety and health reasons. 已售或已運送產品總數中因安全與健康理由而須回收百分比。	The Group did not have products recalled for safety and health reasons in 2020. 本集團於二零二零年沒有因安全與健康理由而須回收產品。
<b>KPI B6.2</b>	Number of products and service related complaints received and how they are dealt with. 接獲關於產品及服務的投訴數目以及應對方法。	Community Engagement 社區參與
<b>KPI B6.3</b>	Description of practices relating to observing and protecting intellectual property rights. 描述與維護及保障知識產權有關的慣例。	Sustainable Operations Management 可持續的運營管理
<b>KPI B6.4</b>	Description of quality assurance process and recall procedures. 描述質量檢定過程及產品回收程序。	Sustainable Operations Management, Environmental Protection 可持續的運營管理、環境保護  Due to the specific nature of the Group's integrated environmental solutions business, recall procedures are not applicable to our products and services provided. 本集團業務性質為環境綜合治理服務，當中並沒有適用的產品及服務回收程序。
<b>KPI B6.5</b>	Description of consumer data protection and privacy policies, how they are implemented and monitored. 描述消費者資料保障及私隱政策，以及相關執行及監察方法。	Sustainable Operations Management 可持續的運營管理
<b>Aspect B7: Anti-corruption 層面B7：反貪污</b>		
<b>General Disclosure 一般披露</b>	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering. 有關防止賄賂、勒索、欺詐及洗黑錢的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。	Sustainable Operations Management, Appendix V – Compliance with Relevant Laws and Regulations that have a Significant Impact on Everbright Environment 可持續的運營管理、附錄V—對光大環境有重大影響的相關法律及規例的遵守情況  No loyalty payment was made to any governments in 2020. 本集團於二零二零年沒有向任何政府支付任何特許權費用。
<b>KPI B7.1</b>	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases. 於匯報期內對發行人或其僱員提出並已審結的貪污訴訟案件的數目及訴訟結果。	In 2020, there was no confirmed case of non-compliance in relation to corrupt practices that would have a significant impact on the Group. 二零二零年並沒有任何與反貪污相關並對本集團有重大影響的已確認違規事件。
<b>KPI B7.2</b>	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored. 描述防範措施及舉報程序，以及相關執行及監察方法。	Sustainable Operations Management 可持續的運營管理
<b>KPI B7.3</b>	Description of anti-corruption training provided to directors and staff. 描述向董事及員工提供的反貪污培訓。	Sustainable Operations Management 可持續的運營管理
<b>Community 社區</b>		
<b>Aspect B8: Community Investment 層面B8：社區投資</b>		
<b>General Disclosure 一般披露</b>	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests. 有關以社區參與來了解運營所在社區需要和確保其業務活動會考慮社區利益的政策。	Community Engagement 社區參與
<b>KPI B8.1</b>	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport). 專注貢獻範疇(如教育、環境事宜、勞工需求、健康、文化、體育)。	Community Engagement 社區參與
<b>KPI B8.2</b>	Resources contributed (e.g. money or time) to the focus area. 在專注範疇所動用資源(如金錢或時間)。	Community Engagement, Key Statistics, Appendix II – Main Corporate Memberships 社區參與、主要數據、附錄II—主要企業會籍

## Stock Exchange ESG Reporting Guide Subject Area

### Aspect A1: Emissions

In order to protect and improve the environment, prevent pollution and other public hazards, safeguard public health, promote the development of ecological civilisation, and promote sustainable economic and social development, China has enacted a large number of laws and regulations to protect environmental resources. Key laws and regulations applicable to the Group's business include the *Environmental Protection Law of the PRC*, *Law of the PRC on Environmental Impact Assessment*, *Water Pollution Prevention and Control Law of the PRC*, *Atmospheric Pollution Prevention and Control Law of the PRC*, *Law of the PRC on the Prevention and Control of Environmental Pollution by Solid Waste*, *Measures for the Administration of Permit for Operation of Dangerous Wastes*, *Measures for the Administration of the Transfer of Dangerous Wastes*, *Regulation on Medical Wastes Management*, *Measures for the Administration of Environmental Surveillance*, *Measures for the Administration of Automatic Monitoring of Pollution Sources*, *Regulation on the Administration of Permitting of Pollutant Discharges*, *Administrative Measures for Urban Living Garbage*, *Provisions on the Administration of Urban Construction Garbage and Regulation on Urban Drainage and Sewage Treatment*. These laws and regulations provide clear requirements on air and GHG emissions, discharges into water and land, and generation of hazardous and non-hazardous waste, etc. The Group understands that it is important to meet these statutory obligations as violation of any of applicable environmental laws and regulations may result in penalties, suspension of operation, and/or legal action against the Group by regulatory authorities.

In 2020, there was no confirmed case of non-compliance in relation to environmental protection that would have a significant impact on the Group. Please refer to the chapter entitled "Environmental Protection" of the Report on how Everbright Environment ensures compliance with applicable environmental laws and regulations.

### Aspect B1: Employment

The *Labour Law of the PRC*, *Labour Contract Law of the PRC*, *Regulation on the Implementation of the Employment Contract Law of the PRC*, *Regulation on Work-Related Injury Insurances*, *Regulation on Paid Annual Leave for Employees* and the *Employment Ordinance* of Hong Kong stipulate the legal obligations and responsibilities of employers to provide employment protection and benefits covering compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare. The *Social Insurance Law of the PRC* is formulated for the purpose of regulating sickness insurance, occupational injury insurance, maternity insurance, medical care insurance, retirement insurance, and death insurance, and also clarifies the legal liabilities of the employers. The *Regulation on the Management of Housing Provident Fund of the PRC* is formulated for the purpose of maintaining the lawful rights and interests of housing provident fund owners. These laws and regulations provide relevant protection for the Group's employees and safeguard their lawful rights. The Group will continue to comply with all relevant employment laws and regulations to protect the Group's most valuable asset – employees.

## 聯交所《環境、社會及管治報告指引》範疇

### 層面A1：排放物

為保護和改善環境，防治污染和其他公害，保障公眾健康，推進生態文明建設，促進經濟和社會的可持續發展，中國制定實施了大量環境資源保護的法律及規例。適用於本集團的主要法律及規例包括《中華人民共和國環境保護法》、《中華人民共和國環境影響評價法》、《中華人民共和國水污染防治法》、《中華人民共和國大氣污染防治法》、《中華人民共和國固體廢物污染環境防治法》、《危險廢物經營許可證管理辦法》、《危險廢物轉移聯單管理辦法》、《醫療廢物管理條例》、《環境監測管理辦法》、《污染源自動監控管理辦法》、《排污許可管理條例》、《城市生活垃圾管理辦法》、《城市建築垃圾管理規定》及《城市排水與污水處理管理條例》。該等法律及規例對廢氣及溫室氣體排放、向水及土地的排污以及有害及無害廢棄物的產生等方面提供了明確要求。本集團深明履行該等法律及規例的重要性，因為違反任何適用的環境法律和規例均可能會導致監管機構對本集團作出罰款、勒令停運及／或採取法律行動。

二零二零年並無任何與環境保護相關並對本集團有重大影響的已確認違規事件。如欲了解更多光大環境確保遵守相關環境法律和規例的情況，請參閱本報告的「環境保護」一章。

### 層面B1：僱傭

《中華人民共和國勞動法》、《中華人民共和國勞動合同法》、《中華人民共和國勞動合同法實施條例》、《工傷保險條例》、《職工帶薪年休假條例》及香港《僱傭條例》提供了全面的僱傭保障和福利，涵蓋對薪酬及解僱、招聘及晉升、工作時數、假期、平等機會、多元化、反歧視以及其他待遇及福利方面的要求，明確了僱主的法定義務和責任。《中華人民共和國社會保險法》規定了疾病、工傷、生育、醫療、退休及死亡保險，並釐清了僱主的相關法律責任。《住房公積金管理條例》則維護了住房公積金所有者的合法權益。以上法律和規例為本集團的員工提供相關保障，保護員工的合法權利。本集團將繼續遵守所有相關的僱傭法律法和規例，保障本集團最寶貴的財富——員工。



In 2020, there was no confirmed case of non-compliance in relation to the Group’s employment practices that would have a significant impact on the Group. Please refer to the chapter entitled “Talent Development” of the Report on how Everbright Environment ensures compliance with applicable employment laws and regulations.

### Aspect B2: Health and Safety

The *Labour Law of the PRC*, *Work Safety Law of the PRC*, *Law of the PRC on the Prevention and Treatment of Occupational Diseases* and *Criminal Law of the PRC* commit to the protection of occupational safety and health and industrial safety, and require manufacturing organisations and employers to provide a safe working environment and protect employees from occupational hazards. The *Social Insurance Law of the PRC* is formulated for the purpose of regulating sickness insurance, occupational injury insurance, maternity insurance, medical care insurance, retirement insurance, and death insurance, and also clarifies the legal liabilities of the employers. Compliance with these laws and regulations is paramount as workplace safety is of critical importance to each and every employee of the Group. As a socially responsible enterprise, the Group complies with relevant health and safety laws and regulations to provide employees with a safe workplace and suitable insurance.

In 2020, there was no confirmed case of non-compliance in relation to health and safety that would have a significant impact on the Group. Please refer to the chapter entitled “Safety Culture” of the Report on how Everbright Environment ensures compliance with applicable laws and regulations relating to health and safety.

### Aspect B4: Labour Standards

The *Labour Law of the PRC* and the *Employment Ordinance* of Hong Kong set out clear rules for preventing child labour and forced labour, and elaborate on the legal liabilities of employers who violate the relevant laws and regulations. Everbright Environment highly values human rights and aims to demonstrate its “People-Oriented” corporate spirit through strictly complying with the relevant labour standards.

In 2020, there was no confirmed case of non-compliance in relation to labour standards that would have a significant impact on the Group. Please refer to the chapter entitled “Talent Development” of the Report on how Everbright Environment ensures compliance with applicable laws and regulations relating to labour standards.

二零二零年並無任何與僱傭相關並對本集團有重大影響的已確認違規事件。如欲了解更多光大環境確保遵守相關僱傭法律和規例的情況，請參閱本報告的「人才發展」一章。

### 層面B2：健康與安全

《中華人民共和國勞動法》、《中華人民共和國安全生產法》、《中華人民共和國職業病防治法》及《中華人民共和國刑法》旨在維護勞動安全健康及工業安全，要求生產經營單位及僱主提供安全工作環境及保障僱員避免職業性危害。《中華人民共和國社會保險法》則規定了疾病、工傷、生育、醫療、退休及死亡保險，並釐清了僱主的相關法律責任。遵守這些法律和規例是本集團的首要任務，因為工作場所的安全對本集團每一位員工都十分重要。為員工提供安全工作環境及合適保險是本集團作為良心企業的實踐，本集團會嚴守相關健康與安全法律和規例。

二零二零年並無任何與健康與安全相關並對本集團有重大影響的已確認違規事件。如欲了解更多光大環境確保遵守相關健康與安全法律法規的情況，請參閱本報告的「安全文化」一章。

### 層面B4：勞工準則

《中華人民共和國勞動法》及香港《僱傭條例》對防止童工或強制勞動列有明確規定，並詳細地闡述違反相關法律和規例的僱主的法律責任。光大環境高度重視人權，透過遵守相關勞工準則，充分反映其「以人為本」的企業精神。

二零二零年並無任何與勞工準則相關並對本集團有重大影響的已確認違規事件。如欲了解更多光大環境確保遵守相關勞工準則法律法規的情況，請參閱本報告的「人才發展」一章。

### Aspect B6: Product Responsibility

Relevant laws and regulations applicable to the Group mainly include the *Civil Code of the PRC (Tort Liability Book)*, *Patent Law of the PRC*, *Criminal Law of the PRC*, *Environmental Protection Law of the PRC*, *Atmospheric Pollution Prevention and Control Law of the PRC*, *Water Pollution Prevention and Control Law of the PRC*, *Law of the PRC on the Prevention and Control of Environmental Pollution by Solid Waste* and *Administrative Penalty Law of the PRC*. These laws and regulations provide clear requirements on health and safety, and remedial methods relating to products and services provided. It is the Group's core value to abide by these rules in providing safe and reliable products and services.

In 2020, there was no confirmed case of non-compliance in relation to product responsibility that would have a significant impact on the Group. Please refer to the chapters entitled "Sustainable Operations Management" and "Environmental Protection" of the Report on how Everbright Environment ensures compliance with applicable laws and regulations relating to product responsibility.

### Aspect B7: Anti-Corruption

The *Anti-Unfair Competition Law of the PRC*, *Criminal Law of the PRC*, *Anti-Money Laundering Law of the PRC*, and the *Prevention of Bribery Ordinance* of Hong Kong set out clear rules on preventing bribery, extortion, fraud and money laundering. These laws and regulations aim to maintain social integrity and fairness, prevent unfair competition, and protect the legal rights of service providers and customers. The Group firmly believes that misconduct such as corruption has a significant negative impact on the business development. Therefore, the Group strictly complies with relevant anti-corruption laws and regulations to maintain a good reputation and enhance its competitiveness.

It is the Group's policy to avoid making any kind of political contribution. In 2020, the Group did not make payment to any lobbying, interest representation, or political campaigns or organisations.

In 2020, there was no confirmed case of non-compliance in relation to anti-corruption practices (including any form of facilitating payment) that would have a significant impact on the Group. Please refer to the chapter entitled "Talent Development" of the Report on how Everbright Environment ensures compliance with applicable laws and regulations relating to anti-corruption practices.

### 層面B6：產品責任

與本集團相關的法律法規主要包括《中華人民共和國法典》(侵權責任編)、《中華人民共和國專利法》、《中華人民共和國刑法》、《中華人民共和國環境保護法》、《中華人民共和國大氣污染防治法》、《中華人民共和國水污染防治法》、《中華人民共和國固體廢物污染環境防治法》及《中國行政處罰法》。該等法律和規例對產品和服務相關的健康與安全、以及補救方法提供了明確的要求。在符合這些規則的前提下提供安全可靠的產品和服務是本集團的核心價值。

二零二零年並無任何與產品責任相關並對本集團有重大影響的已確認違規事件。如欲了解更多光大環境確保遵守相關產品責任法律法規的情況，請參閱本報告的「可持續的運營管理」及「環境保護」章節。

### 層面B7：反貪污

《中華人民共和國反不正當競爭法》、《中華人民共和國刑法》、《中華人民共和國反洗錢法》及香港《防止賄賂條例》對防止賄賂、勒索、欺詐及洗黑錢行為提供了明確的規定，旨在維護社會廉潔公平，制止不正當競爭行為，保護服務提供者和消費者的合法權益。本集團深信貪污等不當行為對業務發展百害而無一利，因此嚴格遵循相關的反貪污法律和規例，致力維持本集團良好的聲譽及提升競爭力。

本集團政策是避免作出任何形式的政治捐款。在二零二零年，本集團沒有向任何遊說、利益代表和政治活動或組織支付款項。

二零二零年並無任何與反貪污相關(包括支付任何形式的通行費)並對本集團有重大影響的已確認違規事件。如欲了解更多光大環境確保遵守相關反貪污法律法規的情況，請參閱本報告的「人才發展」一章。

# 2020

## Sustainability Report 可持續發展報告

CHINA EVERBRIGHT ENVIRONMENT GROUP LIMITED

中國光大環境（集團）有限公司

Stock Code 股份代號 : 257



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