

### **VPower Group International Holdings Limited**

(Incorporated under the laws of the Cayman Islands with limited liability) Stock Code: 1608



SUSTAINABILITY REPORT 2018

# **ABOUT** *THIS* **REPORT**



VPower Group International Holdings Limited ("VPower Group" or the "Group") (Stock Code: 1608.HK) is pleased to present our Sustainability Report 2018 (the "Report"), providing an overview of our commitment to sustainability. This year, we continued to disclose and discuss the key performance of the Group in environmental, social and governance ("ESG") areas to stakeholders through engaging AECOM Asia Company Limited, a professional sustainability consultant, in preparing the Report.

This Report is our third annual standalone report, covering the ESG management approach and performance of the operations of our offices<sup>1</sup>, and the system integration factory in Shenzhen, China (the "Shenzhen factory"), and operating projects under the Group's operational control<sup>2</sup> over the period from 1 January 2018 to 31 December 2018 ("FY2018" or the "Reporting Period"). Unless otherwise specified, the ESG performance of our contractors and suppliers is not reflected in this Report.

The Report has been prepared in compliance with the *Environmental, Social and Governance Reporting Guide* (the "ESG Reporting Guide") under Appendix 27 to the Main Board Listing Rules of The Stock Exchange of Hong Kong Limited ("SEHK"). As we strive to follow a path towards sustainable development, we have associated our activities with the applicable Sustainable Development Goals (SDGs) of the United Nations in the Report for the first time.

The Chinese and English versions of the Report<sup>3</sup> are available on our corporate website (<u>www.vpower.com</u>) as well as the website of HKEXnews (<u>www.hkexnews.com.hk</u>).

We appreciate your valuable comments and suggestions on this Report and our sustainability performance. Please send your comments to us at <u>esg@vpower.com</u>.

#### Notes:

- The offices cover our offices in Hong Kong, Mainland China, Singapore, Indonesia, Myanmar, Peru, and Brazil.
- The operating projects under the Group's operational control consists of our distributed power generation stations located in Indonesia, Myanmar, Bangladesh, Peru and China. For details of our operating projects, please refer to the chapter "About VPower Group".
- <sup>3</sup> In case of inconsistency or discrepancy between the Chinese and English versions of the Report, the English version shall prevail.



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# **MESSAGE** FROM OUR CHAIRMAN



LAM Yee Chun Executive Chairman

As a Hong Kong-based distributed power solution provider with presence in Mainland China, Southeast Asia, Latin America and other countries across the world, we are committed to providing reliable, stable and affordable electricity to our customers. It is also part of our efforts to be a responsible corporate citizen by contributing to the development of a sustainable community for our stakeholders. In recognition of the importance of ESG initiatives in achieving corporate sustainability and social well-being, we reformulate our independent ESG publication into Sustainability Report to better reflect our commitment and dedication to society.

Over the Reporting Period, we continued to create value for our shareholders, customers, employees,

suppliers and the communities in which we operate our business. Through expanding our business footprint and maintaining our market leadership, we generated direct economic value of approximately HK\$2,467.2 million<sup>1</sup>. To ensure our stakeholders continuously benefit from our business achievement, we have formulated development strategies to grow our business with risks managed. The global energy

### MESSAGE FROM OUR CHAIRMAN

transition into decarbonisation, decentralisation and digitalisation has become more evident. Aiming to capture the associated business opportunities, we are going to penetrate our business in emerging markets that we are familiar with, and also grow our business presence in developed markets where escalating demand for distributed power solutions is expected.

We value our mission to deliver reliable electricity to the people in need. We have been generating electricity in Southeast Asia, such as Myanmar, Indonesia and Bangladesh to improve their electrification rate and hence improve the living standard of the local residents. In 2018, we entered the power market of Peru by providing the electricity through island mode operation to 400,000 inhabitants in Iquitos, which remains isolated from the national grid.

We also concern about the climate change. It is confirmed by scientists that global temperatures in 2018 were the fourth warmest on record. To play our part as a responsible energy solution provider, we have deployed considerable resources to improve energy efficiency of our solutions and introduce different environmentally friendly solutions. In September 2018, we materialised our first biogas project equipped with combined heat and power system in China. The use of biogas and also the utilisation of residual heat to generate extra energy reduced

19,656.96 tonnes of carbon dioxide equivalent emissions in just 4 months. This project has inspired us to explore more opportunities in residual heat recovery. From an operation perspective, we adopted Environment Management Policy which helps us manage the potential adverse environmental impacts associated with our projects, such as air pollution, water pollution and noise pollution.

Our commitment to sustainability goes beyond our business operation. We care about the community and always encourage community engagement. In 2018, our charitable efforts extended from Hong Kong to countries with our operation, namely Indonesia, Myanmar and Peru. On top of making monetary donation, we also support our people to participate in these charitable events. For example, a group of management and our staff members ioined the Orbis Moonwalkers 2018 to challenge a 20km night walkathon with a certain distance to walk blindfolded. We believe this was an excellent opportunity for our people to experience the life of the blind who need our support and care.

To conclude, I am pleased to see our commitment in sustainability and increasing efforts to achieve our goal. During the Reporting Period, we received "2018 Hong Kong Awards for Industries: Upgrading and Transformation Grand Award" from the Hong Kong Young Industrialists Council and "BOCHK Corporate Environmental Leadership Award — Belt and Road Environmental Leadership Recognition Award" from the Federation of Hong Kong Industries and Bank of China (Hong Kong). They are prestigious recognition to our efforts and achievements in corporate sustainability and contribution to the environment. I would like to share the honour with all our people in appreciation for their professionalism and devotion in realising the value of VPower Group and supporting us in creating value for our other stakeholders.

LAM Yee Chun Executive Chairman 28 June 2019

Note:

<sup>1</sup> Direct economic value generated refers to revenue, other income and share of profit of an associate.

VPower Group is one of the world's leading large gen-set system integration providers and one of Southeast Asia's largest gas-fired engine-based distributed power generation (DPG) station owners and operators, with more than 20 years of proven operational excellence in the energy market. We deliver much-in-demand electricity to keep industries running and power the regional economic growth through two principal business segments: (1) System Integration (SI) business and (2) Investment, Building and Operating (IBO) business.

### **System Integration (SI) Business**

#### **Power Generation Systems**

- Utilising our proprietary system design and integration capabilities, we design, integrate and sell power generation systems (PGSs).
- Over the years, we have worked with customers located in China, Singapore, South Korea, Indonesia, Myanmar, Bangladesh, Philippines, United Arab Emirates, Peru, and Brazil, catering a variety of customer needs.

#### **Technical Skills and Know-How**

We design and deliver PGSs that can cope with challenging operating conditions, delivering technical support to projects from residential and commercial buildings to railway and telecommunication projects.

System integration of gen-set and PGS is a technological process that involves catering a variety of customer needs, including those relating to power consumption, cost, fuel efficiency, portability, ease of installation, ability to be redeployed, noise control and temperature control. Therefore, our gen-sets and PGSs are primarily equipped with engines manufactured by reputable engine manufacturers.



Engine and ancillary components from our suppliers



#### At our production factory in Shenzhen

We have well-established in-house processes to assemble, install and integrate gen-sets and PGSs to meet customer needs.

We deliver our gen-sets and PGSs, which are designed to be housed in ISO-standard shipping containers to facilitate long distance transportation and installation.

Gen-sets and PGSs are delivered to our customers

We offer on-site installation and commissioning services upon customers' request.

We provide after-sales technical support to our customers.

### Investment, Building and Operating (IBO) Business

#### **Distributed Power Generation Projects**

With our business focusing on markets with power shortages, we introduce fast-track DPG stations with standardised specification in a "plug-and-play" manner, making electricity more accessible.

#### **Operational Excellence**

- We have developed a number of proprietary system designs that contribute to high fuel efficiency of our PGSs, and have partnered with high-quality engine manufacturers to co-develop DPG stations globally.
- We work closely with project co-developers and engineering, procurement and construction (EPC) contractors to ensure compliance with prevailing local environmental and social regulatory requirements, fostering sustainable development in the global markets.

The major customers of our IBO business are public utility companies and government authorities. The off-takers primarily utilise our DPG stations for continuous power supply. They may also utilise the DPG stations to act as peak shaver to support the peak demand, or to balance and stabilise the power intake from the national grid in case their ordinary power source fails. We are generally responsible for the operations and maintenance of the DPG stations.



### Highlights of VPower Group's Achievements in 2018

The Group's first "waste-to-energy" project equipped with combined heat and power (CHP) systems in Shandong Province, China (Shandong Phase I), provides its off-taker with a one-stop energy solution starting from the biological desulfurisation process to the CHP systems for electricity and steam generation. With a 15-year contract term, the first phase of the project with an installed capacity of 8.2MW commenced commercial operation in September 2018 while the second phase is under construction.





We continued to expand our IBO business into Latin America. In February 2018, the Group acquired 51% equity interest in the project company of a heavy fuel oil (HFO)-fired project in Iquitos, Peru. The 80MW HFOfired DPG station provides electricity through island mode operation to 400,000 inhabitants in Iquitos, where the city is remaining isolated from the national grid.

In November 2018, the Group entered into a power purchase agreement with the Myanmar Government for the sales of electricity generated by a gas engine power plant with an installed capacity of 109.7MW in Myingyan, Myanmar, which commenced operation in February 2019. It is also the Group's first time to incorporate the Organic Rankine Cycle (ORC) technology to enhance energy efficiency and reduce energy cost.



We received BOCHK Corporate Environmental Leadership Awards — Belt and Road Environmental Leadership Recognition Award in May 2018. In supporting of the national Belt and Road Initiative, the purpose of the Award is to recognise the outstanding performance of the enterprises implementing environmental protection measures in regions along the Belt and Road.

The Group strives to lessen the long-term impact on the environment while providing stable and reliable electricity to the people and industries of the regions along the Belt and Road. Our DPG stations utilise cleaner and more efficient fuels to reduce emissions during operations.

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As of the date of our Annual Report 2018, VPower Group's IBO business covered 9 countries, reaching a total installed capacity of 668.8MW, as well as a planned installed capacity of 581.2MW in total covering potential projects in Sri Lanka, China, Brazil, United Kingdom and Bangladesh.

The following table shows our DPG projects in operation as of the date of our Annual Report 2018:

Projects	Installed capacity (MW) <sup>(1)</sup>	Contract length (months) <sup>(2)</sup>
Indonesia		
Teluk Lembu I	20.3	12
Teluk Lembu II	65.8	60
Jambi	56.4	60
Medan <sup>(3)</sup>	54.0	12
Rengat	20.3	36
Myanmar		
Kyauk Phyu I	49.9	60
Kyauk Phyu II	49.9	60
Myingyan I	149.8	60
Myingyan II <sup>(4)</sup>	109.7	60
Yangon <sup>(5)</sup>	4.7	48
Peru		
Iquitos <sup>(6)</sup>	79.8	240
China		
Shandong Phase I	8.2	180
Total	668.8	

As of the date of our Annual Report 2018, we are in progress to renew the contract of the following project:

Project	Installed capacity (MW) <sup>(1)</sup>	Location
Pagla	58.8	Bangladesh

Notes:

(1) Installed capacity refers to the maximum power generation capacity of the DPG station based on an aggregate capacity of power generation systems installed.

(2) Contract length refers to the term of the contract entered into by the Group in respect of the DPG projects.

(3) The Medan Project consists of Aceh, Tanjung Belit, Tembilahan and Kota Tengah DPG stations.

(4) Myingyan II Project commenced commercial operation in February 2019 as scheduled.

(5) Yangon Project commenced commercial operation in March 2019 as scheduled.

(6) We hold 51% equity interest of the project company that operates the lquitos Project.

### **Contributing to the Sustainable Development Goals**

VPower Group recognises the need for companies to align their strategies and operations with universal principles on the environment, human rights, and labour practice, creating value in a sustainable way. Therefore, VPower Group is committed to supporting the Sustainable Development Goals (SDGs) of the United Nations, recognising that the SDGs are not only for governments to achieve, but for business and society as a whole to make contribution. We have identified 10 specific SDGs that we believe are most closely connected with our business, environment and people.

# SUSTAINABLE GOALS

#### Our Business connects with:



#### Why these are important to VPower Group

Aiming to bridge the gap between supply and demand for electricity in emerging markets, we provide stable and affordable electricity to meet their need.

Our business depends on a diverse portfolio of projects and a continued investment in both new and upgraded technologies. We seek to promote long-term and sustainable economic growth and create an inclusive and diversified workforce, which are important for good business growth and a healthy investment environment.

#### How VPower Group contributed in 2018

VPower Group is one of the largest gas-fired engine-based DPG station owners and operators in Southeast Asia. In 2018, we had a planned installed capacity of 581.2MW in total covering potential projects, for which we have won public tenders or entered into contracts or letter of intent for operation and acquisition, and also projects with over 420MW planned installed capacity under advanced stage of negotiation. We will continue to explore various business opportunities to underpin the Group's sustainability.

To ensure best value for customers, we put great emphasis and resources on technology innovation and system enhancement to offer more efficient and cleaner power solutions. During the Reporting Period, HK\$31.6 million was used on research and development.

Our initiatives in protecting the **Environment** associate with:



#### Why these are important to VPower Group

As a leading DPG solution provider, we are committed to advancing our power solutions and exploring new technologies in pursuit of higher energy efficiency and lower carbon emission. We also use and rely on a number of natural resources for our business operation, and must therefore use these resources efficiently to minimise waste and negative environmental impacts, and maximise positive impacts where possible.

#### How VPower Group contributed in 2018

We are expanding into the power generation sector by different forms of fuel such as liquefied natural gas, biogas and renewable fuel sources. In September 2018, our first "waste-to-energy" biogas CHP project in Shandong, China (Shandong Phase I) commenced operation. As of the end of 2018, the project successfully recovered over 10 million m<sup>3</sup> of biogas, offsetting 19,656.96 tonnes of carbon dioxide equivalent emissions.

VPower Group respects and commits to preserving the nature by reducing harm to the surrounding environment. Our power plants strictly comply with prevailing local environmental standards, and standardised operational procedures are in place to protect the surrounding ecological environment and water resources.





#### Our commitment to the **People** connects with:

1 <sup>n0</sup> ₱verty <b>⋔`ぉ`Ħ`Ħ</b> `Ħ	End poverty in all its forms everywhere
4 EDUCATION	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
10 REDUCED	Reduce inequality within and among countries

#### Why these are important to VPower Group

Inequality has a negative impact on inclusive economic growth. Arising from the Belt and Road Initiative, we continue to build a strategic global network covering existing markets and new markets including China, Indonesia, Myanmar, Bangladesh, Peru and Brazil. We have a vast interest in the long-term success of these countries, and believe this will be best achieved with economic growth that is geographically balanced across both urban and rural areas.

#### How VPower Group contributed in 2018

During the Reporting Period, we officially expanded our footprint into Peru by acquiring 51% equity interest in the 80MW HFO DPG project in Iquitos. The HFO station provided electricity to more than 400,000 inhabitants of the area.

Operating and maintaining our DPG systems require special knowledge and expertise, which leads to an increase in technical staff number to support the rapidly growing business. We strive to promote higher quality education, and thus improving local employment by creating new job opportunities. We advocate professional skills learning and knowledge transfer in order to support our staff's career ambitions and drive the local economies forward. In 2018, we had a total of 625 overseas outsourced service workers regularly working in our sites.

### **Communication with Stakeholders**

VPower Group believes that stakeholder communication is a dynamic process that should be continuously conducted. Through regular communications with both our internal and external stakeholders, we are able to better align our ESG strategy with stakeholders' expectations and identify risks and opportunities.

Our communication channels with stakeholders include:



#### **Materiality Assessment**

To better understand stakeholders' opinions on VPower Group's efforts and performance on sustainable development, we distributed surveys to our stakeholders to find out the topics they considered important in our operations. These topics span across economic, social and environmental aspects. Stakeholders were asked to identify additional issues that they perceived to be important to our business, and provided feedback on our ESG management and reports. The survey was administered by the sustainability consultant for impartiality.

#### **Materiality Assessment Process**



#### **Materiality Matrix**

A detailed analysis on the survey had been prepared by the sustainability consultant to identify the material topics. Prioritisation of the topics took into account both the importance to stakeholders and the significance of the impacts. Positions of the topics are in the order of level of importance/significance of the impacts from bottom to top/left to right. As our stakeholders increasingly value the environmental performance of our operation and our environmental protection efforts, relevant topics are amongst the top of the list. The 12 material topics identified are addressed in detail throughout the Report.





### **STAKEHOLDER MATERIALITY MATRIX**

SIGNIFICANCE OF ECONOMIC, ENVIRONMENTAL & SOCIAL IMPACTS

	Economic	Environmental	Soc	ial
1.	Economic Performance	9. Materials and Resources Usage	17. Employment Practice 18. Labour / Management	31. Grievance Mechanisms for Impacts on Society
2.	Market Presence	10. Greenhouse Gas	Relations	32. Disaster / Emergency
З.	Indirect Economic	Management and	19. Occupational Health	Planning and
	Impacts	Climate Change	and Safety	Response
4.	Procurement Practices	Mitigation	20. Training and Education	33. Non-Discrimination
5.	Operation Efficiency	11. Wastewater and Waste	21. Diversity and Equal	34. Freedom of Association
6.	Anti-Corruption	Management	Opportunity	and Collective
7.	Anti-Competitive	12. Environmental	22. Employee Welfare	Bargaining
	Behaviour	Compliance	23. Supplier Social	35. Public Policy
8.	Availability and	13. Supplier Environmental	Assessment	36. Customer Health and
	Reliability	Assessment	24. Labour Practices	Safety
		14. Environmental Grievance	Grievance Mechanisms	37. Marketing and Labelling
		Mechanisms	25. Child Labour and Forced	38. Customer Privacy
		15. Environmental Education	Labour	39. Socioeconomic
		16. Biodiversity	26. Rights of Indigenous Peoples	Compliance
			27. Human Rights	
			Assessment for	
			Operations	
			28. Local Communities	

29. Social Compliance 30. Security Practices

### **Sustainability Governance**

Taking into account the environmental, social and governance aspects of our operations as well as our risk management strategies, VPower Group aims to create sustainable value for stakeholders. We maintain a high standards of corporate governance to oversee and implement comprehensive policies that guide and promote sustainability of VPower Group.



The Board of Directors is responsible for monitoring and reviewing corporate governance practices across VPower Group. The Board administers the Audit Committee, Remuneration Committee, and Nomination Committee, with 9 directors in total including 4 executive directors, 2 non-executive directors, and 3 independent non-executive directors, overseeing different functions to protect the interests of VPower Group's stakeholders.

Please refer to our Annual Report 2018 for details of our corporate governance structure and practices.

#### **Governance of Ethics and Culture**

A healthy business culture is important to support value creation in the long term. In undertaking its business activities, VPower Group seeks to do the right thing and operate with transparency and integrity. The *Code of Conducts* is the highest level of policy for all the employees in VPower Group. They provide the guidelines and standards that our company and business partners are required to follow to prevent the risk of unethical conduct relating to bribery, extortion, fraud and money laundering.

In 2018, no investigation or legal proceedings regarding unethical practices was instituted against VPower Group.

#### **Risk Management**

Our corporate culture encourages a risk-aware and control-conscious environment. To effectively manage existing and emerging risks, we instituted systematic risk management, which has been integrated into all our workflows. Our risk management process targets more than just financial risks. We also focus on ESG risks that may arise in connection with our business activities, keeping risks to a minimum from the very outset.



#### **Internal Control**

The Audit Committee has established whistleblowing policies and systems for employees and others who deal with the Group, such as customers and suppliers, to raise their concerns, in strict confidence, to the committee about possible improprieties in any matter related to the Group.



### **Supply Chain Management**

We understand that our responsibility lies beyond our operations and extends across our value chain. We work with our suppliers to acquire the right products and services that best meet our business needs in a cost-effective manner while maintaining a high level of integrity and ethical standards. VPower Group has adopted standardised procedures, including the *Supplier Evaluation Control Procedure* and *Procurement Control Procedure*, guaranteeing the quality of services with the utmost respect to the principles of cost-effectiveness, efficiency, and timeliness, as well as ensuring fair and transparent management of suppliers. When making procurement decisions, we also prioritise suppliers who offer green products, as well as suppliers that conduct themselves with social and environmental accountability.

#### **Engaging Suppliers**

VPower Group proactively collaborates with existing and new partners to strengthen its supply chain and deliver quality, sustainable products and services to the customers. Over the past years, we worked closely with strategic partners to co-create value in our industry.



#### Number of Suppliers by Geographical Region

Our suppliers are valued business partners, and we engage them regularly to pursue shared goals on sustainable development. We also visit our suppliers to conduct audits on their operations and inspect product quality. We leverage these visits to exercise our commitment to good social and environmental performance by sharing information with our suppliers on our sustainability strategies and initiatives.

#### **Responsible Procurement**

In tandem with promoting responsible practices throughout our supply chain, we also require our employees to conduct themselves with the highest standards of integrity and professionalism. We strictly forbid activities in relation to bribery, extortion, fraud and money laundering. Our *Anti-Bribery Policy* and *Conflict of Interest Policy* provides description of each type of corruptive behaviour to ensure that our employees are clear on how to avoid bribery, conflict of interests and favours, as well as secured communication channels for our employees to report any suspicion of corruption and bribery.

### **Product Responsibility**

Protecting people's lives by maintaining the safety of our gen-sets and power generation systems is one of our highest priorities. This is achieved by adhering to the pursuit of technology innovation and system enhancement, and combining these with our operating and maintenance principles to protect the safety of our staff, contractors and customers. Our gen-sets and power generation systems are all tested under our rigorous quality control systems by following the *Inspection Control Procedure* to ensure they are safe for customers to use. We also offer warranties on our gen-sets, providing repair or replacement services, to maintain a high level of excellence in customer care.

Stakeholders may access to our information across a range of platforms, including the company website and publications, which play important roles in our communication strategy, enabling us to relay important information regarding our products and services. In 2018, there was no incident of non-compliance with regulations concerning product and service information.



### **Environmental Management**

VPower Group always adheres to the concept of green operation. We continuously improve our resource management, practice excellence in our management of fuel and water resources, reduction of waste generation, and protection of the local ecological environment of local regions. Our objective is to ensure that our business activities cause no environmental damage and have as little environmental impact as possible.

To actively manage VPower Group's environmental governance, *Environmental Management Policy* is established to set the framework of environmental policies to ensure that operations are in compliance with applicable environmental laws and regulations.

VPower Group is well aware of the potential climate impact due to project development and operations, and therefore, VPower Group has been working hard to enhance the environmental performance of its assets through eco-friendly design, operational measures as well as energy efficiency and carbon reduction initiatives. Our production factory in Shenzhen and several project sites in Indonesia are currently certified to both ISO 14001 Environmental Management System and ISO 9001 Quality Management System, integrating environmental management and quality management into our day-to-day operation.

### **Air Emissions and Control**

Many factors influence emissions levels and intensities, including generation efficiency, type and quality of fuel, and emissions control measures deployed. To ensure optimised generation efficiency, we procure reliable and high-quality engines from reputable engine manufacturers for our gen-sets and power generation systems. Furthermore, our gen-sets are mostly comprised of gas-fired engines, which generally have lower level of air emissions than engines using other fossil fuels. In our Shenzhen factory, stringent operation controls are also implemented to ensure that air pollutants generated from the factory are in compliance with the Class II standard of *Emission Limits of Air Pollutants (DB44/27-2001)* in Guangdong Province.

We estimate our air emissions with reference to the United States Environmental Protection Agency's (USEPA) approved methodologies with the use of applicable emission factors from the engine manufacturers' technical specifications and USEPA AP-42 Compilation of Air Pollutant Emissions Factors. The major air pollutants generated from our operation include sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and particulate matter (PM).

#### Air Emissions in FY2018

Air Emissions (tonne) <sup>(1)</sup>	
Shenzhen Factory	
Sulphur dioxide (SO <sub>2</sub> )	0.032
Nitrogen oxides (NO <sub>x</sub> )	1.996
Particulate matter (PM)	0.053
Iquitos Project	
Sulphur dioxide (SO <sub>2</sub> )	456.14
Nitrogen oxides (NO <sub>x</sub> )	2,359.19
Particulate matter (PM)	80.79

Notes:

(1) Air emissions included the air pollutants generated from our Shenzhen factory, as well as the HFO power station in lquitos, Peru, in which we hold 51% equity interest of the project company that operates the lquitos Project. For the other projects, fuel consumption is controlled by the off-takers, and the related emissions are not considered as ours. Therefore, the related emissions data is not disclosed in this Report.

### **Greenhouse Gas Emissions**

To reduce the emissions over which we have direct control, we strive to accurately calculate our greenhouse gas (GHG) footprint, explore opportunities to improve energy efficiency, and increase the use of renewable energy. Our long-term ambition is to become a sector leader in energy efficiency and emission reduction.

In 2018, we continued to monitor our GHG emissions with an aim to establish consistent, comparable, and accurate climate disclosures. Our direct (Scope 1) emissions included fuels combusted in sources that we own or control, including fuel consumption for local transport, as well as operations at Shenzhen factory and Iquitos Project. Meanwhile, indirect (Scope 2 and Scope 3) emissions included purchased electricity consumption, water and paper consumption, and air travel by employees.



#### **GHG Emissions in FY2018**

GHG Emissions (tonne CO <sub>2</sub> equivalent) <sup>(1)</sup>	
Direct (Scope 1) emissions <sup>(2)</sup>	
Offices	117.25
Shenzhen factory	123.28
Iquitos Project	204,976.00
All other IBO projects	118.88
Energy indirect (Scope 2) emissions <sup>(3)</sup>	
Offices	52.34
Shenzhen factory	103.84
Iquitos Project	5,068.72
All other IBO projects	2,272.64
Other indirect (Scope 3) emissions <sup>(4)</sup>	
Offices	359.75
Shenzhen factory	6.05
Iquitos Project	0.17
All other IBO projects	129.47
Total GHG emissions	213,328.39

GHG Emissions Intensities	
Offices (tCO <sub>2</sub> e/employee)	2.101
Shenzhen factory (tCO2e/HK\$'000,000 of revenue)	0.148
Iquitos Project (tCO2e/kWh of electricity generated)	0.000661
All other IBO projects (tCO <sub>2</sub> e/kWh of electricity generated)	0.00000113

GHG Emissions Offset (tonne CO <sub>2</sub> equivalent)	
Shandong Phase I	19,656.96
"Net GHG emissions" <sup>(5)</sup>	193,671.43

Notes:

- (1) Calculation was made in accordance with applicable guidelines including 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 Electrical and Mechanical Services Department and Environmental Protection Department, HKSAR Government, and USEPA's approved methodologies with the use of applicable emission factors.
- (2) Scope 1 emissions included fuels combusted in sources that we own or control. Fuel consumption controlled by the off-takers is not considered as ours. Therefore, the related emissions data is not disclosed in this Report.
- (3) Emission factor for electricity purchased in Scope 2 is referenced to the latest available emission data released by CLP Power Hong Kong Limited and the *Regional Baseline Grid Emission Factor in China 2011–2012* issued by the National Development and Reform Commission (NDRC) of the PRC.
- (4) GHG emissions from air travel are calculated by International Civil Aviation Organisation (ICAO) Carbon Emissions Calculator.
- (5) "Net GHG emissions" refer to the total GHG emissions less any emission that is offset by VPower Group's activities.

### **Case Study**

#### Renewables: help reduce emissions and make the future green

In 2018, we continued to work on intensifying our contribution to climate protection with our first "waste-to-energy" combined heat and power project in Shandong, China (Shandong Phase I) commenced operation. The first phase of the project with an installed capacity of 8.2MW began operation in September 2018 while the second phase of 6.2MW is scheduled for commencement of commercial operation in the second half of 2019.

The project collects biogas from our customer's biochemical production plant where the biogas is produced from their wastewater anaerobic fermentation tank. As raw biogas contains a high amount of hydrogen sulfide ( $H_2S$ ), it is required to undergo a series of desulfurisation and purification processes prior to entering the gas engine to prevent corrosion of equipment and lower the concentration of  $H_2S$  for environmental, health and safety concerns. The biogas CHP system is equipped with a waste heat boiler for recovering heat energy from the flue gas to produce steam.



By recovering the biogas produced through anaerobic digestion, our biogas power generation project contributes to the reduction of GHGs by generating renewable energy that would otherwise be generated from fossil fuels. From September to December 2018, the biogas CHP system recovered over 10 million m<sup>3</sup> of biogas and offset 19,656.96 tonnes of carbon dioxide equivalent emissions. Throughout the 15 years contract duration, Shandong Phase I is expected to offset 707,655 tonnes of carbon dioxide equivalent emissions in total.



### **Energy Conservation**

VPower Group continues to look for ways to reduce our own energy consumption, which plays an important role in our environmental management and helps us reduce our GHG emissions. We seek to develop a new generation of gen-sets that is more fuel efficient so as to enhance our technological leadership. Our research and development team will continue to focus on developing advanced products and energy service solutions to meet the ever-changing needs of the power market. For example, promotion of the use of CHP systems to recover residual heat to produce steam or hot water, incorporation of Organic Rankine Cycle technology to convert waste heat to electricity, and replacement of old coal-fired power generation units with renewable and clean energy generation facilities.

Besides, VPower Group encourages resources saving in daily operation and proactively fosters a low-carbon corporate culture. Our Shenzhen factory has implemented the *Energy Resource Control Procedure* to strengthen energy conservation and management of our factory.

VPower Group's Energy Management	Regular equipment inspection and maintenance work is carried out to ensure all systems operate in an efficient manner
Equipment with power management feature is prioritised in equipment procure	
	Equipment idling due to internal reasons is prohibited

#### Direct Energy Consumption in FY2018

Energy Consumption	
Non-renewable Sources	
Electricity (kWh)	
Offices	98,149
Shenzhen factory	196,997
Iquitos Project	9,938,662
All other IBO projects	3,433,561
Natural Gas (m³)	
IBO projects (excluding Iquitos Project) <sup>(1)</sup>	459,045,233
Liquid Fuel (L)	
Offices	43,302
Shenzhen factory	57,820
Iquitos Project	67,871,743
All other IBO projects <sup>(1)</sup>	82,605,265

Fround Consumption	
Energy Consumption	
Renewable Sources	
Biogas (m³)	
IBO projects (excluding Iquitos Project) <sup>(1)</sup>	10,374,046
Total Energy Consumption (GJ) <sup>(2)</sup>	
Offices	1,939
Shenzhen factory	2,826
Iquitos Project	2,684,180
All other IBO projects <sup>(1)</sup>	21,179,173
Total Energy Consumption Intensities	
Offices (GJ/employee)	7.69
Shenzhen factory (GJ/HK\$'000,000 revenue)	1.79
Iquitos Project (GJ/kWh of electricity generated)	0.01
All other IBO projects <sup>(1)</sup> (GJ/kWh of electricity generated)	0.01

Notes:

(1) Fuel consumption in our IBO projects controlled by the off-takers during the Year is not considered as ours.

(2) Calculation is made in accordance with applicable guidelines including United Nations International Recommendations for Energy Statistics, Series M No. 93 published by the Department of Economic and Social Affairs of the United Nations Secretariat and International Energy Agency Statistics Manual (2010 Edition) published by International Energy Agency with the use of standard conversion factors.

### Water Stewardship

Water is one of the world's most precious and vital resources. Not only our communities and ecosystems require water, but our business also depends on a reliable supply of clean water. VPower Group is committed to using water efficiently and sustainably and to maintain high quality in the water sources from which our operation extracts water. For this reason, we observe all legal provisions for the withdrawal and discharge of this resource as a matter of course. Our Shenzhen factory also adheres to the water resources management strategies specified in the *Energy Resource Control Procedure* to ensure the water resources are used efficiently.

VPower Group's	Efficient use of water resources through losses control	
Water Resources Management	Integrated management of on-site water treatment and recycling systems to treat and reuse wastewater generated from assembly processes	
	Adopt a drenching system, which recovers used water, for cleaning and cooling down power units	
	Optimisation of plant equipment to reduce water usage, i.e. apply high-pressure hydraulic pumps to clean and cool down power units	

Water Consumption in FY2018

Municipal Water Consumption (m <sup>3</sup> )	
Offices	417
Shenzhen factory and IBO projects	16,068
Municipal Water Consumption Intensities	
Offices (m <sup>3</sup> /employee)	1.65
Shenzhen factory and IBO projects (m <sup>3</sup> /kWh of electricity generated)	0.000063

### **Waste Management**

Waste produced by the Group's activities includes waste arising during the assembly process of gen-sets, waste oil produced from DPG stations, and general refuse generated in facilities. To foster a sustainable business, the Group is committed to waste reduction and waste diversion through reuse or recycling. In 2018, several of our DPG stations were undergoing trial schemes to reuse waste oil in our operations. The Group's policies are aimed at continuously increasing the percentage of waste sent for recovery, whether hazardous or non-hazardous, by following the guidelines in the *Environmental Management Policy* to ensure hazardous waste, industrial waste and general waste are properly handled and encourage recycling activities as appropriate.

#### VPower Group's Waste Management Control



#### Waste Produced in FY2018

Shenzhen Factory		Disposal Method
Non-hazardous waste (kg)	2,960	Collected by government's sanitary division
Hazardous waste (kg)	3,330	Collected by qualified handlers for recycle and/or disposal in a safe manner
Intensity of non-hazardous waste generated (kg/HK\$'000,000 of revenue)	1.87	
Intensity of hazardous waste generated (kg/HK\$'000,000 of revenue)	2.11	
IBO Projects		Disposal Method
Non-Hazardous Waste		
Steel waste and scrap iron (kg)	44,749	Collected by third party handlers
Hazardous Waste		
Waste oil (L)	317,290	Collected by third party handlers for disposal in a safe manner
Intensity of steel waste and scrap iron generated (kg/kWh of electricity generated)	0.000018	
Intensity of waste oil generated (L/kWh of electricity generated)	0.00012	

### **Environmental Preservation**

We manage our environmental impacts on a site-specific basis since our operations have different levels of interaction with the local ecosystems, depending on factors such as locations, the level of development in the vicinity and the quality of the baseline environment. As such, the Group has established the *Environmental Management Policy* to provide clear guidelines on identifying, evaluating and monitoring environmental impacts from our operation activities. An inventory of environmental factors is compiled, updated and monitored on an ongoing basis to ensure the effectiveness and suitability of our environmental management system, allowing us to take appropriate measures in mitigating potential impacts on the environment and natural resources and reducing GHG emissions as much as possible. All of the emissions and effluents generated from our operations are also strictly monitored and adequately treated in meeting prevailing environmental regulations, ensuring no adverse environmental impacts on the surrounding water bodies, land and ecological sites.



### **Employee Relations**

We believe that developing an engaged workforce leads to a productive and profitable company. It is one of our most important priorities to attract and retain dedicated, skilled and knowledgeable employees, and therefore we have made ceaseless efforts in providing competitive remuneration and benefits, fostering professional training and development, and promoting a healthy work-life balance for our employees. Across our operations, we are consistently building a safe, inclusive and caring workplace.

As of 31 December 2018, the Group employed a total of 371 full-time permanent staff, representing an increase of 26.6% as compared with the previous year.



### **Workforce Distribution**

We embrace differences and individuality in employees in the belief that diversity can bring energy and new ideas to our operations. We prohibit all forms of discrimination on gender, age, family status, sexual orientation, disability, race and religion. Our *Code of Conducts* and anti-discrimination practices are embedded in our *Staff Handbook*, which serves as a guide to promote equal opportunities in all aspects of employment, and to ensure employees follow ethical business practices and comply with laws and regulations in relation to human rights and labour practices.

### **Engagement and Retention**

Employees are the most valuable assets of VPower Group, and are the major driver of VPower Group's sustainable development. We are devoted to becoming an outstanding employer by establishing a comprehensive human resources management system to provide standards and guidance for various management work in employment. As set out in our *Staff Handbook*, we operate in strict compliance with applicable local laws and regulations relating to recruitment and promotion, compensation and dismissal, working hours, rest periods, equal opportunity, diversity, anti-discrimination, child and forced labour avoidance, and other benefits and welfare.



#### **Recognising Demands and Suggestions**

An engaged workforce is essential to our success. We have set up internal communication platforms allowing our employees to raise questions and concerns. For example, our "Employee Suggestion Box Scheme" provides an opportunity for employees to share information and engage in the decision-making process. The scheme also serves as a channel for employees to lodge complaints relating to fraud, theft, embezzlement, corruption, bribery and misconduct including sexual harassment and unethical issues. Our management would review the suggestions and complaints in a timely manner, ensuring the voices of employees are heard and that feedback is provided by relevant parties promptly.

### **Employee Turnover Statistics in FY2018**

	Employee Turnover Rate (%) <sup>(1)</sup>
By Gender	
Male	16.39
Female	31.64
By Age Group	
30 or under	21.46
31–40	19.09
41–50	20.78
51 or above	21.54
By Geographical Region	
Hong Kong	21.19
Mainland China	11.19
Southeast Asia	18.71
Latin America	14.99

Notes:

(1) Employee turnover includes employees who leave the organisation voluntarily or due to dismissal, fail to pass probation or retirement.

#### **Staff Welfare and Wellness**

Upholding the principles of equality and non-discrimination, an ideal working environment with benefits such as competitive remuneration and benefit packages, medical allowances and engagement activities are provided for our employees regardless of their backgrounds, so that they are empowered to achieve growth and pursue holistic development in a diverse and fair environment.

On the overall remuneration framework, VPower Group strives to achieve fairness internally and competitiveness externally, and link remuneration with performance to encourage pursuit of excellence. We continue to review the remuneration system to assure that our employees' remuneration aligns with reasonable market levels in maintaining our competitiveness within the industry. In 2018, 100% of our employees received performance reviews, recognising their efforts and accomplishments throughout the year.

VPower Group believes that providing a sound working environment to employees can boost employees' sense of belonging to VPower Group and improve their work efficiency. We have promoted various welfare practices and organised diversified leisure activities. By organising these activities, we hope to improve the cohesion of VPower Group by creating a harmonious and vibrant workplace environment.



### **Development and Training**

Investment in human capital through a broad spectrum of employee training programmes specifically designed to cater the needs of employees at all levels is of utmost importance to the Group. We have put together a comprehensive training programme as set out in our *Training Policy*, covering orientation, health and safety, and professional training for our employees and outsourced service workers. Our orientation training includes company policies and standard operation procedures to help our new hires adapt to the working environment. Meanwhile, management training covering topics such as strategic management, service marketing and supervisory management, and leadership are provided to our management team, enabling professional and personal growth.



#### **Employee Training Statistics in FY2018**

Average Hours of Staff Training			
By Gender			
Male	17.85		
Female	6.63		
By Employment Category			
Senior management	20.40		
Middle management	16.41		
General staff	14.67		

### **Health and Safety**

The safety of both our employees and outsourced service workers remains a top priority for the Group. Amongst our main responsibilities, we have an obligation to take care of our employees and to encourage our outsourced service workers to share our core values, particularly with regard to health and safety at work. We implement health and safety management systems in line with the OHSAS 18001 standard, and strive to achieve an accident-free operation. Standardised procedures such as *VPower Safety Handbook, Power Plant Safety Management Handbook*, and *Power Plant Safety Equipment Operation Instructions* are in place to provide clear guidance on appropriate working procedures, protecting our employees against safety risks and reducing the likelihood of accidents.

We also invest in initiatives to promote the health and wellness of our employees. In terms of occupational health, each of our plant locations conducts regular training and safety drills designated to raise awareness about potential health hazards and teach employees how to respond in the event of an incident. We also equip our employees and contractors with adequate personal protective equipment, and have designated safety supervisors to review and reinforce the health and safety policies. The Group also arranges fire drills at all our operation sites to practice emergency procedures and ensure the effectiveness of our evacuation routes.

We require our employees to report any unsafe conditions so that we can identify and implement corrective actions to prevent potential hazards from developing into occupational injuries. In 2018, we did not record any case of occupational injury or illness of its staff as well as outsourced service workers working in its sites.



# **GIVING BACK** TO OUR COMMUNITY

Positively influencing the local community where we operate is a key component of our sustainability efforts. We engage in community involvement and support employee volunteering in all the countries where we operate. Constant dialogue with the local communities enables us to build projects and solutions that respond to common priorities, promote local development and allow the creation of shared value over the long term. Apart from creating jobs and offering individually tailored energy solutions to meet our customers' needs, we hope to benefit the community with a wide range of initiatives that promote prosperity and local economic development as per our *Community Investment Policy*. In 2018, we made charitable contributions totalling HK\$0.2 million, underlining our bond with the community and our commitment to charitable actions for its welfare.

### **Community Outreach**

#### Care for the Elderly and Underprivileged

As a committed corporate citizen, VPower Group firmly believes that it can create a better society by providing support and offering voluntary services to the elderly and underprivileged members in the society. We encourage our staff to participate in different projects and events to spread our joy and support to people who are in needs. In 2018, we sponsored the "Feast for the Elderly" which was co-organised by two social enterprises, "Run to Your Home" and "Sweet Stories", aiming to bring out the value of care and companionship by pairing 500 elderly guests with 500 community ambassadors and sharing meals in one-on-one manner.


#### **GIVING BACK TO OUR COMMUNITY**

#### **Sharing Primary Need, Sharing Happiness**

VPower Group supported our staff in Indonesia to organise the "Charity for Fasting Month" event, distributing primary needs packages at 3 different districts to express care and contribution towards the community.

A total of 490 packages containing rice, sugar, syrup and cooking oil were delivered by VPower's representatives to the residents who are living in the vicinity of our power plants in Jambi, Takengon and Tanjung Belit, fulfilling their needs during the month of Ramadan.

We hope our business operation will bring new job opportunities and create a sustainable future to the local citizens.



#### **Sports for Charity**

The positive impact of exercise is maximised for individuals and the communities when it is done along with a good cause. In 2018, our staff members participated in the "Orbis Moonwalkers" fundraising event, a 20 km night walkathon, in which the participants had to walk blindfolded for a certain distance to experience the loss of eyesight through a walk from dark to light, symbolising the blind being able to walk out of darkness. All donations raised from this event are used to support the Orbis Flying Eye Hospital, dedicating to the prevention of blindness and the treatment of blinding eye diseases in developing countries.



## **GIVING BACK TO OUR COMMUNITY**

#### **Cultivating a Culture of Continuous Learning**

The Group believes that continuous building of skills and knowledge helps a person's holistic development and encourages intellectual exchanges and relationships that contribute to the better society. We continue to work with local communities to promote a learning culture amongst children, youths and the public.

"VPower will cooperate with the college in Riau in order to support human resource programme in electricity sector in this region. This cooperation with the college will be conveyed in the form of training and sharing through mechanical and electrical workshops."

Branch Manager of PT. VPower Operation Services (Indonesia)

#### Learning with You

Aprendo Contigo is an association with an objective to develop and implement specialised education and recreational services in Peru, promoting the right to education for children with medical needs, hospitalised or in outpatient treatment. To create an environment of normality for the young patients during hospitalisation or treatment, Aprendo Contigo organises various classes and workshops, taking the school to children whose education is impeded due to health reasons. Through educational and recreational activities, the programme helps to bring the children's learning paths back on track. Since 2000, Aprendo Contigo has worked at various hospitals and has served more than 200 children every day for the last 18 years.

In 2018, VPower Group joined this programme, serving as educational assistants to promote and support the education for children at the National Cancer Institute of Peru. We are glad that the young patients would not miss any learning opportunities and would be able to continue their education once they return back to school.



# AWARDS AND RECOGNITION



**2018 Hong Kong Awards for Industries: Upgrading and Transformation Grand Award** *by Hong Kong Young Industrialists Council* 

VPower Group was recognised with our distinguished ability and achievements in business upgrading in the ever-changing market.

BOCHK Corporate Environmental Leadership Award — Belt and Road Environmental Leadership Recognition Award

by the Federation of Hong Kong Industries and Bank of China (Hong Kong)

VPower Group was recognised with our achievements in environmental protection and oustanding contributions to improve the environment in countries and regions along the Belt and Road Initiative.





## Business Environment Council – Corporate Member

VPower Group joined the Business Environment Council, joining hands with organisations across all sectors to facilitate Hong Kong's sustainability development.

#### **Environmental Performance**

	Unit	
Greenhouse Gas (GHG) Emissions <sup>(1)</sup>		
Direct (Scope 1) Emissions <sup>(2)</sup>		
Offices	tonne CO2e	117.25
Shenzhen factory	tonne CO2e	123.28
Iquitos Project	tonne CO2e	204,976.00
All other IBO projects	tonne CO2e	118.88
Energy Indirect (Scope 2) Emissions <sup>(3)</sup>		
Offices	tonne CO2e	52.34
Shenzhen factory	tonne CO2e	103.84
Iquitos Project	tonne CO2e	5,068.72
All other IBO projects	tonne CO2e	2,272.64
Other Indirect (Scope 3) Emissions <sup>(4)</sup>		
Offices	tonne CO2e	359.76
Shenzhen factory	tonne CO2e	6.05
Iquitos Project	tonne CO2e	0.17
All other IBO projects	tonne CO2e	129.47
Total GHG Emissions	tonne CO2e	213,328.40
GHG Emissions Intensities		
Offices	tonne CO2e/employee	2.101
Shenzhen factory	tonne CO2e/HK\$'000,000 revenue	0.148
Iquitos Project	tonne CO2e/kWh of electricity generated	0.000661
All other IBO projects	tonne CO2e/kWh of electricity generated	0.00000113
GHG Emissions Offset		
Shandong Phase I	tonne CO2e	19,656.96
"Net GHG Emissions" <sup>(5)</sup>	tonne CO <sub>2</sub> e	193,671.43
Air Emissions <sup>(6)</sup>		
Shenzhen Factory		
Sulphur dioxide (SO <sub>2</sub> )	tonne	0.032
Nitrogen oxides (NO <sub>x</sub> )	tonne	1.996
Particulate matter (PM)	tonne	0.053
Iquitos Project		
Sulphur dioxide (SO <sub>2</sub> )	tonne	456.14
Nitrogen oxides (NO <sub>x</sub> )	tonne	2,359.19
Particulate matter (PM)	tonne	80.79

	Unit	
Energy Consumption		
Electricity		
Offices	kWh	98,149
Shenzhen factory	kWh	196,997
Iquitos Project	kWh	9,938,662
All other IBO projects	kWh	3,433,561
Natural Gas		
IBO Projects (excluding Iquitos Project) <sup>(7)</sup>	m³	459,045,233
Liquid Fuel		
Offices	L	43,302
Shenzhen factory	L	57,820
Iquitos Project	L	67,871,743
All other IBO projects <sup>(7)</sup>	L	82,605,265
Biogas		
IBO Projects (excluding Iquitos Project) <sup>(7)</sup>	m³	10,374,046
Total Energy Consumption <sup>(8)</sup>		
Offices	GJ	1,939
Shenzhen factory	GJ	2,826
Iquitos Project	GJ	2,684,180
All other IBO projects <sup>(7)</sup>	GJ	21,179,173
Total Energy Consumption Intensities		
Offices	GJ/employee	7.69
Shenzhen factory	GJ/HK\$'000,000 revenue	1.79
Iquitos Project	GJ/kWh of electricity generated	0.01
All other IBO projects <sup>(7)</sup>	GJ/kWh of electricity generated	0.01
Water Consumption		
Municipal Water Consumption		
Offices	m³	417
Shenzhen factory and IBO projects	m <sup>3</sup>	16,068
Municipal Water Consumption Intensities		
Offices	m³/employee	1.65
Shenzhen factory and IBO projects	m <sup>3</sup> /kWh of electricity generated	0.000063

	Unit	
Waste Produced		
Shenzhen Factory		
Non-hazardous waste	kg	2,960
Hazardous waste	kg	3,330
Intensity of non-hazardous waste generated	kg/HK\$'000,000 revenue	1.87
Intensity of hazardous waste generated	kg/HK\$'000,000 revenue	2.11
IBO Projects		
Non-Hazardous Waste		
Steel waste and scrap iron	kg	44,749
Hazardous Waste		
Waste oil	L	317,290
Intensity of steel waste and scrap iron generated	kg/kWh of electricity generated	0.000018
Intensity of waste oil generated	L/kWh of electricity generated	0.00012
Environmental Compliance		
Number of violation cases related to pollutant emission	1	
or environmental impact	No.	0

Notes:

(1) Calculation is made in accordance with applicable guidelines including 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 Electrical and Mechanical Services Department and Environmental Protection Department, HKSAR Government, and USEPA's approved methodologies with the use of applicable emission factors.

(2) Scope 1 emissions included fuels combusted in sources that we own or control. Fuel consumption controlled by the off-takers is not considered as ours. Therefore, the related emissions data is not disclosed in this Report.

(3) Emission factor for electricity purchased in Scope 2 is referenced to the latest available emission data released by CLP Power Hong Kong Limited and the *Regional Baseline Grid Emission Factor in China 2011–2012* issued by the National Development and Reform Commission (NDRC) of the PRC.

(4) GHG emissions from air travel are calculated by International Civil Aviation Organisation (ICAO) Carbon Emissions Calculator.

(5) "Net GHG emissions" refer to the total GHG emissions less any emission that is offset by VPower Group's activities.

(6) Air emissions included the air pollutants generated from our Shenzhen factory, as well as the HFO power station in Iquitos, Peru, in which we hold 51% equity interest of the project company that operates the Iquitos Project. For the other projects, fuel consumption is controlled by the off-takers, and the related emissions are not considered as ours. Therefore, the related emissions data is not disclosed in this Report.

(7) Fuel consumption in our IBO projects controlled by the off-takers during the Year is not considered as ours.

(8) Calculation is made in accordance with applicable guidelines including United Nations International Recommendations for Energy Statistics, Series M No. 93 published by the Department of Economic and Social Affairs of the United Nations Secretariat and International Energy Agency Statistics Manual (2010 Edition) published by International Energy Agency with the use of standard conversion factors.

#### Employment and Labour Practices

	Unit	
Employment Profile		
Number of full-time permanent staff	No.	371
By Gender		
Male	No.	278
Female	No.	93
By Age Group		
30 or under	No.	111
31–40	No.	140
41–50	No.	84
51 or above	No.	36
By Employment Category		
General staff	No.	332
Middle management	No.	29
Senior management	No.	10
By Geographical Region		
Hong Kong	No.	72
Mainland China	No.	152
Southeast Asia	No.	83
Latin America	No.	64
Number of outsourced service workers	No.	625
Employee Turnover Rate		
By Gender		
Male	%	16.39
Female	%	31.64
By Age Group		
30 or under	%	21.46
31–40	%	19.09
41–50	%	20.78
51 or above	%	21.54
By Geographical Region		
Hong Kong	%	21.19
Mainland China	%	11.19
Southeast Asia	%	18.71
Latin America	%	14.99

	Unit	
Health and Safety		
Number of work-related fatalities	No.	0
Rate of work-related fatalities <sup>(1)</sup>	—	0
Number of high-consequence work-related injuries (excluding fatalities) <sup>(2)</sup>	No.	0
Rate of high-consequence work-related injuries (excluding fatalities) <sup>(3)</sup>	_	0
Number of work-related injuries <sup>(4)</sup>	No.	0
Rate of work-related injuries <sup>(5)</sup>	_	0
Days of absence from work due to work-related injury	days	0
Number of occupational diseases	No.	0
Development and Training		
Employee training rate	%	100
Average training hours per person	hours	15.0
Labour Practices		
Number of violation cases related to employment or labour regulations	No.	0
Number of violation cases related to child labour or forced labour	No.	0
Number of discrimination cases related to gender, ethnicity, age and health during recruitment	No.	0

Notes:

(1) Rate of work-related fatalities = (Total number of work-related fatalities/Total working hours) x 200,000

(2) High-consequence work-related injuries (excluding fatalities) refer to work-related injuries 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) x 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) x 200,000

#### SEHK ESG Reporting Guide Content Index

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant Chapter(s) in Sustainability Report 2018 and/or Other Explanation(s)
Environmental		
Aspect A1: Emissions		
General Disclosure	<ul><li>Information on:</li><li>(a) the policies; and</li><li>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</li></ul>	<b>o</b>
	relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	
KPI A1.1	The types of emissions and respective emissions data.	Protecting Our Environment
KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Protecting Our Environment
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Protecting Our Environment
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Protecting Our Environment
KPI A1.5	Description of measures to mitigate emissions and results achieved.	Protecting Our Environment
KPI A1.6	Description of how hazardous and non- hazardous wastes are handled, reduction initiatives and results achieved.	Protecting Our Environment

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant Chapter(s) in Sustainability Report 2018 and/or Other Explanation(s)
Aspect A2: Use of Resou		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw	Protecting Our Environment
	materials.	The Group's business activities revolve around assembling of gen-
		sets and operation of DPGs. We do not involve significant use of raw
		materials in our business activities.
		Therefore, we have no dedicated policies in the respective aspects.
KPI A2.1	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).	Protecting Our Environment
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	Protecting Our Environment
KPI A2.3	Description of energy use efficiency initiatives and results achieved.	Protecting Our Environment
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	Protecting Our Environment
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	
Aspect A3: The Environm	nent and Natural Resources	
General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources.	Protecting Our Environment
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Protecting Our Environment

Subject Areas, Aspects, General Disclosures		Relevant Chapter(s) in Sustainability Report 2018 and/or
and KPIs	Description	Other Explanation(s)
Social		
Employment and Labou	r Practices	
Aspect B1: Employment		
General Disclosure	<ul> <li>Information on:</li> <li>(a) the policies; and</li> <li>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</li> </ul>	
	relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti- discrimination, and other benefits and welfare.	
KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	Caring for Our People
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	Caring for Our People
Aspect B2: Health and S	afety	
General Disclosure	<ul> <li>Information on:</li> <li>(a) the policies; and</li> <li>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</li> <li>relating to providing a safe working</li> </ul>	
	environment and protecting employees from occupational hazards.	
KPI B2.1	Number and rate of work-related fatalities.	Caring for Our People
KPI B2.2	Lost days due to work injury.	Caring for Our People
KPI B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	Caring for Our People
Aspect B3: Developmen	t and Training	
General Disclosure	Policies on improving employees' knowledge Caring for Our People and skills for discharging duties at work. Description of training activities.	
KPI B3.1	The percentage of employees trained by Caring for Our People gender and employee category (e.g. senior management, middle management).	
KPI B3.2	The average training hours completed per employee by gender and employee category.	Caring for Our People

Subject Areas, Aspects,		Relevant Chapter(s) in
General Disclosures and KPIs	Description	Sustainability Report 2018 and/or Other Explanation(s)
and KPIsDescriptionOther Explanation(s)Aspect B4: Labour Standards		
General Disclosure	Information on:	Caring for Our People
	<ul> <li>(a) the policies; and</li> <li>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</li> <li>relating to preventing child and forced labour.</li> </ul>	Child and forced labour are strictly prohibited across our operation. We also manage and oversee the code of conduct of our suppliers including their social and ethical standards to minimise the risks associated in our supply chain.
		We do not consider that there are laws and regulations relating to preventing child and forced labour which have a significant impact on VPower Group.
		During the Reporting Period, none of our operation or suppliers had exposed to the significant risk of having child and forced labour.
KPI B4.1	Description of measures to review employment	Caring for Our People
	practices to avoid child and forced labour.	The Group regularly reviews its employment practice to ensure that we are in compliance with the applicable laws and regulations in preventing the use of child and forced labour.
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	Caring for Our People
		The Group has zero tolerance towards such practice. Violations are subject to internal disciplinary actions or handled by relevant authorities.
<b>Operating Practices</b>		
Aspect B5: Supply Chain	Management	
General Disclosure	Policies on managing environmental and social risks of the supply chain.	Our Approach to Sustainability
KPI B5.1	Number of suppliers by geographical region.	Our Approach to Sustainability
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	Our Approach to Sustainability

Subject Areas, Aspects, General Disclosures		Relevant Chapter(s) in Sustainability Report 2018 and/or
and KPIs	Description	Other Explanation(s)
Aspect B6: Product Resp	-	
General Disclosure	Information on:	Our Approach to Sustainability
	<ul><li>(a) the policies; and</li><li>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</li></ul>	Advertising is not applicable to the Group's business. Therefore, no dedicated policies are in place. Labelling is considered not significant
	relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods	in our operations. Therefore, no dedicated policies are in place.
	of redress.	Data privacy and protection of copyright are among the topics covered in our <i>Code of Conducts</i> to ensure the privacy of our stakeholders.
		We do not consider that there are laws and regulations relating to health and safety, advertising, labelling and privacy matters relating to products and services which have a significant impact on VPower Group.
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	No product was recalled due to safety and health reasons.
KPI B6.2	Number of products and service related complaints received and how they are dealt with.	No complaint was received from the municipalities and our customers.
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	We strive our best to protect the Group's intellectual property rights, as well as complying with all applicable laws and regulations, including observing the intellectual property rights of our suppliers.
KPI B6.4	Description of quality assurance process and recall procedures.	Our Approach to Sustainability
KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	The Group has made a strong commitment to information security. Employees must not disclose or use any confidential or personal information owned by the Group. Legal actions will be initiated if an employee is found to have committed an infringement of confidentiality.

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant Chapter(s) in Sustainability Report 2018 and/or Other Explanation(s)
Aspect B7: Anti-Corrupti	on	
General Disclosure	Information on:	Our Approach to Sustainability
	<ul><li>(a) the policies; and</li><li>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</li></ul>	
	relating to bribery, extortion, fraud and money laundering.	
KPI B7.1	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.	Our Approach to Sustainability
KPI B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	Our Approach to Sustainability
Aspect B8: Community I	nvestment	
General Disclosure	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.	Giving Back to Our Community
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	Giving Back to Our Community
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	Giving Back to Our Community

# **COMPLIANCE** WITH RELEVANT LAWS AND REGULATIONS THAT MAY HAVE A SIGNIFICANT IMPACT ON VPOWER GROUP

SEHK's "ESG Reporting Guide" Subject Areas	Compliance with Relevant Laws and Regulations That May Have a Significant Impact on VPower Group in 2018
Environment	
Aspect A1: Emissions Relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste	Relevant laws and regulations that may have a significant impact on VPower Group's business include Environmental Protection Law of the PRC, Rules on the Administration concerning Environmental Protection of Construction Projects, Law of the PRC on Environmental Impact Assessment, Law of the PRC on the Prevention and Control of Air Pollution, Law of the PRC on the Prevention and Control of Water Pollution, and Law of the PRC on Prevention and Control of Environmental Pollution by Solid Waste, Environmental Quality Standard for Air (Peru), Environmental Quality Standard for Water (Peru), and General Law for Solid Waste (Peru). These laws and regulations stipulate the requirements on air and greenhouse gas emissions, discharges into water and land, generation of hazardous and non-hazardous waste. It is imperative to meet these statutory obligations as violation of any of applicable environmental laws and regulations may result in penalties, operation suspension, or legal action against VPower Group.
	In 2018, we did not identify any confirmed non-compliance incident in relation to environmental protection that would have a significant impact on VPower Group. Please refer to chapter "Protecting Our Environment" on how VPower Group ensures compliance with applicable environmental laws and regulations.
Social	
Aspect B1: Employment Relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti- discrimination, and other benefits and welfare	Relevant laws and regulations that may have a significant impact on VPower Group's business include Labour Law of the PRC, Labour Contract Law of the PRC, Social Insurance Law of the PRC, and Employment Ordinance of HKSAR. In relation to our IBO business with DPG stations in Indonesia, Myanmar and Peru, the laws and regulations that are relevant to VPower Group include Law No. 13 of 2003 on Manpower (Indonesia), Payment of Wages Law (Myanmar), Leave and Holidays Act (Myanmar), Employment and Skills Development Law (Myanmar), Shops and Establishment Law (Myanmar), Law No. 29497 New Labour Procedure Law (Peru), and Supreme Decree No. 003-97-TR Law on Productivity and Labour Competitiveness (Peru). The above laws and regulations stipulate the legal obligations and responsibility 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. It is imperative to meet these statutory obligations may result in penalties or legal action against Vpower Group.
	In 2018, we did not identify any confirmed non-compliance incident in relation to our employment practices that would have a

In 2018, we did not identify any confirmed non-compliance incident in relation to our employment practices that would have a significant impact on VPower Group. Please refer to chapter "Caring for Our People" on how VPower Group ensures compliance with applicable employment laws and regulations.

# COMPLIANCE WITH RELEVANT LAWS AND REGULATIONS THAT MAY HAVE A SIGNIFICANT IMPACT ON VPOWER GROUP

SEHK's "ESG Reporting Guide" Subject Areas	Compliance with Relevant Laws and Regulations That May Have a Significant Impact on VPower Group in 2018
<b>B2: Health and Safety</b> Relating to providing a safe working environment and protecting employees from occupational hazards	Relevant laws and regulations that may have a significant impact on VPower Group's business include Labour Law of the PRC, Work Safety Law of the PRC, and Occupational Safety and Health Ordinance of HKSAR. In relation to our IBO business with DPG stations in Indonesia, Myanmar and Peru, the laws and regulations that are relevant to VPower Group include Law No. 13 of 2003 on Manpower (Indonesia), Occupational Safety and Health Law (Myanmar), and Law No. 29783 Occupational Health and Safety Law (Peru). These laws and regulations provide requirements in providing a safe working environment and protecting employees from occupational hazards. It is imperative to meet these statutory obligations as violation of any of applicable health and safety laws and regulations may result in penalties, operation
	suspension, or legal action against VPower Group. In 2018, we did not identify any confirmed non-compliance incident in relation to health and safety that would have a significant impact on VPower Group. Please refer to chapter "Caring for Our People" on how VPower Group ensures compliance with applicable laws and regulations relating to health and safety.