

SIIC Environment Holdings Ltd.  
Sustainability Report 2017

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## About this Report

### Overview

SIIC Environment Holdings Ltd. ( “**SIIC Environment**”, “**Company**” or “**We**”) is a leading integrated operator in the People’s Republic of China (the “**PRC**”)’s environmental industry and encompasses a nationwide portfolio of 146 wastewater treatment, 9 reclaimed water treatment, 23 water supply, 5 waste incineration and 10 sludge treatment projects. Our water treatment, water supply and sludge treatment services cover 18 provincial-level administrative divisions in China and are managed through five main business units – SIIC Environment Holdings (Wuhan) Co. Ltd (“**Central China**”), Nanfang Water Co. Ltd (“**South China**”), SIIC Environment Holdings (Weifang) Co., Ltd (“**North China**”), Longjiang Environmental Protection Group Co., Ltd (“**Northeast China**”) and Shanghai Fudan Water Engineering and Technology Co. Ltd (“**East China**”). Our waste incineration projects are managed by our waste incineration division (“**Waste Incineration Division**”). We are also a controlling shareholder of Ranhill Water (Hong Kong) Limited (“**Ranhill Water**”), which specialises in industrial wastewater treatment and other public utility services. This management structure enables our businesses to manage their respective daily operations based on specific circumstances, react promptly to developments affecting projects, explore new regional and local opportunities and maintain strong relationships with local governments and communities.

### Reporting Scope

This sustainability report (this “**Report**”) aims to provide investors and related stakeholders with disclosures pertaining to the environmental, social and governance (“**ESG**”) performance of the Company during the period 1 January to 31 December 2017 (unless otherwise stated) (the “**Reporting Period**”). The reporting scope covers the Company’s projects under South China, East China, Central China, North China, Northeast China, the Waste Incineration Division and Ranhill Water.

### Reporting Guideline

This Report has been prepared in accordance with the *ESG Reporting Guide* set out in Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (“**SEHK**”) and has applied the guidance of the Sustainability Reporting Guide issued by the Singapore Exchange Limited (“**SGX**”). In order to fully understand the environmental, social and corporate governance performance of the Company, this ESG Report should be read in conjunction with the “Corporate Governance Report” within the Company’s annual report.

### Disclaimer of the Report

This Report focuses on introducing the philosophy, actions and achievements of the Company’s annual performance. All information disclosed in the Report has been sourced from the Company’s documents and statistics. The Company is responsible for the reliability, truthfulness, objectivity and completeness of the information disclosed in this ESG Report.

This Report is published in English and Traditional Chinese versions. If there is any discrepancy between the two versions, the English version shall prevail.

### Comments and Feedback

The Company welcomes all stakeholders to provide valuable comments and suggestions in relation to this Report by contacting us at: [info@siicenv.com](mailto:info@siicenv.com).

## Business Outlook

The Company has developmental strategies of expanding across the environmental industry value chain, improving operational efficiency and exploring opportunities to invest in the PRC and overseas. In line with this strategy, we capitalise on opportunities through successful project bids, active mergers and acquisitions, scaling up organic growth and industry consolidation. During the Reporting Period, the Company won mandates for 14 concessionary water projects in Zhejiang, Henan, Jiangsu, Jiangxi, Guangxi, Heilongjiang and Jilin provinces and 5 expansion and/or upgrading projects in Shanghai, Zhejiang, Anhui and Jiangxi Provinces, the PRC. We also made a series of acquisitions in the year, including that of Citic Envirotech Water Resource (Hegang) Co., Ltd., Jiaohu Jiaxin Water Co., Ltd., Dalian Ziguang Water Treatment Co., Ltd. and Dalian Ziguang Lingshui Waste Water Treatment Co., Ltd.

Following the “13<sup>th</sup> Five-Year Plan” and the 19<sup>th</sup> National Congress of the Communist Party of China, the government’s “Beautiful China” initiative and pledge on green development, ecological conservation and water quality improvement continue to be high on the agenda in the near term and foreseeable future. The government also expects the rigorous implementation of action plans, environmental inspections and new environmental protection targets. These resonate well with the Company’s objectives to strengthen the country’s water treatment and waste incineration industries. The sustained incentive from the central and municipal governments is expected to support the Company’s performance in the new financial year as it continues to execute its current projects and upgrades and expansion activities in the PRC, which will boost treatment volumes and operating capacities. Among the Company’s total waste water treatment capacity, the daily capacity of 3.3 million tonnes is estimated to be upgraded into national standards Grade 1A and super Grade 1A in the following three to four years.

## Board Statement

The Company’s Board of Directors (“**Board**”) considers ESG issues as part of our operational strategy and has reviewed the ESG issues considered material by our stakeholders. The Board will manage and monitor these material ESG issues and will actively continue to identify opportunities to develop our business in a sustainable manner.

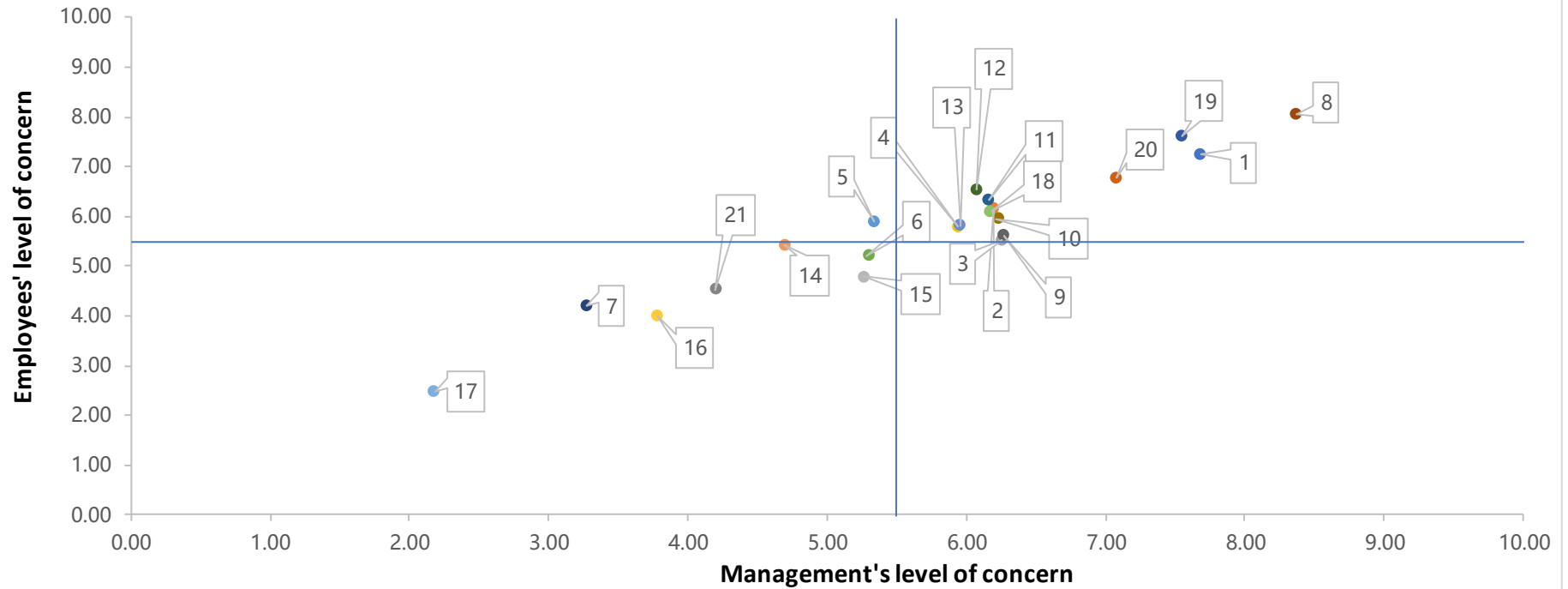
## Stakeholder Engagement

Ongoing communication with stakeholders is an integral part of the Company's day to day operations, and communication channels such as meetings, interviews and surveys enable stakeholders to express their ideas, opinions and suggestions with the Company. The Company's identified stakeholders include shareholders and investors, government and regulators, business partners and suppliers, media, customers and employees.

Stakeholders	Methods of Communication
Shareholders and Investors	Annual reports, quarterly results, interim reports, public announcements, press releases, annual general meetings, individual and group meetings
Government and Regulators	Government meetings, supervision, assessments, questionnaires, on-site visits
Business Partners and Suppliers	Partner meetings, questionnaires, seminars, on-site visits
Media	Press releases, interviews and announcements
Customers	Customer meetings, customer satisfaction surveys, on-site visits
Employees	Company meetings and departmental meetings, annual staff meetings, questionnaires, internal emails

In preparation for this Report, ESG issues were reviewed with our employees and management. ESG issues were initially collated from industry benchmarking and international reporting guidelines and standards, and subject to screening from our management. Selected ESG issues were subsequently incorporated in questionnaires, and distributed to our internal stakeholders, which included employees and senior management. Respondents were required to rank ESG issues according to their level of concern, and a matrix of these responses is shown below:

### SIIC Environment Materiality Matrix of ESG Issues



- 1. Treatment of waste gas, wastewater and solid waste
- 2. Clean water and sanitation
- 3. Promotion of environmental protection concepts
- 4. Management of environmental impacts
- 5. Use of materials and resources (including energy and water)
- 6. Environmental education
- 7. Greenhouse gas emissions and management
- 8. Employee training and development
- 9. Service quality and standards
- 10. Research and development
- 11. Occupational health and safety
- 12. Employee benefits
- 13. Strengthening communication and partnerships within the industry
- 14. Diversity and equal opportunity
- 15. Disaster and emergency planning
- 16. Anti-bribery and anti-corruption
- 17. Prevention of child or forced labour
- 18. Organisational governance
- 19. Business outlook
- 20. Legal and regulatory compliance
- 21. Risk and opportunity assessments



The material issues<sup>1</sup> were then validated by the Company’s Board to ensure the rationality, balance and completeness of the Report. These validated material ESG issues are as follows:

<b>Environmental</b>	<b>Social</b>	<b>Governance</b>
Treatment of waste gas, wastewater and solid waste	Employee training and development	Organisational governance
Clean water and sanitation	Service quality and standards	Business outlook
Promotion of environmental protection concepts	Research and development	Legal and regulatory compliance
Management of environmental impacts	Employee benefits	
	Occupational health and safety	
	Strengthening communication and partnerships within the industry	

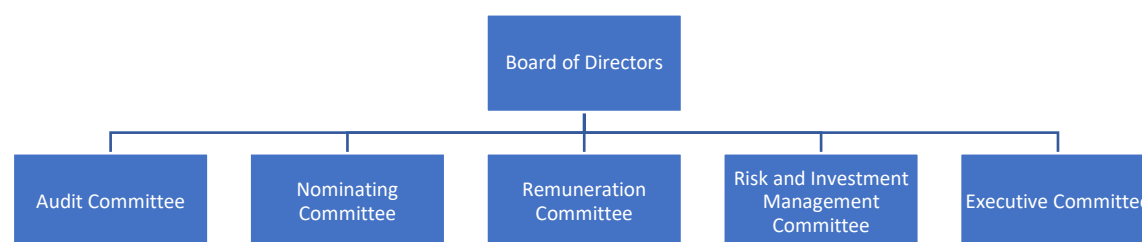
The contents of this Report address these issues that are material and sufficiently important to employees and management at SIIC Environment. We anticipate expanding the scope of this materiality assessment in the future to include our external stakeholders in order to obtain a better understanding of the ESG issues that our key stakeholders deem important, and of how these perceptions differ between stakeholders that are potentially directly or indirectly affected by these issues.

<sup>1</sup> Material issues were defined as issues that were ranked above 5.5 out of 10 at both employee and management level, and validated by the Board.

## Organisational Governance

At SIIC Environment, we acknowledge that good corporate governance ensures that shareholders' interests are protected and enhances corporate performance and accountability. Corporate governance practices in place are in line with recommendations of the Code of Corporate Governance issued by Singapore's Ministry of Finance in May 2012 and the applicable provisions of the Corporate Governance Code set out in Appendix 14 to the Rules Governing the Listing of Securities on the SEHK.

The Board of Directors ("**Directors**") are obliged to act in good faith and to oversee the business and corporate affairs of the Company; the Directors are tasked with making objective decisions in the interest of the Company. The Board comprises Directors, who as a whole, have core competencies and a diversity of experience enabling them to lead and control the Company effectively, including industry knowledge, strategic planning, business and general management, legal and finance, etc. Five committees, namely the Audit Committee, the Nominating Committee, the Remuneration Committee, the Risk and Investment Management Committee and the Executive Committee support the Company by assisting the Board in executing its responsibilities.



The responsibilities of each of the committees are as follows:

**Audit Committee:** reviewing accounting principles, programmes and practices of the Company, assessing the adequacy of internal control systems to identify, assess, manage and disclose financial and non-financial risks.

**Nominating Committee:** identifying and recommending new directors to the board, after considering the necessary and desirable competencies. In selecting potential new Directors, the committee seeks to identify competencies required to enable the Board to fulfil its responsibilities

**Remuneration Committee:** recommends to the Board a framework for the remuneration for the Board and key management personnel, and to determine specific remuneration packages for each Executive Director, which is based on transparency and accountability.

**Risk and Investment Management Committee:** designing, implementing and monitoring the risk management and internal control systems within the Company.

**Executive Committee:** assisting the Board to manage and oversee the Company's operational and business expansion matters

## Anti-corruption

Our Company places a strong emphasis on corporate integrity and honesty. During the Reporting Period, we strictly complied with the *Criminal Laws of the PRC*, *Anti Money Laundering Law of the PRC*, *Anti Unfair Competition Law of the PRC* and other laws and regulations relating to bribery, extortion, fraud and money laundering.

We also have established internal rules to provide guidance for employee conduct, and these are conveyed to employees through staff manuals and training. Furthermore, whistle-blowing channels such as telephone hotlines and confidential emails for reporting the violation of laws and misconduct are made available to all employees. Audits are also periodically conducted at project companies, covering finance, procurement, management and production.

For more details on the Company's organisational and corporate governance, please refer to the Corporate Governance Report contained with the Company's 2017 Annual Report.

## Environment

### Management of Environmental Impacts

The Company actively explores technologies and methods to protect the environment and natural resources in our daily operations and projects. In the project planning progress, the Company adopts relevant measures to minimise environmental impacts and to protect the habitat and natural resources at project sites.

Our environmental management processes and systems are based upon industry-specific guidance and best practices across the industry. The risk levels of environmental incidents are determined according to the actual situation of the Company. Risks are identified within production processes and emission levels, as well from emergencies induced from incidents such as power outages, lightning strikes, fire hazards, leakages, abnormal waterflows and human-induced problems. These factors are analysed according to national, provincial and municipal laws and regulations, local planning requirements and environmental characteristics, and corresponding emergency plans, policies and measures are set according to the outcome of the analysis. Furthermore, measures are proposed to provide a rational basis for environmental risk prevention and decision-making in production processes. Gaps in existing risk prevention and control measures are identified to gradually improve the management system. Plans are also formulated to report environmental impacts to the public in a timely manner.

Our businesses also hold or are in the process of adopting management systems such as the Environmental Management System (ISO 14001), Quality Management System (ISO 9001) and Occupational Health and Safety Assessment Series (OHSAS 18001), and these systems are implemented across projects under these businesses.

## Promotion of Environmental Protection Concepts

Environmental protection consists of taking measures to care for our natural habitat, and to preserve it from deterioration and contamination for the betterment of future generations' livelihoods. This is not only a corporate and social responsibility, but also serves as a premise for companies to operate and to develop. The Company has a corporate mission of pursuing corporate growth whilst remaining committed to protecting the planet, conserving the environment and preserving natural resources. To this end, we recognise the importance of communicating environmental protection concepts both within the Company's premises, and beyond.

Environmental protection concepts are communicated internally via corporate culture training, talks, environmental knowledge competitions, theatrical displays, etc. as well as through the Company's website, newsletters and other platforms. Our businesses also have slogans which are communicated to employees. Some of the Company's slogans are as follows:

"Advocating a Low-carbon Life, Caring for Ecology and Collectively Enjoying the Blue Water and Sky"; "Improving Environmental Quality and Promoting Green Development"; "Allowing the Environment to Take Root and Declaring the Future with Greenness"; "Benefitting the Environment with Good Governance"; "Clean and Safe Water Quality, Protecting the Ecological Environment and Collectively Enjoying a Quality Lifestyle"; "Purifying the Source of Life, Irrigating Quality in Preparation of a Beautiful/Harmonious Future"; "Treating Wastewater Well, Allowing the Flow of Clear Water to Reappear"; "Taking Social Responsibility and Protecting the Clear Water and Blue Sky".

As a National Environmental Protection demonstration base, we open our facilities to the public on "World Earth Day", "6 • 5 World Environment Day" and other occasions to enhance the public's knowledge of ecological protection and to promote environmental protection concepts; the Company's professionalism, public welfare activities and contributions are widely disseminated through ongoing communication with media such as provincial television channels and networks; the Company also actively participates in public welfare hikes and garbage collection activities, and organises tours to promote environmental protection concepts to the public.

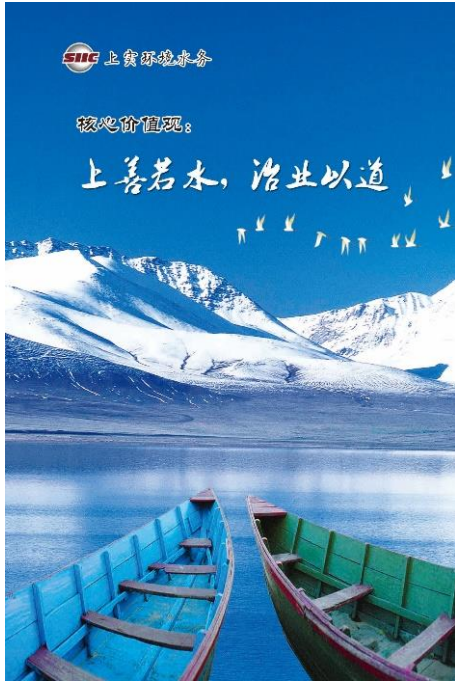


Figure 1: Slogan poster of our Nanyang City Wastewater Treatment Plant Sludge Treatment and Disposal Project



Figure 2: 6 • 5 World Environment Day at our Northeast China business unit



Figure 3: Organisational tours at Dongguan City DaLang Shui Kou Xing Bao Water Treatment Plant



Figure 4: Changjiang Daily citizen visit to our Wuhan Hanxi Wastewater Treatment Plant



Figure 5: On World Environment Day, “Beautiful China, I am a do-er” activity, and student from Wuhan University of Light Industry were invited to visit Wuhan Hanxi Wastewater Treatment Plant

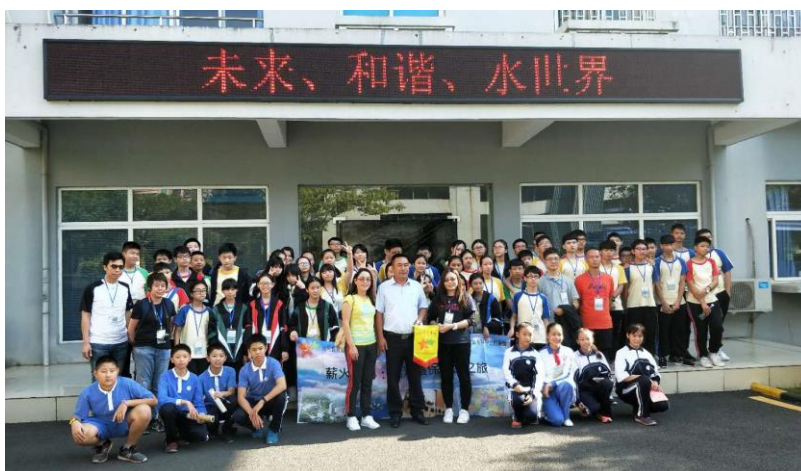


Figure 6: Over 70 teachers and students from Secondary Schools in Hong Kong visited Shenzhen Longgang District Wastewater Treatment Plant (2<sup>nd</sup> Phase)

## Treatment of Waste Gas, Wastewater and Solid Waste

As a leading investor and operator in the environmental industry in the PRC, we remain committed to protecting the planet, conserving the environment and preserving natural resources. To this end, we actively and continuously explore opportunities to minimise adverse impacts on the environment and the depletion of natural resources.

During the Reporting Period, the Company strictly complied with the *Environmental Protection Law of the PRC*, *Atmospheric Pollution Prevention and Control Law of the PRC*, *Energy Conservation Law of the PRC*, *Water Law of the PRC*, *Water Pollution Prevention and Control Law of the PRC*, *Law of the PRC on the Prevention and Control of Environment Pollution Caused by Solid Wastes* and other laws and regulations relating to air and greenhouse gas emissions, discharges into water and land, and the generation of hazardous and non-hazardous waste.

### Waste Gas

Emissions from our businesses are waste gases generated during water treatment and sludge treatment and air pollutants generated during fuel burning. Waste gas and air pollutant emissions can both induce negative impacts on the environment and potentially human health.

Waste gas emissions from water treatment and sludge treatment plants consist primarily of ammonia gas. To prevent gas leakages, disposal tanks are covered and hazardous gas generated are collected, sprayed, passed through volcanic rock and wood layer filtration, and finally deodorised to ensure emission standards are met. Moreover, soda ash is mixed with low pH water in our plants to minimise ammonia emissions. This, alongside other initiatives, have led to a reduction of 24,910 tonnes of ammonia through wastewater treatment during the Reporting Period.



Figure 7: Activated carbon adsorption tower





Figure 8: Sewage deodorisation facilities



Figure 9: Biological treatment pool at our Shenzhen Egongling Wastewater Treatment Plant



Figure 10: Deodorisation system at our Shenzhen Henggang Wastewater Treatment Plant

Air emissions from waste incineration processes primarily consist of sulphur dioxide and nitrogen oxides and industry-leading technology is used to cleanse and treat harmful flue gases (e.g. dioxins) generated by waste incineration, ensuring that the discharged gas meets required standards. As part of our efforts to reduce our emissions, we conducted a pilot project for a flue gas low-heat purification treatment system during the Reporting Period. The system has a high degree of stability and preliminary tests have shown performance levels to be superior to the requirements set out in the *Standard for Pollution Control on the Incineration of Municipal Solid Waste (GB18485-2014)*. Additionally, technical upgrades of our denitrification system and the implementation of discharge limits have led to the improvement in efficiency of removing nitrogen oxides in flue gas.

In addition to waste gas, we also generate greenhouse gas (“GHG”) emissions which mainly come from our fleet of vehicles, boilers, incinerators, generators and electricity consumption. To mitigate these emissions, we have planted trees and installed solar panels at our business locations. During the Reporting Period, we planted 11,183 trees, which equated to GHG emission savings of 257.21 tonnes<sup>1</sup>. Solar panels installed at our North China water supply plants generate an average of 5,000 kWh per day, equating to GHG emissions savings of up to 1,613.85 tonnes<sup>2</sup> a year. Furthermore, our waste incineration business has a positive impact on the environment, in that it reduces GHG emissions from waste otherwise designated for landfill sites. Organic waste at landfill sites are mostly decomposed by bacteria, which produce GHGs such as methane and carbon dioxide.



Figure 11: Solar panels installed at one of our North China water supply plants



Figure 12: Solar panels installed at our Dalian Quanshui River Wastewater Treatment Plant Project (2<sup>nd</sup> Phase)

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<sup>1</sup> CO<sub>2</sub> offsets were calculated using the methodology outlined in *Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong (2010 Edition)* published by the Environmental Protection Department and the Electrical and Mechanical Services Department.

<sup>2</sup> Based upon the assumption that 5,000 kWh per day is generated for 365 days of the year, and calculated using emission factors from the *2011–2012 Regional Power Grid Average CO<sub>2</sub> Emission Factors in China* guideline published by the National Development and Reform Commission of the PRC.

## Wastewater

Wastewater comes from domestic and industrial sources. Domestic sources include water discharged from toilets, baths and sinks, and industrial sources include water discharged from businesses, factories and plants. We are continuously exploring ways, such as the use of automation and artificial intelligence, to analyse the water quality in our plants, treat our wastewater efficiently and reduce our emissions in the process. Water quality mixture sampling of final effluent is conducted through the measurement of parameters such as COD, and online instruments continuously monitor all final effluent to ensure that they comply with the *Class 1A/1B Discharge Standard for Pollutants for Municipal Wastewater Treatment Plant (GB 18918-2002)* and reclaimed water discharge standards respectively. Policies guiding the Company's operations in relation to these aspects have been set according to relevant laws and regulations as well as standards such as the *Emission Standard of Air Pollutants for Municipal Wastewater Treatment Plants (DB31-982-2016)*.

The Company ensures that wastewater is treated with integrated wastewater treatment facilities and that it meets required standards before being discharged. Where possible, we clean and reuse backwash water in our production processes to maximise the utilisation of treated wastewater. Further, we have initiated wastewater reuse in wastewater plants such as our Shanghai Qingpu Second Wastewater Treatment Plant Co., Limited (under our North China business unit), whereby we provide treated wastewater to textile dyeing and finishing companies and other surrounding industries for their use. Treated wastewater from our South China wastewater treatment plants are also recycled for road cleaning use at Shenzhen Universiade Sports Centre and Longgang Central City. During the Reporting Period, the Company treated over 2 billion tonnes of wastewater and discharged approximately 1.8 billion tonnes of wastewater over our businesses. We recycled 8,323,750 tonnes of water in our wastewater treatment, sludge treatment and water supply operations, and reused 29,440,000 tonnes across our reclaimed water treatment operations.



Figure 13: Shenzhen City Guanlan Wastewater Treatment Plant



Figure 14: Ningbo Hangzhouwan New District Wastewater Treatment Plant



Figure 15: Harbin City Xinyi Wastewater Treatment Plant



Figure 16: Yinchuan Wastewater Treatment Fifth Water Reclamation Plant

### Solid Waste

The Company adheres to waste management policies based upon the 3Rs (Reduce, Reuse and Recycle), and encourages the conservation of resources based upon these three principles. We also provide technical training to operators of facilities and make adjustment to optimise operations to reduce waste generated from the use of facilities.

Across our water treatment and water supply operations, sludge is gathered, collected and transported to our sludge treatment plants as well as third party sludge treatment plants for high temperature aerobic fermentation. Regular inspections of sludge treated by our sludge treatment plants are conducted by designated personnel and surveys with customers are conducted to ensure that the sludge meets standards such as *Quality of Sludge from Municipal Wastewater Treatment Plant (GB24188-2009)*, *Disposal of Sludge from Municipal Wastewater Treatment Plant - Quality of Sludge used in Land Improvement (GB/T 24600-2009)* and *Disposal of Sludge from Municipal Wastewater Treatment Plant - Quality of Sludge used in Separate Incineration (GB/T 24602-2009)*. During the Reporting Period, we treated over 300,000 tonnes of sludge. Sludge designated for disposal at landfill sites is dewatered first to reduce the burden of landfill sites. Where possible, treated sludge is re-used for other purposes such as brick-production in brick-making factories and as compost for agricultural purposes, or it is incinerated to produce electricity. Sludge classified as “hazardous”, according to the definitions outlined in the *National Catalogue of Hazardous Wastes*<sup>1</sup> is rendered innocuous via treatment by third party contractors.

Other hazardous wastes generated in our water treatment and water supply operations consists of laboratory waste (such as chemical reagents). These are categorised according to their waste type, managed by designated personnel and waste that cannot be treated by the plant is collected by the laboratory and further handled by third-party contractors. Alternatives to materials/substances that generate hazardous waste are continuously searched for to minimise impacts on the environment.

Fly ash and activated carbon are the main wastes generated from our incineration projects. Fly ash is treated by removing impurities and being solidified whilst waste gas is adsorbed from the activated carbon before being treated together with fly ash and sent to landfill sites for disposal. These processes are conducted in line with the requirements set out in the *Standard for Pollution Control on the Landfill Site of Municipal Solid Waste (GB16889-2008)*. During the Reporting Period, we made improvements to incinerator designs and management processes, and adopted the use of advanced technology and equipment, ensuring that we comprehensively utilised hazardous waste and prevented and controlled generation as much as possible. Approximately 240,000 tonnes of waste was incinerated during the Reporting Period.

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<sup>1</sup> Published by the Ministry of Ecology and Environment (MEE), National Development and Reform Commission (NDRC), and Ministry of Public Security (MPS)



Figure 17: Siemens Bio-fermentation rotary machine



Figure 18: A sludge dewatering facility at our Qingpu Second Wastewater Treatment Plant of North China

## Environmental Performance Data

### Wastewater Treatment

Emission Type	Indicator	Unit	Discharged Amount
Air pollutants <sup>1</sup>	SOx	tonnes	56.35
	NOx		19.09
	PM <sub>10</sub>		58.75
Greenhouse gases	Direct emissions (Scope 1) <sup>2</sup>	'000 tonnes CO <sub>2</sub> e	5.64
	Indirect emissions (Scope 2) <sup>3</sup>		301.17
Wastewater	COD discharged	tonnes	79,751.10
	Ammonia discharged		3,786.12
Hazardous wastes <sup>4</sup>	Waste liquids (HW49; 900-047-49)	tonnes	9.45
	Acidic waste (HW34; 900-308-34)		0.14
	Hazardous sludge (HW18; 772-003-18)		22,179.69
	Physicochemical sludge (HW49; 802-006-49)		551.49
	Contaminated waste packaging, containers and filters (HW49; 900-041-49)		0.16
	Used motor oil (HW08; 900-249-08)		0.2
Non-hazardous wastes	Domestic Waste	'000 tonnes	1,368.26
	Paper		5.78
	Sludge		1,126.07

<sup>1</sup> Air pollutants were calculated using the *Technological Guidance for the Compilation of Emissions Inventory of Non-Road Mobile Sources (Trial)*, *Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Overland Transportation Enterprises (Trial)* and *Compilation of Air Pollutant Emissions Factors (AP-42)* published by the USEPA. Air pollutants included those emitted from boilers, backup diesel generators and vehicles during the Reporting Period.

<sup>2</sup> Scope 1 emissions were calculated using the *Methodology and Reporting Guidance on Greenhouse Gas Emissions for 24 Key Industrial Enterprises (Trial)*, *Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Overland Transportation Enterprises (Trial)* and the *Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Other Industrial Enterprises (Trial)* issued by the Ministry of Ecology and Environment of the PRC; and the *Greenhouse Gas Inventory Guidance - Direct Emissions from Mobile Combustion Sources* released by USEPA. The emission of greenhouse gas and air pollutants under Scope 1 is from the use of boilers, backup diesel generators and vehicles during the Reporting Period.

<sup>3</sup> Scope 2 emissions were calculated using the *2011–2012 Regional Power Grid Average CO<sub>2</sub> Emission Factors in China* guideline published by the National Development and Reform Commission of the PRC. Scope 2 emissions were from electricity purchased during the Reporting Period.

<sup>4</sup> Hazardous wastes were defined according to the *Directory of National Hazardous Wastes* published by the Ministry of Ecology and Environment of the PRC.

<b>Initiatives and processes to reduce emissions/discharges</b>	<b>Indicator</b>	<b>Unit</b>	<b>Result from initiatives and processes</b>
Planting trees	Number of trees planted	trees	8,483
	Amount of CO <sub>2</sub> offset <sup>1</sup>	tonnes CO <sub>2</sub> e	195.11
Wastewater treatment	COD reduced after treatment	'000 tonnes	251.78
	Ammonia reduced after treatment	'000 tonnes	24.91
Recycling water	Water recycled	'000 tonnes	6,446.09
	Reused reclaimed water	'000 tonnes	29,440

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<sup>1</sup> CO<sub>2</sub> offsets were calculated using the methodology outlined in *Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong (2010 Edition)* published by the Environmental Protection Department and the Electrical and Mechanical Services Department



## Water Supply

Emission Type	Indicator	Unit	Discharged Amount
Air pollutants <sup>1</sup>	SOx	tonnes	8.89 x 10 <sup>-3</sup>
	NOx		6.99
	PM		8.95
Greenhouse gases	Direct emissions (Scope 1) <sup>2</sup>	'000 tonnes CO <sub>2</sub> e	4.02
	Indirect emissions (Scope 2) <sup>3</sup>		87.53
Hazardous wastes <sup>4</sup>	Organic solvents (HW06)	tonnes	0.03
Non-hazardous wastes	Domestic Waste		241.8
	Paper		6.98
	Organic waste		55

Initiatives and processes to reduce emissions/discharges	Indicator	Unit	Result from initiatives and processes
Planting trees	Number of trees planted	trees	2,691
	Amount of CO <sub>2</sub> offset <sup>5</sup>	tonnes CO <sub>2</sub> e	61.89
Recycling water	Water recycled	'000 tonnes	1,786.41

<sup>1</sup> Air pollutants were calculated using the *Technological Guidance for the Compilation of Emissions Inventory of Non-Road Mobile Sources (Trial)*, *Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Overland Transportation Enterprises (Trial)* and *Compilation of Air Pollutant Emissions Factors (AP-42)* published by the USEPA. Air pollutants included those emitted from boilers and vehicles during the Reporting Period.

<sup>2</sup> Scope 1 emissions were calculated using the *Methodology and Reporting Guidance on Greenhouse Gas Emissions for 24 Key Industrial Enterprises (Trial)*, *Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Overland Transportation Enterprises (Trial)* and the *Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Other Industrial Enterprises (Trial)* issued by the Ministry of Ecology and Environment of the PRC; and the *Greenhouse Gas Inventory Guidance - Direct Emissions from Mobile Combustion Sources* released by USEPA. The emission of greenhouse gas and air pollutants under Scope 1 is from the use of boilers and vehicles during the Reporting Period.

<sup>3</sup> Scope 2 emissions were calculated using the *2011–2012 Regional Power Grid Average CO<sub>2</sub> Emission Factors in China* guideline published by the National Development and Reform Commission of the PRC. Scope 2 emissions were from electricity purchased during the Reporting Period.

<sup>4</sup> Hazardous wastes were defined according to the *Directory of National Hazardous Wastes* published by the Ministry of Ecology and Environment of the PRC.

<sup>5</sup> CO<sub>2</sub> offsets were calculated using the methodology outlined in *Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong (2010 Edition)* published by the Environmental Protection Department and the Electrical and Mechanical Services Department.

## Sludge Treatment

Emission Type	Indicator	Unit	Discharged Amount
Air pollutants <sup>1</sup>	SOx	tonnes	3.44 x 10 <sup>-3</sup>
	NOx		2.88
	PM		0.17
Greenhouse gases	Direct emissions (Scope 1) <sup>2</sup>	'000 tonnes CO <sub>2</sub> e	0.69
	Indirect emissions (Scope 2) <sup>3</sup>		7.27
Non-hazardous wastes	Domestic Waste	tonnes	9.3
	Paper		0.2
	Treated Sludge		101.661

Initiatives and processes to reduce emissions/discharges	Indicator	Unit	Result from initiatives and processes
Planting trees	Number of trees planted	trees	9
	Amount of CO <sub>2</sub> offset <sup>4</sup>	tonnes CO <sub>2</sub> e	0.21
Recycling water	Water recycled	'000 tonnes	91.25

<sup>1</sup> Air pollutants were calculated using the *Technological Guidance for the Compilation of Emissions Inventory of Non-Road Mobile Sources (Trial)*, *Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Overland Transportation Enterprises (Trial)* and *Compilation of Air Pollutant Emissions Factors (AP-42)* published by the USEPA. Air pollutants included those emitted from boilers, backup diesel generators and vehicles during the Reporting Period.

<sup>2</sup> Scope 1 emissions were calculated using the *Methodology and Reporting Guidance on Greenhouse Gas Emissions for 24 Key Industrial Enterprises (Trial)*, *Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Overland Transportation Enterprises (Trial)* and the *Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Other Industrial Enterprises (Trial)* issued by the Ministry of Ecology and Environment of the PRC; and the *Greenhouse Gas Inventory Guidance - Direct Emissions from Mobile Combustion Sources* released by USEPA. The emission of greenhouse gas and air pollutants under Scope 1 is from the use of boilers, backup diesel generators and vehicles during the Reporting Period.

<sup>3</sup> Scope 2 emissions were calculated using the *2011–2012 Regional Power Grid Average CO<sub>2</sub> Emission Factors in China* guideline published by the National Development and Reform Commission of the PRC. Scope 2 emissions were from electricity purchased during the Reporting Period.

<sup>4</sup> CO<sub>2</sub> offsets were calculated using the methodology outlined in *Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong (2010 Edition)* published by the Environmental Protection Department and the Electrical and Mechanical Services Department.

## Waste Incineration

Emission Type	Indicator	Unit	Discharged Amount
Air pollutants <sup>1</sup>	SOx	tonnes	26.58
	NOx		174.22
	PM		14.41
	Dioxins	kg	0.016
Greenhouse gases	Direct emissions (Scope 1) <sup>2</sup>	'000 tonnes CO <sub>2</sub> e	65.01
	Indirect emissions (Scope 2) <sup>3</sup>		0.24
Wastewater	COD discharged	tonnes	0.52
	Ammonia discharged		3.26 x 10 <sup>-3</sup>
Hazardous wastes <sup>4</sup>	Fly ash from domestic waste (HW18; 772-002-18)	'000 tonnes	3.59
	Activated carbon from treatment of waste gases generated during waste incineration (HW18; 772-005-18)	tonnes	75.12
Non-hazardous wastes	Domestic Waste		36.5
	Slag	'000 tonnes	44.38

Initiatives and processes to reduce emissions/discharges	Indicator	Unit	Result from initiatives and processes
Generating waste from electricity	Electricity generated	'000 MWh	83.32

<sup>1</sup> Air pollutants were calculated using the *Technological Guidance for the Compilation of Emissions Inventory of Non-Road Mobile Sources (Trial)*, *Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Overland Transportation Enterprises (Trial)* and *Compilation of Air Pollutant Emissions Factors (AP-42)* published by the USEPA. Air pollutants included those emitted from non-mobile vehicles and mobile vehicles, and dioxins emitted from waste incineration, during the Reporting Period.

<sup>2</sup> Scope 1 emissions were calculated using the *Methodology and Reporting Guidance on Greenhouse Gas Emissions for 24 Key Industrial Enterprises (Trial)*, *Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Overland Transportation Enterprises (Trial)* and the *Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Other Industrial Enterprises (Trial)* issued by the Ministry of Ecology and Environment of the PRC; and the *Greenhouse Gas Inventory Guidance - Direct Emissions from Mobile Combustion Sources* released by USEPA. The emission of greenhouse gas and air pollutants under Scope 1 is from the use of non-mobile vehicles and mobile vehicles during the Reporting Period.

<sup>3</sup> Scope 2 emissions were calculated using the *2011–2012 Regional Power Grid Average CO<sub>2</sub> Emission Factors in China* guideline published by the National Development and Reform Commission of the PRC. Scope 2 emissions were from electricity purchased during the Reporting Period.

<sup>4</sup> Hazardous wastes were defined according to the *Directory of National Hazardous Wastes* published by the Ministry of Ecology and Environment of the PRC.

## Use of Resources

The Company strives to operate, and to use resources such as energy and water efficiently. Energy and water use across our projects are monitored, and the data is reviewed by the Company to identify areas for improvement. We also set annual targets in place which are set according to equipment's energy and water consumption requirements and in accordance with industry guidance, laws and regulations and notices. For example, projects based in Shanghai adhere to the *Shanghai Water Consumption Quota Approval Measures*, the *Regulation of Shanghai Municipality on the Supply and Use of Electric*. Moreover, municipal notices such as the *Measures for Rewarding the Reporting of Violations of Environmental Laws in Shanghai* are followed to reduce the Company's impacts on the environment.

A range of initiatives have been implemented to reduce our resource consumption across our wastewater treatment plants. For example, our wastewater treatment plants operate with reduced pumping pressure during off-peak seasons of water supply or drainage; the repair and maintenance of pump motors is strengthened to enable the conservation of electricity consumption without compromising operating performance; frequency converters are used where possible; and tailwater (i.e. water that has been treated and ready to be discharged) from water treatment plants is comprehensively utilised to clean dewatering facilities.

Innovative production technology is used across our water supply plants, and improvements on our production management system have been made to increase the efficiency and utilisation rate of energy and water. The water sourced from our water supply projects comes from natural water bodies such as groundwater and surface water, and these are sourced only upon obtaining the proper and requisite approval from government authorities. As part of our efforts to reduce our water consumption, we re-used backwash water and recycled pool water for industrial purposes.

## Environment and Natural Resources

The Company recognises that its operations may have impacts on the environment and natural resources, and is committed to bolstering up the green and sustainable development of projects that it is engaged in. As a company engaged in wastewater treatment, water supply, waste incineration and sludge treatment, we endeavour to reduce the amount of environmental waste through treating and handling waste that would otherwise be discharged or disposed of into the environment.

For example, our waste incineration operations relieve the burden imposed on landfill sites and the energy generated from waste-to-heat technology are re-supplied back into the electricity grid for use. During the Reporting Period, thermal energy generated from incinerated waste amounted to 83.32 million kWh.

## Clean Water and Sanitation

We highly value the quality of water that we provide to our esteemed customers, particularly given that this has the potential to affect their health. Our water supply plants possess state-of-the-art membrane technology, enabling us to increase the quality of supplied water. Daily testing is conducted on incoming water from the source, outgoing water from plants and municipal pipelines to ensure that the water we supply meets the *National Drinking Water Standards (GB5749-2006)* and other national standards. Furthermore, the Company has strict quality management systems which involve timely inspections and real-time monitoring to ensure that the water quality meets required standards.

Resource Type	Indicator	Unit	Wastewater Treatment/Reclaimed Water Treatment	Water Supply	Sludge Treatment	Waste Incineration
Energy Consumption	Electricity	'000 MWh	442.22	130.83	10.31	0.45
		'000 MWh/revenue <sup>1</sup>	0.12	0.22	$2.8 \times 10^{-3}$	$3.06 \times 10^{-3}$
	Natural gas	'000 m <sup>3</sup>	130.38	567.20	227.80	
		'000 m <sup>3</sup> /revenue	$3.54 \times 10^{-2}$	0.94	$6.18 \times 10^{-2}$	
	Steam	'000 GJ	3013.6	1.01		
		'000 GJ/revenue	0.82	$1.67 \times 10^{-3}$		
	Gasoline	'000 litres	205.98	207.92	10.26	19.39
		'000 litres/revenue	0.06	0.34	$2.78 \times 10^{-3}$	0.13
	Diesel	'000 litres	55.62	20.72	93.33	46.26
		'000 litres/revenue	$1.51 \times 10^{-2}$	0.03	$2.53 \times 10^{-2}$	0.32
Coal	'000 tonnes	2.53	2.94			
	'000 tonnes/revenue	$6.86 \times 10^{-4}$	$4.85 \times 10^{-3}$			
Water Consumption <sup>2</sup>	Surface water	'000 tonnes	1,085.68	259,487.23		
	Groundwater			4,915.15		
	Water consumption intensity	'000 tonnes/revenue	0.294	436.75		

<sup>1</sup> Revenue was the total revenue (millions of RMB) for each of the respective business segments during the Reporting Period. This applies to all other instances of the term "revenue" in this table. As separate revenue figures for wastewater treatment/reclaimed water treatment and sludge treatment business segments, the combined revenue for these two segments were used for their respective intensity calculations.

<sup>2</sup> During the Reporting Period, the Company did not experience any issues in sourcing water that was fit for purpose.

## Social

### Service Quality and Standards

We strive to deliver quality products and services to our customers and continually identify ways to improve upon this by strengthening communication with our customers. This includes providing them with factual and accurate information on these products and services. At the same time, we value and respect our customers' information and privacy and strictly prevent the unauthorised disclosure of their personal information. We strictly comply with the *Advertising Law of the PRC*, the *Trademark Law of the PRC* and the *Patent Law of the PRC* and other laws and regulations relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.

To verify the quality of our products, we conduct regular project inspections and third-party sampling checks. Real-time monitoring systems are used in the wastewater treatment process and designated persons are responsible for the collection and analysis of water samples to ensure that the quality of water meets the required standards. We also have an established 24-hour tap water supply service hotline and designated personnel responsible for handling and managing customers' comments, suggestions and complaints.

### Employment and Labour Practices

The Company is committed to talent management and adheres to a "people-oriented" spirit. We provide open and equal opportunity employment opportunities to attract talented people, and do not discriminate based on applicants' gender, age, race or creed. Furthermore, we ensure that employees are fairly compensated through the assessment of individual contributions, corporate results and market trends. Besides offering competitive remuneration and bonuses, we also offer employees medical allowances, regular physical examinations, maternity leave, marriage leave, personal accident insurance as well as retirement benefits.

Staff manuals in the Company set out clear policies and codes of conduct for office procedures, reporting duty, attendance, performance appraisals, rewards and penalties, compensation and benefits as well as training and employee rights. We strongly believe that our employees are the most important asset to the Company, as their work influences our culture and business growth. During the Reporting Period, the Company strictly complied with the *Labour Law of the PRC*, *Labour Contract Law of the PRC*, *Regulation on the Implementation of the Labour Contract Law of the PRC* and other laws and regulations relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination and other benefits and welfare. Furthermore, the Company has a zero-tolerance approach toward the use of child or forced labour and abides by the laws and regulations described above to resolutely prevent this. Employment contracts are signed with employees on the basis of equality and mutual benefit. The termination of employment contracts and dismissal of employees are carried out in strict compliance with the relevant laws and regulations to fully protect the rights and obligations of both employees and the Company.

The Company had 5,623 employees by the end of 2017 and we continue to improve our talent recruitment, retention and development systems and operating with a management style that ensures employees' values are given due recognition. A breakdown of our employees by age, gender and employment type are shown below:

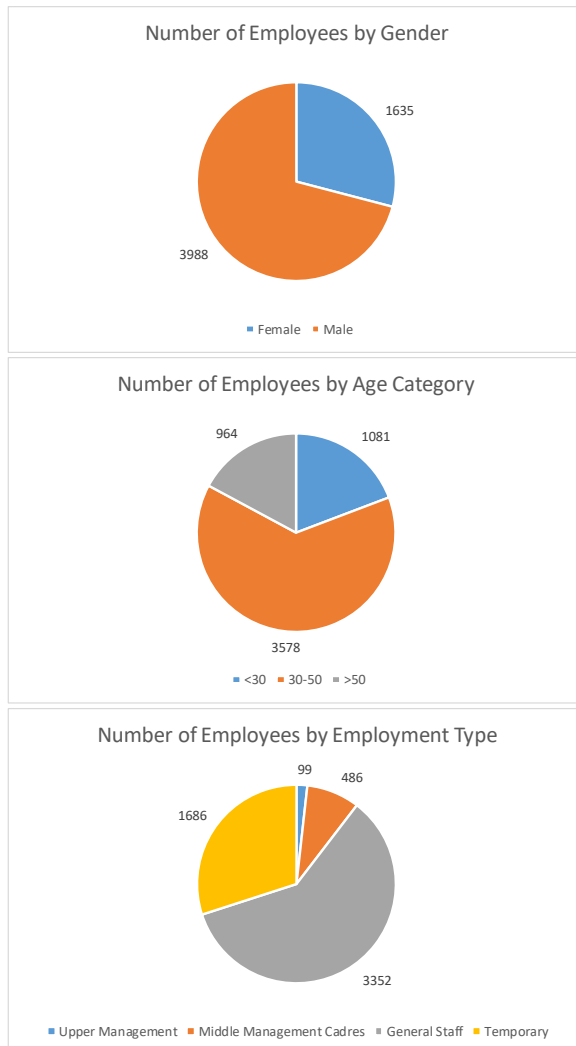


Figure 19: Employee breakdown by gender (top), age (middle) and employment type (bottom)

### Case Study

On 28<sup>th</sup> April, 2017, our Central China business unit organised the inaugural “East Lake Greenway Walking Tour”. Sixty participants (split into 15 teams of four) from the business unit and projects under the business unit took part and competed for the top three positions. The starting point, the halfway point and finishing point were designated checkpoints, with each competitor requiring to check in at each checkpoint. All for members of a team were also required to cross hands together when crossing the finish line. Ultimately, teams from the business unit’s headquarters crossed the line in first and third positions whilst a team from the Hanxi project location took the honours for second. Through this activity, participants collectively shared the mindset of “exercising one hour a day and working healthily for 40 years equates to a lifetime of happiness”.





Figure 20: "East Lake Greenway Walking Tour" organised by our Central China business unit

### Occupational Health and Safety

At SIIC Environment, safety is non-negotiable. During the Reporting Period, the Company strictly complied with the *Work Safety Law of the PRC*, *Law of the PRC on the Prevention and Control of Occupational Diseases* and other laws and regulations relating to providing a safe working environment and protecting employees from occupational hazards. Our workplace production safety mechanisms are based on three main areas: strengthening the development, supervision and control of our safety systems; providing employees with safety education and training; and enhancing employees' awareness of safety and emergency capabilities. Fire evacuation drills and other emergency simulation drills are implemented to enhance employees' health and safety awareness. Protective equipment is also provided to employees in specialist and technical positions, and this equipment is checked on a regular basis to ensure that they are in optimal working conditions. Special teams within the Company are responsible for coordinating, planning, organising, developing and promoting health and safety matters.

### Case Study

On 24<sup>th</sup> August, 2017, our Central China business unit organised a safety-themed conference. The aim of the conference was to strengthen participants' knowledge on safe production at work, address safety precautions and measures and to effectively prevent and curb serious work-related incidents. At the conference, the business unit's chairman shared the Company's safety-related documents with participants and received safe production reports from project representatives. At the end of the conference, project representatives collectively signed the "2017 Safe Production Agreement", declaring their commitment to designate relevant personnel to be responsible for specific aspects of safe production, and to ensure that safe operations are in place and are effective.



Figure 21: Safety-themed conference at our Central China business unit

### Training and Development

SIIC Environment views professional development and training for its employees as means to broaden employees' horizons and help them recognise their own value and potential. We have provided a range of internal and external training programmes for our employees. For example, we conducted technical training on the use of centrifuge facilities at East China's Pinghu City Dushan wastewater treatment plant, which have equipped them with the necessary skills to operate these facilities. During the Reporting Period, a total of 4,077 employees received 78,172 hours of training, equating to an average of 19.2 hours per employee. A breakdown of this training by employment grade is provided below.



Figure 22: Power generation Northeast China division training in 2017



Figure 23: May 4<sup>th</sup> hiking activity



Figure 24: 2017 mid-year conference training and development activities

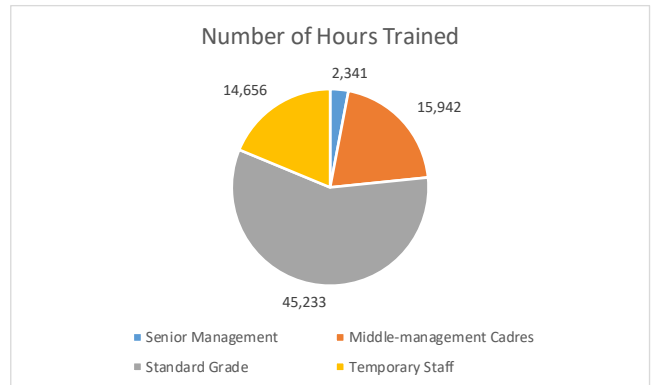
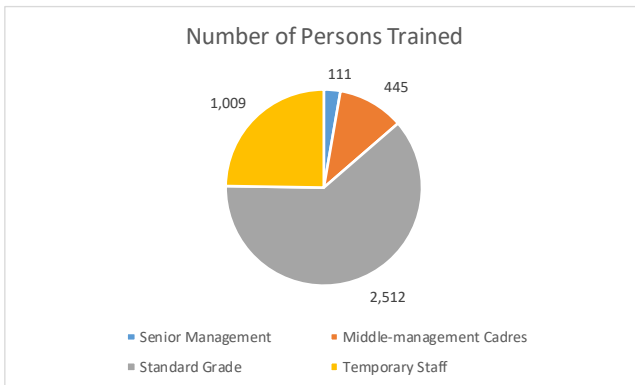


Figure 25: Number of persons trained and number of hours trained

## Research and Development

We actively explore opportunities to develop our own core technologies which put us in a strong position to enhance operational efficiency, lower operating costs, develop and commercialise new technologies in areas where we believe there is a strong potential for growth, and to protect the environment and natural resources in our daily operations and projects.

We have also increased our investments in research and development. Between the beginning of the Reporting Period and 30 September 2017, we invested 3.7 million RMB, an increase of over 100% of the amount invested in 2016. Our research and development investments mainly focus on core technologies across our businesses. For example, in a medical industrial park wastewater treatment project and sludge aerobic fermentation project of our Central China business unit, we invested 0.5 million RMB in technological developments that offer additional treatment options for wastewater that is difficult to treat and further stabilises and better utilises sludge from municipal wastewater treatments plants as a resource. At our Northeast China business unit, we invested 0.59 million RMB to run an experimental study on the use of ultra-fine microbubble wastewater treatment technology, 115,900 RMB to test the use of BARU compound lactic acid bacteria deodorising technology, 1.45 million RMB on the use of reactive oxygen species for sludge treatment; these investments give us leverage to lower energy consumption, increase processing efficiency and to produce higher quality products for our customers. We further invested 1.56 million RMB to establish a research centre at the business unit, which enables us to carry out research and development to create a water environmental management industrial chain incorporating the upgrade of conventional processes, increase in treatment extensiveness and equipment integration, as well as intelligent management.

We are currently researching and developing an intelligent inspection robot that can visually monitor various pool segments in the entire biochemical pool and monitor dissolved oxygen on a real-time basis; it is anticipated that this monitoring method can offer a solution to manual inspection errors arising from false detections and missed detections, and also to improve the collection of key indicators. We are also researching and developing an intelligent unmanned aerial vehicle system that can fly to areas that are difficult to access, and conduct water-quality sampling and monitoring in these places as well as nearby river outlets; this aids the provision of data to fill in missing data gaps and to improve maintenance efficiency and response times of maintenance teams.

Our commitment to research and development is also reflected in the patents that we have across our businesses. As of 30 September 2017, we had 45 registered patents in the PRC for technologies relating to wastewater treatment, reclaimed water treatment, water supply and waste incineration. Patents were invented across our business units during the Reporting Period. For example, our East China business unit currently holds 30 patents, of which 4 were developed during the Reporting Period, and our Northeast China business unit currently has 8 effective patents, 6 of which were invented during the Reporting Period. Similarly, our Central China business unit developed 3 patents which came into effect during the Reporting Period.

## Strengthening Communication and Partnerships Within the Industry

SIIC Environment has also considered the environment and social performance of business partners and suppliers. Our partnership with business partners and suppliers is built upon a foundation of seeking mutual cooperation and mutual benefits in order to arrive at a common developmental goal for SIIC Environment.

Our business operations ensure that suppliers and materials procured meet assessment standards in order to minimise potential supply chain risks. Our list of suppliers is updated at regular intervals and suppliers' performances are evaluated using a scoring system. Bidding activities are governed by fair and transparent evaluation rules to create a fair and open bidding process and to ensure the quality and efficiency of our procurement operations. These activities are also performed in accordance with the *Bidding Law of the PRC* and the *Regulation on the Implementation of the Bidding Law of the PRC* and other related laws and regulations.

### Case Study

We strive to forge stronger relationships and partnerships in the industries with professionals and experts in our industries, and conduct joint assessments with them on plants based in the provinces that we operate in. From 5 May to 25 May 2017, Heilongjiang Water Association organised 6 groups of experts to assess 136 wastewater treatments and main departments in 76 cities and counties in Heilongjiang province, in accordance with the *Notice on Carrying Out Standardised Management Assessment of Urban Wastewater Treatment* published by the Heilongjiang Department of Housing and Urban-rural Development. Experts from our Northeast business unit took part in the assessment.



Figure 26: Meeting between experts for a joint assessment organised by the Heilongjiang Water Association

## Social Responsibility

SIIC Environmental has a strong presence in society and we strive to build rapport with local communities where we operate. To this end, employees are encouraged to participate in community services and to use available corporate resources to help those in need. Our social responsibility work mostly focuses on supporting education, helping the poor and participating in community development.

We also provide assistance to employees going through difficult times. The Company's North China business unit carries out educational support and poverty alleviation activities. During the Reporting Period, a total of 30,000 RMB was offered to provide educational support to 6 of our employees, and a total of 30,000 RMB was offered to alleviate 27 poverty-stricken employees. Our Northeast China business unit also organised visits with the Harbin Municipal Youth League Committee to express their sympathy to the elderly at Ankang Social Welfare Institute.

## Appendix: Hong Kong Stock Exchange Environmental, Social and Governance Reporting Guide Content Index

General Disclosures and Key Performance Indicators (KPI)	Description	Relevant Page No.
<b>Environmental</b>		
<b>Aspect A1 : Emissions</b>		
<b>General Disclosure</b>	(a) 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	15-16
<b>KPI A1.1</b>	The types of emissions and respective emissions data.	23-27
<b>KPI A1.2</b>	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	
<b>KPI A1.3</b>	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	
<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).	
<b>KPI A1.5</b>	Description of measures to mitigate emissions and results achieved.	16-20
<b>KPI A1.6</b>	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	20-22
<b>Aspect A2 : Use of Resources</b>		
<b>General Disclosure</b>	Policies on the efficient use of resources, including energy, water and other raw materials.	28
<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).	30
<b>KPI A2.2</b>	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	28
<b>KPI A2.3</b>	Description of energy use efficiency initiatives and results achieved.	30
<b>KPI A2.4</b>	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	Not applicable
<b>KPI A2.5</b>	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	
<b>Aspect A3 : The Environment and Natural Resources</b>		
<b>General Disclosure</b>	Policies on minimising the issuer's significant impact on the environment and natural resources	28
<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.	
<b>Social</b>		
<b>Employment and Labour Practices</b>		
<b>Aspect B1 : Employment</b>		
<b>General Disclosure</b>	(a) 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.	31-33

<b>Aspect B2 : Health and Safety</b>		
<b>General Disclosure</b>	(a) 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.	33-34
<b>Aspect B3 : Development and Training</b>		
<b>General Disclosure</b>	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities	34-35
<b>Aspect B4 : Labour Standards</b>		
<b>General Disclosure</b>	(a) Policies ; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer  relating to preventing child and forced labour	31
<b>Operating Practices</b>		
<b>Aspect B5 : Supply Chain Management</b>		
<b>General Disclosure</b>	Policies on managing environmental and social risks of the supply chain.	37
<b>Aspect B6 : Product Responsibility</b>		
<b>General Disclosure</b>	(a) 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.	29, 31
<b>Aspect B7 : Anti-Corruption</b>		
<b>General Disclosure</b>	(a) 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.	11
<b>Community</b>		
<b>Aspect B8 : Community Investment</b>		
<b>General Disclosure</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.	38