

(Formerly known as Panda Green Energy Group Limited) (前稱熊貓綠色能源集團有限公司)

(Incorporated in Bermuda with limited liability) (於百慕達註冊成立之有限公司)

Stock Code 股份代號: 686

Environmental, Social and Governance Report 環境、社會及管治報告



VISION 願景

To become a world-class clean energy ecological investment operator 成為國際一流的清潔能源生態 投資運營商

MISSION 使命

To build an ecological system of clean energy industry that is green, multi-functional, complementary and intelligently coordinated, and provide full life-cycle services to global energy users through value creation 構建綠色為主、多能互補、智慧協同的清潔 能源產業生態體系,通過價值創造為全球 能源用戶提供全生命周期服務

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This is the fifth Environmental, Social and Governance ("ESG") Report of Beijing Energy International Holding Co., Ltd. (formerly known as Panda Green Energy Group Limited) (hereafter referred to as the "Company", and collectively with its subsidiaries, the "Group"), presenting our continued efforts for driving sustainability and corporate social responsibility. This report should be read in conjunction with the Company's 2019 Annual Report. For the corporate governance section, please refer to our Annual Report on pages 32 to 56.

The board (the "Board") of directors (the "Directors") of the Company acknowledges its responsibility for ensuring the integrity of this report. To the best of its knowledge, this report presents the details of topics material to the Group, their impacts and the Group's performance in addressing ESG issues. This report has been reviewed and approved by the Board.

REPORTING GUIDELINES AND PRINCIPLES

This report is prepared in accordance with the Core Option of the Global Reporting Initiative's Sustainability Reporting Standards ("GRI Standards"), and in compliance with the ESG Reporting Guide set out in Appendix 27 to the Rules Governing the Listing of Securities on the Main Board of The Stock Exchange of Hong Kong Limited ("HKEX"). Where applicable, the Group aligns its ESG performance with the Sustainable Development Goals ("SDGs") when addressing its material ESG topics.

The preparation of this report was underpinned by the reporting principles of Materiality, Quantitative, Balance, and Consistency. Quantitative data are analysed to account for year-on-year changes and is presented in a way that allows for consistent comparison.

REPORTING BOUNDARY AND PERIOD

This report discloses key indicators of the Group's environmental and social performance during the financial year from 1 January 2019 to 31 December 2019 (the "Year"). The scope of this report encompasses business operations of the Group and its associates, unless stated otherwise. 本報告是北京能源國際控股有限公司(前稱 熊貓綠色能源集團有限公司)(下文簡稱為 「本公司」,連同其附屬公司統稱為「本集團」) 的第五份環境、社會和管治(「ESG」)報告, 呈列我們為推動可持續發展和企業社會責任 所做的不懈努力。本報告應與本公司2019年 年報一併閱讀。有關企業管治一節,請參閱我 們的年報第32至56頁。

本公司董事(「董事」)會(「董事會」)確認其 有責任確保本報告的真實性,且就其所知,本 報告詳細披露本集團的實質性議題、其影響 以及本集團在處理ESG議題的表現。董事會 已審閱並通過本報告。

報告指引及原則

本報告乃根據全球報告倡議組織《可持續發展報告標準》(「GRI標準」)的「核心」方案, 並遵循香港聯合交易所有限公司(「聯交所」) 主板證券上市規則附錄二十七中所載的《環 境、社會及管治報告指引》而編制。當適用 時,本集團於處理其重大ESG議題時參考可 持續發展目標(「SDGs」)。

本報告以「重要性」、「量化」、「平衡」和「一 致性」的報告原則為基礎,量化數據經分析 後,以可作按年比較的一致性方式呈列。

報告範圍及期間

本報告披露本集團在2019年1月1日至2019年 12月31日(「本年度」)的環境和社會績效的關 鍵指標。除另有説明,本報告的範圍涵蓋本集 團及其聯營公司的業務營運。

FEEDBACK 反饋

The Group is committed to communicating with its stakeholders, understanding their concerns and striving for ongoing improvement in ESG management approach and performance. We welcome your feedback on this report and on any aspect of our sustainability performance through the feedback form, which is available at the back of this report. 本集團致力於與利益相關者進行溝通,了解 他們的關注,並持續改善ESG管理方法和績 效表現。我們歡迎您通過我們的反饋表對本 報告及我們在可持續發展績效的任何方面進 行反饋,反饋表格可在本報告的背面獲取。

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The Company is principally engaged in the development, investment, operation and management of the solar power plants and other renewable energy projects.

Transforming the concept of clean energy into tangible results, the Company and its associates and/or joint ventures owns 61 renewable energy power plants, with the total electricity generation of 3,172,916 megawatt hours ("MWh") in 2019.

The Company is one of the first batch of Hong Kong listed companies to be shortlisted in China's Top-runner projects, which aim to promote state-of-the-art technology in the development and operation of solar power plant projects. During the Year, our Toprunner project in Baotou, Inner Mongolia, which is also our fourth Panda Power Plant, has successfully connected to the grid. Together with the commencement of other power plants during the Year, the aggregate installed capacity of the Company and its associates surpassed 1,979 megawatt ("MW") as at the end of 2019. 本公司主要從事太陽能發電站及其他可再生 能源項目的開發、投資、營運和管理。

為將清潔能源的概念轉化為切實的成果,本 公司及其聯營公司及/或合營企業擁有61 個可再生能源發電站,2019年的總發電量為 3,172,916兆瓦時(「兆瓦時」)。

本公司是首批入圍國家「領跑者」項目的香港 上市公司之一,其目標在於於太陽能發電站 項目的開發和營運方面推廣最先進的技術。 於本年度,我們在內蒙古包頭的「領跑者」項 目,也是我們的第四個熊貓電站,已經成功併 網。加上於本年度其他電站的啟用,截至2019 年底,本公司及其聯營公司的總裝機容量已 經超過1,979兆瓦(「兆瓦」)。





2018的數據已經重列

PROMOTING LOW CARBON CLEAN ENERGY 推動低碳清潔能源

The total electricity generation volume for 2019 is 3,172,916 MWh, equivalent to: 2019年的總發電量為3,172,916兆瓦時,相當於:



Saving 1.26 Million Tonnes of Standard Coal 節約1.26百萬噸標準煤



Reducing 863 Thousand Tonnes of Soot Emission 減排86.3萬噸煙塵



Reducing 3.16 Million Tonnes of Carbon Dioxide Emission 減排3.16百萬噸二氧化碳



Planting 172 Million of Trees 種植172百萬棵樹



Reducing 47 Thousand Tonnes of Nitrogen Oxide Emission 减排4.7萬噸氮氧化物



2.11 Million Household's Electricity Consumption in a year 2.11百萬戶居民 一年的用電量

AWARDS AND RECOGNITION

The Group has received two awards and recognition in connection to its performance in environmental protection and social responsibilities in 2019, listed below:

最具社會責任獎

獎項及榮譽

2019年,本集團在環境保護和社會責任方面的表現獲授予兩項獎項及榮譽,具體如下:

Awarded the "Best in Social Responsibility Award" in the "2019 Chinese Enterprise Excellence Awards" for its contributions to green development, social responsibility and devotion to the society.

憑藉本公司在綠色發展、履責擔 當、奉獻社會等方面的貢獻,於 「2019年中國企業精英頒獎禮」 上榮獲「最具社會責任獎」。

Awarded the "Most Socially Responsible Hong Kong Listed Company" at the "1st Greater China Best Listed Companies Awarding Ceremony" for the Company's positive contribution in the fields of poverty alleviation, education, environmental protection, etc. 於「首屆大中華區最佳上市公司頒 獎典禮」榮獲「港股上市公司最具 社會責任獎」,以表彰本公司在扶 貧、教育、環保等領域的積極貢獻。



EXTERNAL COMMITMENTS

The Company is committed to growing into an international resource pooling platform, working together with industry stakeholders and international institutions to propel the development of the renewable energy industry.

對外承諾

本公司致力成為一個國際資源匯集平台,與 行業利益相關者和國際機構攜手合作,共同 推動可再生能源產業的發展。



Initiated the establishment of the Photovoltaic Green-ecosystem Organisation ("PGO") to carry out all-round cooperation among members on the development of clean energy

發起成立光伏綠色生態合作組織(「PGO」),就清潔能源的開發於成員間展 開全方位合作



Followed the national policy of the "Belt and Road Initiative" to provide ecological solutions for countries and regions along the route 緊隨「一帶一路」國策,為沿綫國家及地區提供生態解決方案



Signed a cooperation agreement with the United Nations to build Panda Power Plants, becoming the United Nations' international platform in response to climate change

與聯合國簽署合作協議打造熊貓電站,成為聯合國推動應對氣候變化的國際 平台

About the Company 關於本公司

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Activities Highlights in 2019

2019年活動亮點



Attended China-Saudi Arabia Investment Cooperation Forum 出席中沙投資合作論壇



The Sixth Panda Photovoltaic Power Plant Successfully Connected to the Grid 第六個熊貓光伏電站順利併網



Visited the United Nations Development Programme Representative Office in China 到訪聯合國開發計劃署 駐華代表處座談交流

OUR BUSINESS MODEL 我們的業務模式

Understanding the creation of value 了解價值創造的模式

KEY INPUTS 主要投入

Financial capital 資本資源

- Obtained through various channels including new shares placement, issue of senior notes, medium-term notes, corporate bonds, bank borrowings and financial lease
- 透過多種渠道獲得,包括配售新股,發行優先票據、中期票據、公司債券,銀行借款及融資租賃



Manufactured capital 生產資源

- Property, plant and equipment of RMB14,246 million
- 物業、廠房及設備,總值人民幣14,246百萬元

Intellectual capital 知識資源

Intellectual properties include patents, trademarks and copyrights

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- Experienced employees and managers from the power industry
- 知識產權,包括專利、商標及版權
- 來自電力行業的經驗豐富員工、管理人員

Human capital 人力資源

- Full-time permanent employees: 21 employees in Hong Kong and 391 employees in PRC
- Site safety inspection and evaluation system
- Safety hazards prevention measures implemented on various stages ranging from research, design, manufacture, operation and maintenance
- 全職僱員:香港21名僱員及中國內地391名僱員
- 地盤安全監督及評估系統
- 在研究、設計、生產、營運及維護各環節實施的安全隱患預防措施



Social and relationship capital 社會關係資源

- Our stakeholders include employees, suppliers, business partners, PGO and governments, etc.
- 我們的利益相關者包括僱員、供應商、業務夥伴、PGO及政府等



Natural capital 自然資源

- Water consumption: 961 tonnes in offices and 35,742 tonnes in power plants
- Energy consumption in offices and power plants: 92,629 gigajoules ("GJ")
- 用水量:辦公室961噸及電站35,742噸
- 辦公室及電站能源耗量:92,629千兆焦耳(「千兆焦耳」)

環境、社會及管治報告 2019 Environmental, Social and Governance Report 2019

About the Company 關於本公司

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OUR ACTIVITIES 經營活動

OUTCOMES 經營成果

For the year ended 31 December 2019: 截至2019年12月31日止年度:

- Revenue: RMB2,168 million
- EBITDA: RMB1,920 million
- 收益 : 人民幣2,168百萬元 EBITDA : 人民幣1,920百萬元

• Total number of on-grid solar power plants: 61

- Total electricity generated: approximately 3,172,916 MWh
 已併網的太陽能發電站總數:61個
 總發電量:約3,172,916兆瓦時

- Work-related fatalities: 0
- Percentage of employees who received physical health check-ups:

- 員工培訓總數:6,896人次 因工死亡人數:0 因工傷損失工作天數:0 接受健康檢查的僱員比例:99% 我們的主要太陽能電站獲得OHSAS:18001職業健康與安全管理體系 • 認證證書
- Office in China to reach consensus on deepening cooperation 接待東亞峰會清潔能源論壇代表團,以及香港教育局代表團 到訪聯合國開發計劃署駐華代表處座談交流,就深化合作達成共識

- Non-hazardous waste: 0.47 tonnes
 Non-hazardous waste: 21.09 tonnes
 Solar panels recycled: 6.3 tonnes
 溫室氣體排放: 19,259噸二氧化碳當量
 有害廢棄物: 0.47噸
 無害廢棄物: 21.09噸
 回收太陽能電池板: 6.3噸

發展 Development

全球領先的 生態發展方案 供應商 The World's Leading Ecodevelopment **Solutions** Provider

語意

Operation

建設 Construction

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Dear Valued Stakeholders:

Fostering sustainable development in society is not merely a social responsibility, but also the core of our business operations. As a provider of eco-development solutions, we strive to contribute to the world's transformation towards clean energy through projects such as Panda Power Plants and Top-runner projects. During the Year, our sixth Panda Power Plant in Baotou, Inner Mongolia has successfully connected to the grid.

The Group's efforts in the Year centred on boosting the overall quality and efficiency of our power stations, while putting the long-term safety and stability of the power stations as the foundation of what we do. This is achieved by our robust quality management integrating IT technologies and energy management. Committed to embracing advanced technology to foster upgradation of the photovoltaic industry, our 100 MW Photovoltaic Power Generation Project in Mulei, Xinjiang has successfully connected to the grid, in which we achieved long-distance transmission of photovoltaic power from Xinjiang to East China via the UHVDC¹. Through this project, we will be able to supply approximately 66 billion kilowatt hours ("kWh") of photovoltaic power to East China annually, meeting the daily demand of about 50 million people.

We are devoted to not only providing cleaner sources of energy, but also minimising the environmental impacts arising from our operations. Endeavouring to achieve full utilisation of our resources and reduce waste, we repair, reuse, and recycle our malfunctioning parts and equipment before considering direct disposal. In 2019, we recovered 200 pieces of photovoltaic modules in our Haiyang power plant and recycled 82% of the scrapped solar panels from our power plants. During the Year, we have also fostered the integration of our photovoltaic development with local industries through the "PV +" projects, aiming to maximise the utilisation of our valuable land resources. Measures such as sand barrier installation and tree planting have been implemented to facilitate soil remediation and prevent land degradation.

各位尊敬的利益相關者:

促進社會可持續發展不單是一項社會責任, 更是我們業務營運的核心。作為生態發展解 決方案的供應商,我們致力於通過熊貓電站 和「領跑者」等項目,為世界走向清潔能源的 改革作出貢獻。於本年度,我們位於內蒙古包 頭市的第六個熊貓電站成功併網。

於本年度,本集團的工作側重於提升電站的 整體質量及效率,以電站的長期安全及穩定 為業務之本,並通過我們結合互聯網技術與 能源管理的優良質量管理所實現。我們亦致 力於透過先進技術促進光伏產業升級,在新 疆木壘的100兆瓦光伏發電項目已成功併網 發電,通過UHVDC1實現由新疆向華東地區的 遠距離光伏電力傳輸。該項目每年將能為華 東地區供應約660億千瓦時(「千瓦時」)的光 伏電力,滿足約5千萬人的日常需求。

我們不僅致力於提供更清潔的能源,也努力 將我們的營運對環境的影響降至最低。為充 分利用資源,減少浪費,我們對故障零件及設 備進行維修、重複使用及回收,最後才考慮將 其棄置。於2019年,我們於海陽電站修復200 個光伏模組,並從各電站回收82%的廢棄太 陽能電池板。於本年度,我們亦透過「光伏+」 計劃促進光伏發展與當地產業融合,從而善 用寶貴的土地資源。我們亦已採取安裝沙障 及植樹等措施,以促進土壤修復及防止土地 退化。 Operating as a power provider, safety is the prerequisite for all employees in performing any work. We continue to make the Company a safe and healthy workplace by delivering 1,128 hours of safety training to our staff and organising safety awareness enhancement activities, such as seminars and knowledge checks. Besides obtaining OHSAS 18001 certification for occupational health and safety systems in our power plants, we ensure effective safety management through implementing a 4-level safety monitoring management system. Although we have continued to record zero occupational incidents for five consecutive years, we will remain vigilant at all times.

During the Year, we played host to delegations from the East Asia Summit Clean Energy Forum and Hong Kong Education Bureau for a visiting at our power plants in Datong, Shanxi, Qianhai, and Shenzhen, facilitating communications between different social parties on topics of clean energy utility and ecological protection. Our continued support to the community via PV poverty alleviation projects and other childcare and elderly care programmes have won us recognition and support from society. 作為電能提供商,安全生產是開展一切工作 的前提。我們為員工提供1,128小時的安全 培訓,組織舉辦研討會及知識競賽等安全意 識提升活動,持續致力將本公司打造成一個 安全健康的工作場所。我們的電站不僅通過 OHSAS 18001職業健康安全體系認證,並透 過實施四級安全監控管理系統確保有效的安 全管理。雖然我們已經連續五年保持零職業 事故記錄,但亦將時刻保持警惕。

於本年度,我們接待了東亞峰會清潔能源論 壇代表團,以及香港教育局代表團,帶領其參 觀我們在山西大同、前海以及深圳的發電站, 促進不同社會群體在清潔能源利用與生態保 護方面的交流。我們通過光伏扶貧項目與其 他兒童及長者關懷項目持續為社區提供幫助 與支持,贏得社會各界的認可。



Letter to Stakeholders 致利益相關者的信

Along our sustainability journey, we understand that there is still much room for improvement. Looking ahead, the Company will continually adhere to its core business of providing clean and affordable energy to the world, contributing to the development of an ecologically sustainable civilisation. On behalf of the Board and management, I would like to thank our staff, business partners and all who have been with us throughout our sustainability journey. We look forward to your continued support.

Zhang Ping

Chairman of the Board Beijing Energy International Holding Co., Ltd. 在促進可持續發展的路程中,我們明白相關 方面仍存在不少改進的空間。展望未來,本公 司將繼續堅持為世界提供清潔且可負擔的能 源這一核心業務,並同時為生態可持續文明 的發展貢獻力量。我謹代表董事會和管理層, 在此感謝我們的全體員工、商業合作夥伴, 以及在可持續發展之路上與我們同行的所有 人。我們期待著您的繼續支持。

張平 *董事會主席* 北京能源國際控股有限公司



SUSTAINABILITY MANAGEMENT APPROACH 可持續 發展管理 方計。

We continue to place stakeholders' concerns as the core of our sustainability approach, cautiously manage the aspects deemed material by our stakeholders and respond to calls from the United Nations. 我們繼續將利益相關者的關注事項作為我們 可持續發展方針的核心,謹慎管理利益相關 者認為具實質性的方面,並響應聯合國的號 召。



Sustainability is the core of our operations and management. At the Company, sustainability-related matters are managed by our cross-departmental ESG reporting team, overseen by the chief executive officer of the Company (the "CEO").

可持續發展是我們經營管理的核心。在本公司,可持續發展相關事宜由我們的跨部門ESG 報告團隊管理,並由本公司首席執行官(「首 席執行官」)進行監督。

MATERIALITY REVIEW

The materiality assessment of the Group follows a four-step approach of Identification, Prioritisation, Validation and Review. This exercise provides us an opportunity to understand how our internal and external stakeholders perceive the relevance and significance of the impact of each topic, and what we can do to address their concerns. The Group is gradually integrating identified material issues into its business development strategy. We believe reporting and responding to material issues in an open and transparent way is key to meeting the expectations of our stakeholders.

實質性回顧

本集團的實質性評估遵循鑒別、排序、確證及 檢視四步方法。我們可藉此瞭解內部及外部 利益相關者如何認知各議題的相關性及其影 響的重要性,以及我們為回應彼等所關注的 問題而可採取的行動。本集團正逐步將鑒別 的實質性議題納入其業務發展戰略。我們相 信以公開且透明的方式報告及回應實質性議 題乃達成利益相關者期望的關鍵。

MATERIALITY ASSESSMENT PROCESS 實質性評估過程

Identification 鑒別

- Determined a pool of sustainability topics considering both business and stakeholders perspectives with a systematic process
 - 從企業及利益相關者的角度採取系統化流程識別一系列可持續發展議題
- Identified 30 potentially material topics based on GRI Standards and the HKEX ESG Reporting Guideline
 - 根據GRI標準及聯交所《環境、社會及管治報告指引》識別30個潛在實質性議題

Prioritisation 排序

- Assessed material topics in terms of their influence on decisions and the significance of their impacts
 - 就議題對決策的的影響力及其帶來的影響評估實質性議題
- Ranked the topics in four levels, with topics in Level I being most material to the Group
 - 將可持續發展議題分為四個層次,第一層次是對本集團而言最重大的議題

Validation & Review 確證及檢視

- Validated the results internally 內部確證調查結果
- Reviewed and identified gaps for future improvement 審視並識別未來完善的空間

| Sustainability Management Approach 可持續發展管理方針

MATERIALITY ASSESSMENT PROCESS

MATERIALITY MATRIX

實質性評估過程

實質性矩陣



對經濟、環境及社會的重大影響 Significance of Economic, Environmental, and Social Impacts

Level I 第一	- 層次
 Environmental compliance Green products Employee communication Carbon emissions Energy consumption Dead at health 2 solution 	 環境合規 線色產品 僱員溝通 碳排放 能源消耗 素品供店留字入
Product health & safetyEmployment complianceBusiness ethics	 產品健康與安全 僱傭合規 商業道德
Level II 第-	二層次
 Training & development Occupational health and safety 	・培訓與發展・職業健康與安全
Anti-discriminationEqual payTalent management	 反歧視 同工同酬 人才管理
Product complianceSupply chain managementAir emissions	 產品合規 供應鏈管理 廢氣排放

Level III 第三層次

 Economic value generated and distributed 	 所產生和分配的經濟 價值
Diversity & equal opportunity	• 多元化與機會平等
Wastewater	• 廢水
 Ecological conservation 	• 生態保護
• Data privacy	• 資料隱私
Human rights	 人權
• Environmental expenditure	• 環保投入
• Community engagement	• 社區參與
Customer satisfaction	• 客戶滿意度
Oligopoly	• 寡頭市場壟斷
I evel IV 第四	層次

Level IV 第四層次

• Waste management	•	廢物管理
 Raw materials 	•	原材料

Water consumption

經管理層確認,往年的實質性評估中的八個 實質性議題(第一層次)於我們的業務及利益 相關者而言仍重要。

用水

RESPONDING TO STAKEHOLDERS' CONCERNS

The Company is committed to creating sustainable and longterm business growth. We maintain communication with our stakeholders through channels and platforms such as annual reports, ESG reports, surveys, seminars, meetings and our WeChat official account. The Group's response to the key concerns of our stakeholders is summarised in the table below and aligned with the Sustainable Development Goals (SDGs).

回應利益相關者關注

本公司致力創造可持續及長期的業務增長。 我們通過年報、ESG報告、調研、研討會、會 議及微信公眾號等渠道及平台,與利益相關 者保持交流。下表總結本集團對利益相關者 主要關注事項的回應及對應的可持續發展目 標。

Stakeholder Groups 利益相關者組別	Key Topics and Concerns 關鍵議題及關注事項	Our Response in 2019 2019年回應	Corresponding SDGs aligned 對應的可持續發展目標
Employees 僱員	• Employment Compliance 僱傭合規	 Provided a working environment free from inequality, harassment and discrimination 	5 GENDER EQUALITY
Q	• Employee Communication 僱員溝通	提供平等、零騷擾及零歧視的工作環境 Ensured that employees' voices 	Gender equality 性別平等
	 Talent Management 人才管理 	are heard through various communication channels 確保可通過多種溝通渠道聆聽僱員意見	8 DECENT WORK AND ECONOMIC GROWTH
	 Training & Development 培訓與發展 	 Arranged online training and learning platform 	Decent work and economic growth 體面工作和經濟增長
	 Occupational Health and Safety 職業健康與安全 	安排線上培訓及學習平台 Recorded zero occupational 	10 REDUCED INEQUALITIES
		health and safety accident for five consecutive years	Reduced inequalities
		連續五年錄得零職業健康安全事故 Adopted four-level safety monitoring 	減少不平等
		management system 採取四級安全監控管理系統	
		Implemented site-specific monitoring and handling measures	
		to strengthen safety control 實施根據現場情況而特定的監控及處 理措施以加強安全控制	

Stakeholder Groups 利益相關者組別	Key Topics and Concerns 關鍵議題及關注事項	Our Response in 2019 2019年回應	Corresponding SDGs aligned 對應的可持續發展目標
Environmental NGOs 從事環保工作的 非政府組織	 Carbon Emissions 碳排放 Energy Consumption 能源消耗 	 Integrated photovoltaic development and local industries to maximise utilisation of land resources 光伏發展與當地產業融合以最大限度 利用土地資源 	13 CLIMATE Climate action 氣候行動
	 Ecological Conservation 生態保護 Air Emissions 	 Conducted environmental impact assessments for every project and ensured corresponding mitigation 	15 UFF LAND
	廢氣排放 Water Consumption 水消耗 	measures are implemented 對各項目進行環境影響評估並確保相 應緩解措施得到實施	Life on land 陸地生物
		 Installed sand barriers and utilised cleaning water to moisturise the surrounding areas to combat 	



sandification and desertification 安裝沙障並利用清洗用水滋潤周圍地

區以對抗沙化及沙漠化

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Stakeholder Groups 利益相關者組別	Key Topics and Concerns 關鍵議題及關注事項	Our Response in 2019 2019年回應	Corresponding SDGs aligned 對應的可持續發展目標
Customers 客戶	 Green Product 線色產品 Environmental Compliance 環境合規 Product Health & Safety 產品健康與安全 Customer Satisfaction 客戶滿意度 	 Extended the provision of renewable energy to wind and water 將可再生能源的供應擴展至風能及 水能 Generated renewable energy to offset the carbon emissions emanating from burning of fossil fuels 產生可再生能源,以抵銷燃燒化石燃 料產生的碳排放 	7 AFFORDABLE AND ここのです。 Affordable and clean energy 可負擔的 清潔能源
		 Conducted annual customer satisfaction survey every year 每年展開年度客戶滿意度調查 	

 Provided comprehensive pre-sale, sale, after-sale service 提供全面的售前、售中、售後服務



Stakeholder Groups 利益相關者組別	Key Topics and Concerns 關鍵議題及關注事項	Our Response in 2019 2019年回應	Corresponding SDGs aligned 對應的可持續發展目標
Suppliers 供應商	 Supply Chain Management 供應鏈管理 Environmental Compliance 環境合規 	 Conduct annual supplier assessment regularly at the end of each year 每年年末定期進行供應商評估 	17 PARTNERSHIPS FOR THE GOALS Partnerships for the goals 促進目標實現的 伙伴關係
Community 社區	 Community Investment 社區投資 Economic Value Generated and Distributed 所產生和分配的經濟價值 Ecological Conservation 	 Played host to representatives from various institutions for a visiting at our power plants 接待多個機構的代表團參觀我們的 電站 Donated HKD 10 thousand 捐贈港幣一萬元 	13 CLIMATE
Investors 投資者	生態保護 Business Ethics 商業道德 	 Organised anti-corruption training for management and general staff 對管理層及員工展開反貪培訓 	
	 Operational Excellence 卓越營運 Compliance 合規 	 Evaluated the safety precautions situation and the grading protection of the power plants to improve power plant security 評估電站的安全措施實施及分級保護 情況,以提高電站的安全性 	
		 Adopted the Network Security On- line Testing equipment for data stability and safety 	

採用網絡安全在線檢測設備,確保數

據的穩定性及安全性

23



到

We are dedicated to creating a cleaner environment by promoting the application of renewable energy and realising energy transformation.

PROVIDING CLEAN ENERGY

As at 31 December 2019, the Group and its associates/joint ventures owned 61 on-grid solar power plants. The total installed capacity has decreased by approximately 12% as compared to 2018, amounting to 1,979 MW. The annual electricity generation has increased by approximately 2.03% to 3,172,916 MWh.

The shift to renewable energy and clean sources is the key to tackle climate change. The electricity generated from the Group's power plants is sufficient to support one-year electricity usage of 2,110 thousand households. While focusing on the development of solar power business, the Group steps up its efforts in diversifying its renewable energy portfolios. Concerning the Group's wind power plants in Shanxi, phase one with installed capacity of 48 MW has been on-grid connected with full capacity during the Year, while phase two with installed capacity of 48 MW was under construction.

透過促進可再生能源應用 及實現能源轉型,我們致 力營造更清潔的生態宜居 環境。

提供清潔能源

截至2019年12月31日,本集團及其聯營公司 /合資企業擁有61個已併網的太陽能發電 站。總裝機容量相比2018年減少約12%,達到 1,979兆瓦。年度發電量增加約2.03%,達到 3,172,916兆瓦時。

轉向可再生及清潔能源是應對氣候變化的關鍵。本集團的電站發電量足夠為211萬居民供應整年的電力使用。本集團專注發展太陽能業務的同時,竭力實現可再生能源業務的多元化。本集團在山西的風力發電站,裝機容量為48兆瓦的一期工程已於本年度併網運行,同時正在建設裝機容量為48兆瓦的二期工程。

The table below shows the positive environmental impacts of the Group's renewable energy generation:

下表顯示了集團的可再生能源發電為環境帶 來的正面影響。

	2013	2014	2015	2016	2017	2018	2019
Total Electricity Generation (MWh) 總發電量 (兆瓦時)	34,939	485,046	859,730	1,345,830	2,115,253	3,109,894	3,172,916
Approximately equivalent to: 大約相當於:							
Standard Coal Saved (tonnes) 節約標準煤 (噸)	11,530	160,065	283,725	444,124	700,000	1,020,000	1,260,000
Carbon Dioxide Emission Reduced (tonnes) 減少二氧化碳排放 (噸)	29,978	416,169	737,684	1,154,722	1,815,000	2,680,000	3,160,000
Nitrogen Oxide Emission Reduced (tonnes) 減少氮氧化物排放(噸)	269	3,735	6,620	10,363	16,287	26,000	47,000
Smoke and Dust Emission Reduced (tonnes) 減少煙塵排放 (噸)	17	243	430	673	1,058	1,567	863,000

* Total electricity generation for 2018 has been restated
 2018的總發電量已重新呈列

CARING FOR LAND

The Group strives to mitigate the impacts on land generated from its renewable energy projects including land degradation and biodiversity loss. Through proper management and effective land restoration measures, we aim to achieve the dual objective of providing clean energy and preserving land resources.

Integration of Photovoltaic Development and Local Industries

We continue to explore different models of integration of PV development and various industries, including PV + Agriculture, PV + Fisheries and PV + Cultivation, aiming to maximise utilisation of land resources and drive the transformation of industry.

土地閣懷

本集團致力於減輕其可再生能源項目對土地 造成的影響,如土地退化及生物多樣性破壞。 我們旨在透過適當的管理及有效的土地恢復 措施,實現提供清潔能源及保護寶貴土地資 源的雙重目標。

光伏發展與當地產業融合

我們持續探索光伏+農業、光伏+漁業、光伏+ 養殖等不同模式的光伏發展與多產業跨界融 合,旨在最大限度地利用土地資源,為產業轉 型發展提供新動力。

與和諧發展。

Datong Panda Power Plant in Shanxi province is built on an idle land in the deep coal mining area. It adopts the model of PV + Forestry integration, which simultaneously boosts the development of the photovoltaic industry and forestry. To promote the balanced and harmonious development of industrial, social, economic and ecological benefits, we have fully implemented on-site afforestation in the power plants. The forest coverage rate in the area can reach 100%.

山西省大同熊貓電站建設於採煤深陷區的閒置土地,採用 林光互補一體化的模式,同時推動光伏產業及林業的發 展。我們於電站內全面實施就地造林綠化,區域內的森林 覆蓋率可達100%,促進產業社會經濟與生態效益的協調

A pilot project of the industrial integration of PV + Agriculture in Tangshan power plant has been launched. Perennial Chinese herbal medicines are planted between the module arrays in the PV field.

我們於唐山電站啟動一項光伏+農業產業融合試驗計劃, 光伏場區的模組陣列之間種植了多年生中草藥。





Optimal Site Selection

We prioritise idle lands for our projects to minimise disturbance on existing land uses. Some of the power plants are built on wastelands, deserts and coal mining subsidence areas. When it is unavoidable to take up relatively valuable land such as farmland or woodland, we strive to maintain the original landscape and fulfil the local agricultural and forestry requirements through close communication with the local government.

We conduct an environmental impact assessment for every project to understand the impact on its surroundings, including soil, water resources and biodiversity, and to ensure the corresponding mitigation measures are implemented. For example, shrubs and herbaceous plants were planted in the power plant for noise reduction. The operating time during construction process was also reasonably arranged which minimises site disturbance and ensures strict compliance to relevant regulations.

Reverse Land Degradation

Striving to reverse land degradation, combat sandification and desertification at our operational sites, the Group formulated related prevention and control plans. We installed low-standing and high-standing sand barriers to prevent sandification. Water used for solar panel cleaning can moisturise the surrounding areas and facilitate soil remediation.

We implemented various measures in photovoltaic power stations built in coal mining subsidence areas to strengthen subsidence area management and assist vegetation restoration and reconstruction, such as real-time monitoring of subsidence danger areas and subsidence alert. We continue to strengthen our greening work and tree management in operational sites to prevent soil erosion. Aiming to improve soil quality and restore local ecology, plenty of trees and vegetation have been planted and through the combination of photovoltaic power station construction and PV + Forestry projects, preliminary landfill, reinforcement and greening of the subsidence area were carried out to prevent further soil erosion. We also adopted engineering measures to reinforce the steep slope, preventing severe landslides caused by heavy rain.

最佳選址

我們的項目首選閒置土地,旨在減少對現有 土地用途的干擾。部分電站設在荒地、沙漠及 採煤沉陷區。當不可避免地佔用農地或林地 等相對寶貴的土地時,我們致力於維護原始 地貌,並與地方政府緊密溝通,以滿足當地農 林業的規定。

我們對每個項目展開環境影響評估,以了解 項目對其周邊環境的影響,包括土壤、水資源 及生物多樣性,並確保相應緩解措施得以實 施。例如,於電站內種植灌木及草本植物以減 少噪音。我們亦合理安排施工過程中的營運 時間,旨在最大限度地減少場地干擾,嚴格遵 守相關規定。

逆轉土地退化

本集團制定相關預防控制計劃,致力於逆轉 土地退化,並在我們的營運地點對抗土地沙 化及沙漠化。我們安裝低立式及高立式沙障 以防治沙化。清潔太陽能板的用水可以滋潤 周圍地區,促進土壤修復。

我們在建設於採煤沉陷區的光伏電站實施各 種措施以加強沉陷區治理及協助植被恢復及 重建,如對沉陷危險區進行實時監控和沉降 警報。我們持續加強在營運地點的的綠化工作 及樹木管理以防止土壤侵蝕。為改善土壤質 量及恢復當地生態,我們種植大量樹木及植 被,並透過結合光伏電站建設和林光互補工 程,對沉陷區進行初步的填埋、加固及綠化, 防止水土進一步流失。我們亦採取工程措施 加強陡坡,防止因暴雨引起的嚴重山崩。

ENVIRONMENTAL MANAGEMENT

An environmental management manual is in place. It outlines our environmental management system (the "EMS"), management approaches and policies, as well as the environmental objectives and indicators to serve as a code of conduct for employees on environmental management. The Group's CEO spearheads the formulation of environmental management approach and policy, ensuring the provision of manpower, material and financial resources for the EMS's operation. The management representative is responsible for coordinating the Group's implementation of the EMS, with assistance from departments including the Project Construction Command Centre, Engineering Department and Safety Production Department.

Regulatory Compliance

To ensure compliant operations, we conduct regular evaluations of our compliance status, including compliance with pollutants discharge standards, implementation of "Three Simultaneities" system, and compliance with laws and regulations² related to important environmental factors. During the Year, we were not aware of any non-compliance of relevant laws and regulations that have a significant impact on the Group relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.

Combating Climate Change

The Group is committed to effectively managing climate change risks in its operations. Guidelines for operations during extreme weather conditions are in place. The Safety Production Department has formulated specific inspection systems for extreme weather events such as rainstorm, snowstorm, hail and gale. Inspection of facilities and equipments are conducted under safety conditions regularly.

環境管理

我們已編制環境管理手冊,羅列環境管理體 系、管理方針及政策,以及環境目標及指標, 作為僱員針對環境管理的行為守則。本集團 首席執行官領編環境管理方針及政策,確保 環境管理體系運作所需的人力、物質及財政 資源供應。管理層代表則在項目建設指揮中 心、工程部及安全生產部等部門的協助下,負 責協調本集團環境管理體系的日常運作。

法律合規

為確保合規營運,我們定期評估合規狀況,包 括遵守污染物排放標準、實行「三同時」制度 及遵守重要環境因素相關的法律法規²。於本 年度,我們並不知悉任何違反有關廢氣及溫 室氣體排放、向水及土地排污、有害及無害廢 氣物的產生且對本集團造成重大影響的法律 法規事宜。

應對氣候變化挑戰

本集團致力於有效管理其營運中的氣候變化 風險並制定極端天氣條件營運指引。安全生 產部門已制定針對暴雨、雪暴、冰雹、烈風等 極端天氣事件的檢查制度。設施及檢查設備 會於安全的情況下恆常進行。

ENERGY CONSUMPTION

The Group's energy consumption includes electricity, gas and fuel oil in offices and power plants. During the Year, we consumed a total of 106,162 GJ of energy, representing a 5% increase compared to 2018. The total energy consumption comprised of 87.3%, 0.2%, 11.9% and 0.6% of electricity, natural gas, gasoline and diesel respectively. Energy intensity was 33.5 GJ per GWh electricity generated.

能源消耗

本集團的能源消耗包括辦公室及電站使用的 電力、燃氣及燃油。於本年度,我們消耗合共 106,162千兆焦耳的能源,相比2018年上升 5%。電力、天然氣、汽油及柴油的消耗分別 佔總能耗的87.3%、0.2%、11.9%及0.6%。能 源強度為每千兆瓦時發電量33.5千兆焦耳。

Energy Consumption 能源消耗	Unit 單位	2018	2019
		2010	2010
Electricity	kWh		
電力	千瓦時	26,482,005	25,730,232.8
Natural gas	Cubic metres		
天然氣	立方米	2,684	5,916
Gasoline	Litres		
汽油	公升	174,260	396,746.7
Diesel	Litres		
柴油	公升	15,806	18,371.1
Energy intensity	GJ per GWh electricity generated		
能源強度	千兆焦耳/千兆瓦時發電量	32.7	33.5

Energy intensity for 2018 has been restated 2018的能源強度已重新呈列

Energy Consumption in FY2019 (GJ) 2019財政年度的能源消耗(千兆焦耳)



Energy Consumption (GJ) and Intensity (GJ per GWh electricity generated) 能源消耗(千兆焦耳)及強度 (千兆焦耳/千兆瓦時發電量)



GHG Emissions

During the Year, the Group's total greenhouse gas ("GHG") emissions amounted to 19,259 tonnes of carbon dioxide equivalent ("tCO₂e"). The direct emissions (Scope 1) and indirect emissions (Scope 2) accounted for 1,183 tCO₂e and 18,076 tCO₂e respectively. Emission intensity was computed as 6.1 tCO₂e per GWh electricity generated.



AIR EMISSIONS

The Group's operations involve emissions of sulphur oxides (SOx), nitrogen oxides (NOx) and particulate matter (PM) generated by fuel consumption of vehicles. During the Year, the Group's SOx, NOx and PM emissions were 6.1 kg, 530.4 kg and 47.5 kg respectively. The Group's air emissions have no significant impact on the Group's operations and the environment.

WATER CONSUMPTION

Water is sourced from the mains supply. The Group did not have any issue in sourcing water that is fit for the purpose. The major water consumption consists of water usage for solar panel cleaning and in offices. During the Year, we consumed 36,703.4 tonnes of water and the consumption intensity is 11.6 tonnes per GWh electricity generated, representing an increase of 64.1% compared to 2018.

溫室氣體排放

於本年度,本集團的總溫室氣體排放量 (「GHG」)為19,259噸二氧化碳當量。其中直 接排放(範圍1)及間接排放(範圍2)分別為 1,183噸二氧化碳當量及18,076噸二氧化碳當 量。排放強度則為每千兆瓦時發電量排放6.1 噸二氧化碳當量。



廢氣排放

本集團的營運涉及汽車燃油消耗產生的硫氧 化物、氮氧化物及顆粒物排放。於本年度,本 集團產生的硫氧化物、氮氧化物及顆粒物排 放量分別為6.1公斤、530.4公斤及47.5公斤。 廢氣排放量對本集團的業務營運及環境影響 並不重大。

水資源消耗

本集團所使用的水資源主要來自城市自來 水,年內並無任何獲取適用水源上的問題。主 要用水包括清洗太陽能電池板用水及辦公室 用水。於本年度,我們共消耗36,703.4噸水資 源,消耗強度為每千兆瓦時發電量消耗11.6噸 水資源,相比2018年增加64.1%。

廢棄物管理

到

WASTE MANAGEMENT

Non-hazardous Waste Generation (Tonnes) 無害廢棄物產生量 (噸) 40.00 30.00 24.14 20.00 15.19 10.00 13.11 5.90 0 2019 2018 Recyclable 可回收 Non-recyclable 不可回收

During the Year, we generated 0.47 tonnes of hazardous wastes including waste circuit boards, waste oil, waste batteries, toner cartridges, ink cartridges, ribbons and fluorescent lamp tubes. Total non-hazardous wastes generated including domestic wastes, construction waste, waste packaging cartons and waste parts, etc., amounted to 21.09 tonnes, of which 5.90 tonnes was recyclable and 15.19 tonnes was non-recyclable.

The Group has adopted a systematic approach for waste management. All waste is clearly labelled and stored separately according to different categories.

We prioritise waste recycling to minimise waste of resources. When handling damaged solar panels and electronic components, we perform self-repairs and explore the possibility of recycling to minimise hazardous waste generation first. During the Year, 200 pieces of photovoltaic modules were recovered in the Haiyang power plant. We also set up a battery recycling bin and traded old toner cartridges and ink cartridges with new ones. During the Year, we recycled 6.30 tonnes of scrapped solar panels. Waste that cannot be repaired, reused or recycled will be stored carefully in the designated storage room to avoid environmental pollution.

We appoint gualified waste collection specialists to handle waste that cannot be reused or recycled. Hazardous waste including scrapped solar panels is handled only by certified parties approved by our Environmental Department.

於本年度,我們共產生0.47噸有害廢棄物,包 括廢舊線路板、廢油、廢棄電池、碳粉匣、墨 盒、色帶及熒光燈管。產生的無害廢棄物(包 括生活廢物、建築廢物、廢物包裝紙箱及廢棄 零件等)總量為21.09噸,其中5.90噸為可回 收廢棄物及15.19噸為不可回收廢棄物。

本集團已就廢棄物管理採納系統化的方法,所 有廢棄物根據類別作清晰標識及分開儲存。

我們優先回收廢棄物以盡可能減少資源浪 費。處理受損太陽能電池板及電子元件時,我 們首先進行自我修復及探索回收的可能性, 以最大限度地減少有害廢棄物排放。於本年 度,海陽電站已修復200塊光伏模組。我們亦 設置電池回收箱,以廢舊碳粉匣及墨匣換取 新的碳粉匣及墨匣。於本年度,我們共回收了 6.30噸的廢棄太陽能電池板。對於不可修復、 重複使用或回收的廢棄物,我們謹慎儲存於 指定的儲存室內,以免造成環境污染。

我們委聘合資格的廢棄物收集專家處理無法 重複使用或回收的廢棄物。對於廢棄太陽能 電池板等有害廢棄物,僅可由環境部門批准 的認證機構處理。



EFFLUENT MANAGEMENT

The wastewater generated by the Group consists of domestic sewage and production sewage. During the Year, we produced a total of 2,321.5 tonnes of wastewater. The domestic sewage is mainly from toilet water used in offices and construction sites, while production sewage mainly consists of water used for cleaning of solar panels. The Group ensures the sewage discharge meets the Integrated Wastewater Discharge Standard in the PRC.

To ensure the compliance of domestic sewage, we set up draining ditches and sedimentation tanks. Pouring of food residues, chemicals, oil and other contaminants in domestic sewage sewer is strictly prohibited; toilet sewage has to go through sedimentation in septic tanks before discharging into municipal sewage pipeline. We adopt grease traps and buried integrated biological wastewater treatment facilities to handle domestic sewage at construction sites. We reuse wastewater from domestic usage for purposes including irrigation and toilet flushing in order to recycle wastewater as much as possible and reduce water consumption. For the five power plants in South China, domestic sewage is used for compost after sedimentation in septic tank.

Our production sewage consists of only few suspended matters which are insignificant to the environment, we therefore allow it to naturally evaporate without any treatment. However, we continue to explore new approaches to reduce sewage discharge. Since 2017, we have launched a pilot project in Datong Panda Power Plant to adopt a waterless component cleaning robot for cleaning of the solar panels. We have also introduced the use of a component cleaning vehicle with fast cleaning speed and small water consumption. The Group is thus able to greatly reduce its water consumption as well as sewage generation during the process of solar panel cleaning.

RESOURCES CONSERVATION

The Group strives to continuously improve its operational efficiency and reduce resource consumption. We adopted new technologies to enhance power generation and transmission efficiency, as well as to reduce energy loss. We also carried out various conservation measures in offices regarding the use of energy, water and paper.

The Group raised employees' awareness of energy conservation and emission reduction by conducting employee trainings. Through enhancing the collaboration at all levels, we ensure proper management and sustainable use of resources.

污水管理

本集團產生的廢水包括生活污水及生產污水,於本年度,我們共產生廢水總量2,321.5 噸。生活污水主要來自辦公室及建築工地的 廁所用水,而生產污水主要為清潔太陽能電 池板的用水。本集團確保污水排放符合中國 污水綜合排放標準。

為確保生活污水的合規排放,我們設置排水 管及沉澱池,嚴禁食品殘渣、化學物、廢油及 其他污染物進入生活污水下水道:廁所污水 經過化糞池的沉澱才可進入市政污水管道。 至於建築工地的生活污水,我們採用隔油池及 地埋式一體化生物污水處理設施。我們將生 活污水循環利用於綠化灌溉及作沖廁用途, 以盡可能回收廢水,減低水資源耗用。就中國 南方的五個電站而言,生活污水經化糞池的 沉澱後用於堆肥。

我們的生產污水包含僅少量懸浮物,對環境 影響並不重大,因此我們允許其於不進行任 何處理的情況下自然蒸發。然而,我們將繼續 探索減少污水排放的新方法。自2017年起,我 們於大同熊貓電站推出一項試驗計劃,採用 一款無水清洗機器人清洗太陽能電池板。我 們亦引進一種清洗速度快、耗水量小的零部 件清洗車。因此,本集團能夠大幅減少太陽能 電池板清洗過程中的水資源消耗及污水產生 量。

資源節約

本集團致力不斷提升其營運效率,減少資源 消耗。我們採用新技術提高發電及輸電效率, 並減少能源損耗。此外,我們在辦公室內部推 行多項有關節約能源、水資源及用紙的環保 措施。

本集團組織僱員培訓以提高僱員節能減排意 識。我們亦加強各層面的合作以確保資源的 妥善管理及持續使用。

ENERGY SAVING 節約能源

- Use the external wall insulation on the ecological buildings to reduce power consumption of airconditioning
- Control energy consumption and strictly enforce seasonal usage time of electrical equipment
- Use of LED lights with automatic switches in some power plant bases to avoid energy waste
- Turn off unused lighting equipment, air conditioners and other idle appliances
- 生態建築採用外牆隔熱,以 減少空調耗電量
- 控制能源消耗,嚴格執行用 電設備的季節使用時間
- 於部分電站基地採用帶有自 動開關的LED燈,以避免能 源浪費
- 關閉並無使用的照明設備、 空調及其他閒置電器

WATER SAVING 節約水資源

- Use flush toilets that reduce water consumption
- Conduct daily inspection according to water plans
- Check water pipes regularly to prevent water leaks
- Explore the possibility of recycling water resources
- 採用抽水馬桶以減少用水量
- 根據用水計劃進行日常監督
- 定期檢查供水管道以防止漏 水
- 探尋循環利用水資源的可能



PAPER SAVING 節約用紙

- Use double-sided printing or electronic filing
- Advocate electronic communications to reduce paper consumption
- Set up recycling bins to recycle waste paper
- Keep monthly paper consumption records to detect any unusual usage
- 採用雙面印刷或電子歸檔
- 提倡電子通訊以減少用紙
- 設置回收桶回收廢紙
- 保存月度用紙記錄,以檢測 任何異常使用情況

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OPERATIONAL EXERTIONAL EXECUTION 単立 単立
Operational Excellence 卓越營運

Operational excellence is the foundation of our long-term development. Leveraging science and technology, we embrace advanced and intelligent approaches for fine quality management, striving to provide our customers with superior products and services.

LEADING-EDGE TECHNOLOGY

The Company is committed to bringing clean energy to the world through the application of advanced technology. During the Year, two photovoltaic power projects, namely the 50MW Top-runner Project in Baotou, Inner Mongolia and the 100MW Photovoltaic Power Generation Project in Xinjiang Mulei Solar Park, were successfully connected to the grid.

卓越營運是我們長期發展 的基礎。藉助科技,我們 應用先進、智能的方式進 行質量精細化管理,致力 為客戶提供更優質的產品 及服務。

尖端技術

本公司致力於通過應用先進技術,為世界提供清潔能源。於本年度,我們的兩個光伏發電項目,內蒙古包頭市的50MW領跑者項目與新疆聯合光伏木壘光伏園區100MW光伏發電項目成功併網發電。



50MW Top-runner Project in Baotou, Inner Mongolia

Technology: Use of high-efficiency series inverter, high support and other advanced technologies

Environmental & social benefits: High power generation efficiency, generating about 86.45 million kWh of electricity annually, saving about 7,976 tonnes of standard coal and illuminating about 67,000 urban and rural households. In addition, this project can facilitate the transformation of the energy consumption pattern in coal-mining areas, solve the idle land issue in coal-mining areas, and enhance the comprehensive management of the local ecological environment and economic development

內蒙古包頭市**50MW**領跑者項目

技術應用:運用高效組串式逆變器、高支架及其他先進技術 環境和社會效益:發電效率高,年均發電約為8,645萬千瓦時,可節 約標煤約7,976噸,照亮城鄉家庭約6.7萬戶。此外,此項目可助力採 煤區實現能源利用方式轉型,解決採煤區的土地閒置問題,促進當 地的生態環境綜合治理及經濟發展

100MW Photovoltaic Power Generation Project in Xinjiang Mulei Solar Park

Technology: Application of block power generation and centralised grid connection

Long-distance transmission: Transfer of photovoltaic power from Xinjiang to East China through UHVDC*

Environmental & social benefits: 66 billion kWh of power transmission, meeting the daily demand of approximately 50 million people and reducing coal consumption by 32.4 million tonnes

新疆聯合光伏木壘光伏園區100MW光伏發電項目 技術應用:採用分塊發電與集中併網方案 遠距離傳輸:通過UHVDC*將光伏電能從新疆輸送至華東地區 環境和社會效益:輸送電力可達660億千瓦時,可滿足約5,000萬人的日常用 電需求,同時減少3,240萬噸的燃煤使用量

Leveraging innovative technologies, we integrate our PV power plants with other industries. During the Year, we carried out 40MW and 20MW PV + Agriculture projects respectively in Heyuan, Guangdong and Guigang, Guangxi. In addition to the PV + Agriculture projects, we have also integrated photovoltaic power generation with other industries, such as animal husbandry and fishery, to achieve better economic, social and environmental benefits.

利用創新技術的優勢,我們結合光伏電站與 其他產業。於本年度,我們於廣東河源及廣西 貴港分別展開40MW和20MW農光互補項目 建造工作。除農光互補項目之外,我們亦將光 伏發電與畜牧業及漁業等其他產業相結合, 以實現更好的經濟、社會和環境效益。



Photovoltaic + Agriculture 光伏+農業



Photovoltaic + Fishery Industry 光伏+漁業



Photovoltaic + Animal Husbandry 光伏+畜牧業



Photovoltaic + Viticulture 光伏+葡萄種植



UHVDC: Ultrahigh-voltage direct current UHVDC:特高壓百流輸電

QUALITY MANAGEMENT

The Company understands that a comprehensive quality management system is of fundamental importance to an enterprise. We strictly comply with the laws and regulations³, and established a series of internal quality control policies ranging from the design and development of power plants, to the construction and the operations, striving to provide customers with quality and safe services.

Our businesses neither involve in advertising nor product labelling, and therefore, these aspects have no impact on our operation. During the Year, there was no reported infringement of the laws and regulations regarding product responsibility.

Design and Development Phase

We have established a project design management mechanism for power plants, which guarantees the quality of design and improves the reliability of the operation process. The Technology Department is responsible for determining the requirement on each stage during the development and design, referring to factors such as past experiences and resource situations. Only when the feasibility and correctness of the design project are confirmed after several assessments and verifications can the project be applied.

Construction Phase

Though the Group does not involve in the construction of its power plants, we understand our responsibility to carry out quality management during the construction phase. The Group has set up an acceptance inspection committee, which arranges quality inspections at the construction phase to ensure project quality, environmental and safety performance at the construction site. Before commencement of operation, the power plant must be assessed from several aspects, such as environmental performance, safety and quality, and approved by the committee.

質量管理

本公司深知全面的質量管理體系是企業的基礎。我們嚴格遵守法律法規³,制定涵蓋電站 開發設計到施工營運全過程的一系列內部質 量控制政策,致力於為客戶提供優質及安全 的服務。

我們的業務不涉及廣告及產品標籤活動,故 這些方面對我們的營運沒有影響。於本年度, 本集團並無違反有關產品責任的法律法規的 報告。

開發設計階段

我們建立一套電站項目設計管理機制,以保 證設計質量及提升營運過程的可靠性。技術 部負責在參考過往經驗、資源狀況等因素的 基礎上,確定開發設計過程中各階段的要求。 項目須經多次評估和驗證其設計方案的可行 性和正確性後才能得以實施。

建設階段

雖然本集團並不參與發電站建設,但我們深 明於建設階段展開質量管理工作的責任。本 集團設立驗收委員會,負責安排建設階段的 質量檢查工作,以確保項目質量和施工現場 的環境及安全表現。發電站須接受環境表現、 安全和質量等多方面評估,並獲得委員會的 批准後才可投入營運。

Operation Phase

Quality management of our operating power plants is secured by the integration of internet technologies with energy management. In order to standardise the management of equipment defects in PV power plants and maintain the safety, stability and economic operation of the power plants, we have formulated the Equipment Defects Management System, enumerating the measures to detect and handle equipment defects, and strictly implemented the "Two Tickets System", ensuring the smooth maintenance of power generation equipment.



DEFECTS MANAGEMENT 缺陷管理

Equipment Defects Categorisation 設備缺陷分類

Urgent & Critical Defects: Compulsory elimination in a short time 緊急、重大缺陷:短期內必須消除

General Defects: Elimination within the stipulated time 一般缺陷:於規定時間內消除

Other Defects: Elastic Elimination within appropriate time 其他缺陷:可適當延時消除

Defects Detection & Handling

缺陷發現及處理

Equipment inspection and in-time defects detection according to inspection routes, projects and periods

按巡檢路線、項目和週期對設備進行巡視檢查,及 時發現缺陷

Timely maintenance and defects elimination by operation and maintenance personnel 電站運維人員及時檢修、消除缺陷

Summary of causes, handling process and results of defects 總結缺陷發生原因、處理過程及結果

營運階段

我們結合互聯網技術與能源管理,以保障營 運中發電站的質量管理。為規範各光伏電站 的設備缺陷管理工作,保持電站安全、穩定、 經濟運作,我們制定《設備缺陷管理制度》, 呈列發現設備缺陷的處理方式,同時嚴格執 行「雙票」制度,確保電力生產設備的檢修工 作順利進行。



TWO TICKETS SYSTEM 「雙票」系統

"Work Ticket" Management 「工作票」管理

"Work Ticket" shall be used in inspection and rectification, elimination, maintenance, testing and installation

檢修、消缺、維護、試驗、安裝等工作中需使用「工 作票」

Name and serial number of the equipment, work content and safety measures shall be listed on the "Work Ticket"

於「工作票」上列明設備名稱、編號、工作內容、安 全措施等內容

"Operation Ticket" Management 「操作票」管理

The operator of PV power plants shall fill in the "Operation Ticket" to record the contents such as operation tasks and steps 光伏電站操作員需填寫「操作票」,記錄操作任務 和步驟等內容

The person in charge shall check the operating system according to the operation task report and carry out an on-site inspection if necessary 負責人根據操作任務匯報情況核對運行系統,必要時進行現場檢查

Improving Customer Satisfaction

By maintaining a close and effective communication with customers, we fully understand the needs and expectations of our customers which help meet customers' demand and maintain our trust. The Group conducts customer satisfaction survey every year, focusing on service quality, supply capacity, price, grid stability and safety, which helps us identify our imperfections and get improvement.

提升客戶滿意度

我們通過與客戶保持密切高效的溝通,充分 瞭解客戶的需求及期望,從而滿足客戶需求, 維持對我們之間的信任。本集團每年均針對 服務質量、供應能力、價格及電網的穩定性和 安全性展開客戶滿意度調查,以發現不足並 加以改進。



COMPREHENSIVE CUSTOMER SERVICE

RESPONSIBLE SUPPLY CHAIN

The Group consistently improves its supplier management system, by standardising the supplier admittance, assessment, and management procedures. We are committed to establishing a sustainable supply chain, which not only helps improve the procurement quality and efficiency, but also promote the maintenance of long-term business relationships with suppliers.

The Group has three types of suppliers, including materials, engineering and services. As at 31 December 2019, the Group had a total of 340 suppliers in Mainland China.

負責任之供應鏈

本集團通過規範供應商准入、評估及管理程 序,不斷優化供應商管理體系。我們致力於建 立可持續供應鏈,不僅有助於提升採購品質 及效率,亦促進與供應商保持長期合作關係。

本集團的供應商主要包括材料、工程和服務 三大類。截至2019年12月31日,本集團在中 國內地共有340家供應商。

Supplier Qualification

To encourage suppliers to follow responsible ESG practices and deliver high-quality products and services, our priority is given to suppliers with relevant management system established, such as Social Responsibility Management, Environmental Management System, etc. In addition, we include a "Compliance with Social Responsibility Code of Ethics Agreement" in the procurement contract, listing our expectation of excellent performance in the social and environmental fields.

供應商資格

為鼓勵供應商遵守負責任的ESG慣例,並提 供高品質產品及服務,我們優先考慮與已建 立社會責任管理、環境管理等相關管理體系 的供應商合作。此外,我們將「遵守社會責任 道德標準協議書」納入採購合約,呈列我們對 良好社會及環境表現的期望。



如合格供應商名單中的供應商不能滿足需

求,本集團將根據內部政策《採購管理辦法》

開發新供應商。採購部負責篩選新供應商的

準備工作,包括制定開發供應商的策略及供

應商准入標準。經採購部授權後,質控小組將

圍繞公司管理、產品服務等主要因素對新供

應商展開評估,並匯報合格供應商。

If suppliers in the Qualified Suppliers List cannot meet the demand, the Group will develop new suppliers based on the internal policy of "Procurement Management Methods". The Procurement Department takes the responsibility for the preparation of selecting new suppliers, including formulating the strategies of developing suppliers and the standards for admittance into our supply chain. With the authorisation from the Procurement Department, the Quality Control Team will assess the main aspects of new suppliers, such as corporate management, product service, etc., and then report the qualified suppliers.

Supplier Assessment

The Group's Procurement Department regularly assesses suppliers from four dimensions including quality, delivery period, service and price at the end of each year, and then grades them. If any exception occurs, we will perform irregular assessments and ask suppliers for rectification before the deadline. The result of the irregular assessment is an important basis for the annual assessment. During the Year, we conducted an annual assessment of 104 suppliers, 70% of which were graded as B or above.

供應商評估

每年年底,採購部從質量、交期、服務、價格 四個方面對供應商進行定期評估及評級。如 有異常情況發生,我們將展開不定期評估,並 要求供應商適時進行整改。不定期評估的評 估結果乃年度評估的一項重要依據。於本年 度,我們對104家供應商進行年度評估,其中 70%的供應商的評級達到B級或以上。



Supplier Communication

We maintain close communication with suppliers through various channels such as interviews, phone calls, emails and WeChat. During the Year, we communicated technology-wise and businesswise with Tianjin Huanou International Silicon Material Co., Ltd. and other suppliers on the technological development route, market characteristics and current market of the subsequent monocrystalline module, deepening our understanding of the market and promoting technological exchanges between the two sides.

供應商溝通

我們透過面談、電話、郵件和微信等多種渠道 與供應商保持密切溝通。於本年度,我們與天 津環歐國際硅材料有限公司等供應商就後續 單晶組件的技術發展路線、市場特點及當前 行情進行技術及商務方面的溝通,加深我們 對市場的了解及促進雙方的技術交流。

DATA PRIVACY AND SECURITY

The Group understands the importance of data privacy protection and information confidentiality. We observe the relevant laws and regulations⁴, and establish the internal confidentiality management regulations, to protect the data safety including but not limited to commercial secrets, technical and customer information.

資料私隱及安全

本集團明白資料私隱保護及信息機密性的重 要性。我們遵守相關法律法規4,制定內部保 密管理規定,以保護包括但不限於商業機密、 技術信息和客戶信息在內的資料安全。

Build and perfect the confidentiality management system

- Regularly inspect the confidentiality of every department and area
 - Formulate the Group's "Commercial Secret Inventory"

- Organise the training about laws and regulations about confidentiality
- Deal with the disputes and infringement cases about confidentiality
- Formulate the Department's "Commercial Secret Inventory"

Please refer to Laws and Regulations section for data privacy and security-related laws and regulations 資料私隱及安全相關法律法規請參見**法律及法規**章節

建立、健全保密管理體系 Organise to solve the leakage case 組織洩密事件的處理工作 定期監督各部門及區域的保密情況 制訂集團《商業秘密信息清單》 Manage the secret-related personnel 管理洩密人員 Sign the secrecy agreement with employees 與員工簽訂保密協議 組織有關保密的法律法規的培訓 處理有關保密糾紛及侵權案件 制訂部門《商業秘密信息清單》 Support the inspection work 支援監察工作

During the Year, the Group has taken actions to improve the information security of power plants. We evaluated the safety precautions situation and the grading protection of the power plants. Network Security On-line Testing equipment was adopted for further data stability and safety.

INTELLECTUAL PROPERTY PROTECTION

Only through innovation could an enterprise achieve sustainable development. Upholding the principles of respecting intellectual property and safeguarding the Group's interest, the Company manages and monitors the use of patents, trademarks and copyrights in compliance with relevant laws and regulations⁵. We encourage inventions and creations by protecting intellectual property and rewarding employees for outstanding contribution in invention. There were no cases of infringement of intellectual property rights reported during the Year.

於本年度,本集團採取行動以提升發電站的 信息安全性。我們對發電站進行安全防護評 估及保護評級,並安裝網絡安全在線監測裝 置以進一步保證資料的穩定性和安全性。

知識產權保護

企業唯有創新,才能實現可持續發展。秉持尊 重知識產權及維護本集團利益的原則,本公 司依據相關法律法規⁵對專利、商標及版權的 使用進行管理及監控。我們通過保護知識產 權及獎勵員工在創造方面的傑出貢獻來鼓勵 發明創造。於本年度,本集團並無侵犯知識產 權的個案報告。



Please refer to **Laws and Regulations** section for Intellectual Property Protection-related laws and regulations 知識產權保護相關法律法規請參見**法律及法規**章節

ANTI-CORRUPTION

The Company adheres to high moral and ethical principles and always conducts business with due regard to honesty and integrity. The Group has also formulated Compliance Manual and other employee documents, which identify the Group's Code of Conduct and internal policies against unethical behaviours. such as bribery and conflict of interests. In order to improve the Group's risk management system and strengthen the internal monitoring mechanism, we formulated the "Report Management Method" during the Year. All employees are encouraged to supervise and report any violation of the manual and related policies. Whistleblower can make real-name or anonymous reports through WeChat, email, phone, text message, and visits. The Audit Department is responsible for investigating the issues reported. Once the behaviours are confirmed as a violation of ethical standards, involved employees would be subject to economic and administrative penalties. If the circumstances are serious, the Group will consider termination of the employment contract or transfer to the judiciary.

The Group strictly complies with Prevention of Bribery Ordinance in Hong Kong, relevant laws and regulations⁶ of the PRC and the other regions where we have operations. All employees are stringently prohibited from soliciting any advantages from clients, vendors or any person in connection with the Group's business. They should decline advantages offered in connection with their duties if the acceptance could affect their objectivity or induce them to act against the Group's interests or lead to concerns about possible bias.

反貪污

本公司恪守高度的道德和倫理準則,始終堅 持在顧及誠信與正直的情況下展開業務。本 集團制訂合規管理手冊以及其他相關員工文 件,從而明確本集團的行為守則和企業內部 相關政策,以防止賄賂及利益衝突等不合規 行為。為完善集團風險管理體系及強化內部 監督機制,我們於本年度制定《舉報管理辦 法》,鼓勵全體僱員監督並舉報任何違反合 規管理手冊和其他相關政策的行為。舉報人 可通過微信、郵件、電話、短信及來訪等方式 進行實名或匿名舉報。審計部負責調查舉報 事件,若調查屬實,涉事僱員將會受到行政和 經濟處罰,若情況嚴重,本集團會考慮終止其 僱傭關係或移交司法機關處理。

本集團嚴格遵守香港防止賄賂條例,以及中 國內地及其他經營所在地適用的相關法律法 規⁶。所有僱員被嚴格禁止向與本集團業務相 關的客戶、供應商或任何人士索要任何利益。 相關利益收受可能會影響僱員客觀性,致使 僱員作出違背本集團利益的行為,僱員應謝 絕有關利益收受。

⁶ Please refer to Laws and Regulations section for Anti-corruption-related laws and regulations 反貪腐相關法律法規請參見法律及法規章節 In order to raise employees' awareness of the Code of Conduct and ethical standards in business and strengthen employees' ability to cope with such circumstances properly, the Group conducts various training sessions about the prevention of bribery. During the Year, the Group organised a study tour to Guangdong Anti-corruption Base for management, responsible person of different departments and regional companies to further study and understand the significance and practice of anti-corruption in business operation.

The Group was not aware of any violations of relevant laws and regulations that have a significant impact on the Group relating to bribery, extortion, fraud and money laundering and the Group was not involved in any corruption cases during the Year. 為提高僱員對於公司行為守則及商業道德標 準的認知,以及加強僱員正確應對相關問題 的能力,本集團展開一系列關於防止賄賂的 培訓活動。於本年度,本集團組織管理層、各 部門及地區分公司負責人赴廣東反腐倡廉基 地參觀學習,旨在深入學習瞭解在業務營運 中反貪污的重要性及相關實踐。

於本年度,本集團並無知悉任何違反賄賂、勒 索、欺詐和洗黑錢等相關法律法規並對本集 團造成重大影響的事宜。本集團亦無涉及任 何貪腐案件。



At the Company, people are our greatest assets. We strive to cultivate a healthy and safe working culture and safeguard employees' rights.

TRAINING AND DEVELOPMENT

The Group is committed to investing resources into training and development, aiming to improve their work skills and help them to realise their values.

Our "4+1" training system consists of basic, professional, advanced and professional quality training, as well as a pointsbased training management. Employees can earn training points by participating in training courses, being one of the factors when considering rewards, performance reviews and promotions.

To enhance the flexibility of training opportunities, we continue to adopt online training and learning platform this year, targeting mainly the frontline operation and maintenance personnel. One of our training highlights this year was the compliance content of listed companies related to operations. We aim to avoid risks of non-compliance by enhancing employees' knowledge on the relevant laws and regulations.

We identified the development needs and arranged appropriate trainings for employees at all levels. Three major training programmes, including induction training, position specific training and advanced training continue to serve as vital tools to improve employees' skills and performance. During the Year, there were 6,896 person-times of training.

在本公司,員工是我們最大的財富。我們致力於培養健康與安全的工作文化,同時維護員工的權利。

培訓與發展

本集團致力於在員工培訓和發展方面投入資 源,旨在提高員工的工作技能並幫助他們實 現自身價值。

我們「4+1」培訓系統包括基礎、專業、進階 及專業質素培訓,以及培訓積分制管理。員工 可以通過參加培訓課程來獲取培訓積分,此 為獎勵、績效考核和晉升的考量因素之一。

為增加培訓的靈活性,我們年內將繼續採用 網上培訓及學習平台,主要針對前線的營運 與維護人員。我們今年的培訓重點之一是與 上市公司營運相關的合規內容。我們旨在通 過加強員工對相關法規的認識,以避免違規 風險。

我們識別發展需求,並為各級員工安排適當 的培訓。包括入職培訓、崗位專項培訓和進階 培訓在內的三項主要培訓計劃將繼續被用作 提高員工技能和績效的重要工具。於本年度, 本集團的培訓總人次為6,896人次。



Total Training Person-times 培訓總人次 To encourage internal knowledge transfer and cultivate internal trainers, we arranged trainings which are operated by professional training organisations for qualified and experienced employees of the Group. Employees are also encouraged to apply for external training courses related to their departmental needs.

為鼓勵內部知識傳遞及培養內部培訓講師, 我們委託專業培訓機構對本集團內有資質及 經驗豐富的員工提供培訓,並鼓勵員工申請 符合部門需求的外部培訓課程。

Induction Training for New Staff 新員工的入職培訓

- Introduction on the Group's culture, development strategies and internal policies
 介紹集團文化、發展戰略及內
 部政策
- Position requirement 職位的工作要求

Position Specific Training for Professional Staff 專業人員的崗位專項培訓

- Technical skills and knowledge enhancement 專業技能及知識提升
- On-job qualification and emergency handling 在職資格和應急處理

Advanced Training for Managerial Staff 管理層員工的進階培訓

- Management qualities and techniques enhancement 管理質素和技術提升
- Occupational health and safety issues 職業健康與安全問題
- Leadership skills and operational strategies 領導才能和營運策略

CAREER DEVELOPMENT

The Group places strong emphasis on offering training and promotion opportunities to its employees. We develop talents and nurture their professional growth with the dual-career development channel and the promotion mechanism, offering a transparent career developmental ladder for professional and management aspects. Employees can make flexible decisions with reference to the Group's developmental needs, personal qualities and interests, motivating them to grow with the Group.

A comprehensive promotion mechanism is formulated to recognise talents' efforts. We review the mechanism and optimise it when necessary. All levels of employees are evaluated based on their working performance, professionalism, experience, and other criteria. The results are applicable for salary adjustment, training provision and economic rewards.

職業發展

本集團高度重視為僱員提供培訓和晉升機 會。我們通過雙軌制職業發展通道和晉升機 制來培養人才並促進其職業發展,為專業人 才和管理層方面提供透明的職業發展階梯。 員工可以根據本集團的發展需求,個人質素 和興趣作出靈活的決定,以激勵他們與本集 團一起成長。

集團建立全面的晉升機制,以表彰人才的努力。我們會審查該機制,並在必要時對其進行 優化。我們根據各級員工的工作表現、專業水 平、經驗和其他條件對他們進行評估,其結果 適用於薪金調整、提供培訓和經濟獎勵。

OCCUPATIONAL HEALTH AND SAFETY

Employees' safety and health is always one of our top priorities. Adhering to the safety principles of safety first, hazard prevention and integrated management, the Group continues to place emphasis and resources in enhancing our safety strategy and providing the best protection for our employees. The Group's occupational health and safety management system of our power plants has obtained OHSAS 18001 certification. Management regulations on major maintenance work and the upgrading safety monitoring on operation are in place to standardise the Group's operational safety management.

To further manage safety risks and ensure safety production, a four-level safety monitoring management system is in place. The Safety Production Department at the operating headquarter is fully responsible for safety operation of all regions and power plants, taking the lead in formulating and monitoring implementation of safety policies at operational sites. The Safety Production Department in regional companies is responsible for the safety operation management of affiliated power plants. Departments and responsible personnel at different levels work in close collaboration to enhance the effectiveness of safety management in a comprehensive manner.

職業健康與安全

員工的安全與健康始終是我們的首要考慮之 一。本集團秉承安全第一、危險預防和綜合管 理的安全原則,繼續在加強安全戰略和為員 工提供最佳保護方面重點關注及投入資源。 本集團發電站的職業健康與安全管理系統已 獲得OHSAS 18001認證。我們制定有關大型 維護工程的管理規定並升級營運中的安全監 控,以規範本集團的營運安全管理。

為進一步管理安全風險,確保安全生產,集團 建立四級安全監控管理系統。營運總部的安 全生產部門全面負責所有地區和發電站的安 全營運,及牽頭制定並監督營運所在地的安 全政策實施情況。區域公司的安全生產部門 負責附屬發電站的安全營運管理,各級部門 及負責人員密切配合,從而全面提高安全管 理的有效性。



During the Year, the Group strictly complied with the relevant laws and regulations⁷ and we were not aware of any violation of relevant laws and regulations that have a significant impact on the Group relating to providing a safe working environment and protecting employees from occupational hazards.

During the Year, there were no incidents of occupational illness or working days lost due to work injury, and no work-related fatalities were reported. This is the fifth consecutive year for the Group to achieve zero occupational incidents.

Safety Hazard Prevention

We raise our employees' safety awareness and strive to cultivate our safety culture. We prioritise hazard prevention and proactive safety measures implementation to mitigate safety risks and promote workplace safety. We also identified and evaluated existing safety hazards and implemented site-specific monitoring and handling measures to strengthen safety control.



Safety Hazard Identification 安全隱患識別

- A risk evaluation team has been set up in every department to conduct assessment 每個部門均成立風險評估小組進行評估
- The identified safety hazards are categorised into different areas, enabling the implementation of corresponding measures
 - 所識別的安全隱患可分為不同的類別,從而實施相應的措施
- Regular inspection and test on facilities are conducted to ensure smooth operation of facilities 定期對設施進行檢查和測試,以確保設施運行暢順
- Workflow and standard are provided by the 'two tickets" consisting of "work ticket" and "operation ticket" 工作流程和規範由「兩票制」提供,即「工作票」及「操作票」

於本年度,本集團嚴格遵守相關法律法規7, 我們並不知悉任何違反有關提供安全工作環 境及保障僱員避免職業危害且對本集團造成 重大影響的法律法規事宜。

於本年度,我們並無發生職業病事故,或產生 因工傷損失工作日數,亦無因工死亡的個案。 這是我們連續第五年實現零職業事故。

預防安全隱患

我們提高員工的安全意識,致力培養安全文 化。我們優先考慮隱患預防和主動實施安全 措施,以降低安全風險並促進施工安全,並識 別及評估現有的安全隱患,實施針對特定地 點的監控和處理措施,以加強安全控制。



監控

 Policies for monitoring the procurement, usage and storage of equipment are established and updated

制訂並更新監控設備採購、使用和 儲存的政策

 Employees are required to wear personal protective equipment provided, the use of these equipment is monitored by the Safety Production Departments on a regular basis

要求員工佩戴所提供的個人防護設 備,安全生產部門會定期監控這些 設備的使用情況

Please refer to **Laws and Regulations** section for health and safety-related laws and regulations 健康及安全相關法律法規請參見法律及法規章節

Talent Management 人才管理

We have adopted an economic responsibility system to further inspire and motivate our employees to be aware of workplace safety. Employees are required to strictly comply with safetyrelated governmental laws and internal regulations. Their safety performances are assessed by our points-based evaluation in which they will receive fair rewards or penalty based on their performances. Those who fail the evaluation will receive warnings or position readjustment. They are also required to resolve the problems within an assigned period of time.

Safety Training

To reinforce safety culture and equip our employees with necessary safety-related knowledge and skills, the Group has formulated an annual safety training plan. The focus of the training includes safety activities, emergency handling and technical enhancement. We provide safety training courses with emphasis on the effectiveness and practicality, ensuring employees' abilities on efficiently dealing with various emergency situations. For example, we conduct trainings on safety skills once a week, as well as provide case studies of safety accidents for operational personnel in power plants.

In 2019, 97% of the total workforce participated in safety training, accounting for 987 person-times and 1,128 training hours.

We also launched a series of emergency drills in each power station to further improve the response and management ability of employees in handling emergencies. 我們採用經濟責任制度,以進一步激勵員工 關注施工安全。我們要求員工嚴格遵守與安 全相關的政府法律和內部制度,並通過積分 制評估系統考核其安全表現,以此為依據對 其進行相應及公平的獎勵或懲罰。未通過評 估測試的人將收到警告通知或職位調整,同 時須在規定時間內解決相應問題。

安全培訓

為加強安全文化並為員工配備必要的安全相 關知識以及技能,本集團制定年度安全培訓 計劃。重點包括安全活動、應急處理和技術改 進。我們提供側重於有效性和實用性的安全 培訓課程,以確保員工具備有效應對各種緊 急情況的能力。例如,我們每週進行一次安全 技能培訓,並為發電站的營運人員提供安全 事故案例研究。

於2019年,全體員工中共97%參加安全培 訓,總計987人次,總培訓時長約1,128小時。

我們在每個電站啟動一系列應急演習,以進一 步提高員工對緊急情況的應變和管理能力。



Fire emergency drills were organised to enhance employees' ability in handling fire accidents. 消防應急演習,以增強員工處理火災事 故的能力。

First aid drills for heatstroke of personnel were carried out to provide employees with hands-on experience of heatstroke treatment. 人員中暑急救演習,為員工提供中暑治療的經驗。





First aid drills on electric shock were carried out to get employees familiar with electric shock therapy. 電撃急救演習,使員工熟悉電擊搶救法。



In June 2019, the Group held the Summative Conference of the Security Inspection and Security Knowledge Competition of Spring 2019 in the Panda Power Station in Datong, Shanxi Province, involving more than 70 staff from the management level and various regional companies. We held a seminar with a theme of "forbidding habitually illegal operation, preventing major accidents in power station and improving production efficiency". Extensive discussion was carried out on measures in strengthening management systems, enhancing safety awareness and implementing supervision and inspection. By summarising the outcome of the security inspection and sharing feasible strategies in improving operational efficiency, the event catalysed the communication and collaboration between regional companies and different departments on safety-related issues.

2019年6月,本集團在山西省大同市熊貓電站舉行2019年春季安全檢查與 安全知識競賽總結大會,70多名來自管理層和各個地區公司的員工參加 該會議。我們舉辦一個主題為「禁止習慣性違規操作、防止電站重大事故 並提高生產效率」的研討會,就加強管理體系、增強安全意識和實施監督 檢查的措施進行廣泛討論。通過總結安全檢查的結果並分享提高營運效 率的可行策略,該會議促進各地區公司與不同部門之間在安全問題上的 溝通與協作。

OUR PEOPLE

As of the end of December 2019, the Company employed 412 full-time staff, of which 21 (5%) were based in Hong Kong and 391 (95%) were based in China. The proportion of male to female employees was 84:16. There were 41.5% and 47.3% of our employees aged below 31 and 31-40 respectively.

In terms of educational profile, more than a half of our employees held tertiary or above qualifications. Of which, 44.9% held a bachelor's degree, 7.0% held a master's degree, and 0.5% held a doctor's degree. 47.6% of our employees had non-tertiary qualifications and below. Our team comprised of 2.4% of senior management team, 9.2% of middle management team and the rest was general staff.

員工

截至2019年12月底,本公司共有412名全職員 工,其中香港員工21人(5%),內地員工391 人(95%)。男女僱員比例為84:16。我們分 別有41.5%和47.3%的員工年齡在31歲以下及 31-40歲之間。

就教育程度而言,我們一半以上的員工持有 大專及以上學歷。其中44.9%持有學士學歷, 7.0%持有碩士學位,0.5%持有博士學位。 47.6%持有大專及以下學歷。我們的團隊中, 2.4%為高級管理人員,9.2%為中層管理人員,其餘為普通員工。



員工構成



During the Year, the overall turnover rate of the Group was 26.0% or 107 people, of which approximately 83% took voluntary redundancy. The overall new hire rate of the Group was 24.8% or 102 people, including 7 male ethic minority employees. The distribution of turnover and new hire rates by gender, age and geographical locations categories are presented in charts below.

於本年度,本集團的總流失比率為26.0%,即 107人,其中約83%為自願離職。本集團的總 新招聘員工比率為24.8%,即102人,其中包 括7名男性少數民族員工。下圖顯示按性別、 年齡和地理位置類別劃分的流失比率和新招 聘比率構成。

流失比率及新招聘比率



Turnover and New Hire Rates





Turnover and New Hire Rates by Geographical Locations 按地理位置劃分的流失比率及 新招聘員工比率



EMPLOYEE RIGHTS AND WELFARE

As an equal opportunity employer, the Group strives to create a diverse and inclusive workplace for all employees regardless of their age, gender, marital status, sexual orientation, race, religion, disability, or political background. The Group has zero tolerance to any form of harassment and discrimination and strictly complied with local laws and regulations in places of operations⁸.

We prohibit employment of child or forced labour. Procedures for employee recruitment and dismissal are regulated by internal policies. The Human Resources Department is responsible for establishing and terminating labour contracts, which are formed based on mutual agreements between the Group and the employees. During the Year, the Group was not aware of any violations of laws and regulations related to the prevention of child labor and forced labor that have a significant impact on the Group. There was no reported case regarding child or forced labour during the Year.

To retain talents and recognise their contribution to the Group, we provide competitive remuneration and welfare packages. During the Year, the Hong Kong office improved staff benefits, including additional birthday leave, paid annual leave, sick leave, and maternity leave. Employees' remuneration includes basic salary and performance bonus, and it is reviewed annually to reward and motivate individual performance. Working hours and rest periods of our employees are based on their position's requirements and relevant laws.

員工權益及福利

作為注重平等機會的僱主,本集團致力為所有 員工創造多元化、包容性的工作場所,不論其 年齡、性別、婚姻狀況、性取向、種族、宗教、 殘障或政治背景等。本集團對任何形式的騷擾 和歧視零容忍,並嚴格遵守當地法律法規⁸。

我們禁止僱用童工或強迫勞動。員工招聘和 解僱的程序受內部政策約束。人力資源部負 責訂立和終止勞動合同,該合同是根據本集 團與員工之間的相互協議而制定的。於本年 度,本集團並不知悉任何違反有關防止童工 及強制勞工且對本集團造成重大影響的法律 法規事宜。於本年度並沒有有關童工及強制 勞工的個案。

為留住人才及表彰他們對集團的貢獻,我們 提供有競爭力的薪酬和福利待遇。香港辦公 室於本年度完善員工福利,包括增設生日假、 有薪年假、病假和產假。員工的薪酬包括基本 工資和績效獎金,每年對其進行檢討以獎勵 和激勵個人突出表現。我們根據員工的職位 要求和相關法律安排其工作時間和休假。

Welfare Package 福利配套

- Free annual health checks (2019: 99% of staff has enjoyed)
 免費年度健康檢查 (2019: 99%員工參加)
- Maternity and paternity leaves (2019: 100% returned to their positions)

產假和侍產假 (2019:100%恢復職位)

- Additional birthday leave for staff in Hong Kong 香港員工新增生日假
- Cash subsidies and benefits 現金補貼福利
- Paid leave
 帶薪休假

Please refer to **Laws and Regulations** section for labour-related laws and regulations 僱傭相關法律法規請參見**法律及法規**章節 During the Year, the Group was not aware of any non-compliance of relevant laws and regulations that have a significant impact on the Group relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.

EMPLOYEE COMMUNICATION

We value effective communication with our employees and ensure effective reception of their views and comments. Through the face-to-face 360° evaluation, we understand employees' ideas. Energy-saving suggestions raised by our employees are adopted by the Group.

During the Year, we organised employee engagement activities, for example, basketball competition and farming in the operation site. These activities can help employees to cultivate a sense of belonging and to strengthen cohesion and solidarity. 於本年度,本集團並不知悉任何違反有關薪 酬及解僱、招聘及晉升、工作時數、假期、平 等機會、多元化、反歧視以及其他待遇及福利 且對本集團造成重大影響的法律法規事宜。

員工溝通

我們重視與員工的有效溝通,確保有效接收 他們的觀點及意見。通過面對面360°評估, 我們了解到員工的想法。由員工所提出的節 能建議被本集團所採納。

於本年度,我們在營運地舉辦鼓勵員工參與 活動,例如籃球比賽和農業耕作活動。這些活 動旨在培養員工歸屬感,增強集團凝聚力和 團結。





Farming in the Operation Site 營運地點進行農業耕作

Basketball Competition 籃球比賽

Employee Communication Channels 員工溝通渠道

- Weekly meetings 每週會議
- Mailbox 郵箱
- Email 電子郵件
- WeChat 微信
- Face-to-face 360° evaluation 面對面360°評估

REATIONSHIPS のの日本の目的です。

Community Care 社區關懷

We always thrive to make contributions to society, facilitate domestic communities where we have operations to share the achievements in clean energy, in order to promote the long-term sustainable development in social, economic and environmental perspectives.

CONTINUED SUPPORT TO THE COMMUNITY

Propelling a sustainable society to tackle climate change, we organised two "Youth Leadership Camps for Climate Action" in cooperation with the United Nations Development Programme, providing a unique opportunity for the next generation to establish innovative thinking and motivating them to act as future leaders in global climate issues. We have also developed an industry-integration mode of "PV + Poverty Alleviation", hoping to assist the communities in need through specific photovoltaics poverty alleviation projects.

Besides, we are committed to promoting communications between different social parties to raise awareness of sustainable development in the society. During the Year, we organised various visiting activities and played host to various institutions from different regions, such as the delegations of East Asia Summit Clean Energy Forum and Hong Kong Education Bureau. During the visits and communications, we introduced the latest progress in photovoltaic industries and further discussed the future development of clean energy utility and ecological environment protection. 我們始終致力於奉獻社 會、促進我們營運所在社 區共享清潔能源技術發 展成果,從而推動社會、 經濟、環境的長期可持續 發展。

持續支持社區

為推動可持續發展社會以應對氣候變化,我 們與聯合國開發計劃署合作,組織兩屆「培養 未來氣候行動領袖」夏令營,為下一代青年人 提供一個獨特的機會去培養及建立創新型思 維,並激勵他們在未來全球氣候議題上能夠 發揮領導性作用。我們還發展一套創新型的 「光伏+扶貧」產業融合模式,旨在通過特定光 伏扶貧項目幫助有需要的社區。

此外,我們致力於促進不同社會群體間的對話 溝通,以提高整個社會的可持續發展意識。於 本年度,我們組織各種各樣的參觀學習活動, 接待來自不同地區的各類團體,例如東亞峰 會清潔能源論壇代表團,以及香港教育局代 表團。在參觀與交流中,我們介紹光伏產業領 域的最新發展情況,與代表團深入探討使用 清潔能源及生態環境保護的未來發展前景。



Recognising our effort in constructing poverty-alleviation clean energy power plants for regions in need, organising climate-change themed summer camp with international institutions, sponsoring youths and children in underdeveloped areas, caring the elderly people, and other CSR initiatives, the Group was awarded the "Best Social Responsibility Award" in the "2019 China Enterprise Excellence Awards", and "Most Socially Responsible Hong Kong Listed Company" at the "1st Greater China Best Listed Companies Awarding Ceremony" during the Year. In the future, we will continue to actively shoulder social responsibility and create shared value in communities for a more sustainable society. 鑒於我們於貧困地區建立清潔能源扶貧電 站、與國際組織合作組織氣候變化主題夏令 營、資助發展落後地區的青少年及兒童以及 關懷孤寡老人等一系列承擔社會責任所作出 的努力,本集團於「2019年中國企業精英頒獎 禮上榮獲「最具社會責任獎」,以及於「首屆 大中華區最佳上市公司頒獎典禮」榮獲「港股 上市公司最具社會責任獎」。未來,我們將繼 續積極承擔社會責任,並在社區創造共同價 值,為實現更可持續的社會作出貢獻。



LAWS AND REGULATIONS

We implement internal policies to ensure our business operations adhere to all applicable laws and regulations, listed below.

法律及法規

我們實施內部政策,確保業務營運恪守所有 適用法律及法規,如下表所示。

Aspect 層面	Applicable Laws and Regulations 適用的法律及法規
Emissions 排放	 Environmental Protection Law of the PRC 《中華人民共和國環境保護法》 Marine Environment Protection Law of the PRC 《中華人民共和國海洋環境保護法》 Water Pollution Prevention and Control Law of the PRC 《中華人民共和國水污染防治法》 Atmospheric Pollution Prevention and Control Law of the PRC 《中華人民共和國大氣污染防治法》 Law of the PRC on the Prevention and Control of Environmental Pollution by Solid Waste 《中華人民共和國固體廢物污染環境防治法》 Law of the PRC on the Prevention and Control of Environmental Noise Pollution 《中華人民共和國環境噪聲污染防治法》
Use of resources 資源使用	 Energy Conservation Law of the PRC 《中華人民共和國節約能源法》 Water Law of the PRC 《中華人民共和國水法》

Aspect	Applicable Laws and Regulations 適用的法律及法規		
層面			
The Environment and Natural Resources 環境及天然資源	 Law of PRC on Promotion Clean Production 《中華人民共和國清潔生產促進法》 Emergency Response Law of the PRC 《中華人民共和國突發事件應對法》 Law of the PRC on Appraising of Environmental Impacts 《中華人民共和國環境影響評價法》 		
Labour 僱傭	 Labour Law of the PRC 《中華人民共和國勞動法》 Labour Contract Law of the PRC 《中華人民共和國勞動合同法》 Law of the PRC on the Protection of Disabled Persons 《中華人民共和國殘疾人保障法》 Employment Ordinance in Hong Kong 香港《僱傭條例》 Employees' Compensation Ordinance in Hong Kong 香港《僱員補償條例》 Race Discrimination Ordinance in Hong Kong 香港《種族歧視條例》 Sex Discrimination Ordinance in Hong Kong 香港《性別歧視條例》 Disability Discrimination Ordinance in Hong Kong 香港《殘疾歧視條例》 		
Health and Safety 健康與安全	 Law of the PRC on the Prevention and Treatment of Occupational Diseases 《中華人民共和國職業病防治法》 Occupational Safety and Health Ordinance in Hong Kong 香港《職業安全及健康條例》 Production Safety Law of the PRC 《中華人民共和國安全生產法》 		
Labour Standards 勞工準則	 Law of the PRC on the Protection of Minors 《中華人民共和國未成年人保護法》 Provisions on the Prohibition of Using Child Labour 《禁止使用童工的規定》 Employment of Children Regulations in Hong Kong 香港《僱用兒童規例》 		

Aspect	Applicable Laws and Regulations
層面	適用的法律及法規
Product Quality	• Product Quality Law of the PRC
產品質量	《中華人民共和國產品質量法》
Data Privacy and Security	 Personal Data (Privacy) Ordinance in Hong Kong
資料私隱及安全	香港《個人資料(私隱)條例》
Intellectual Property Protection 知識產權保護	 Patent Law of the PRC 《中華人民共和國專利法》 Copyright Law of the PRC 《中華人民共和國著作權法》 Trademark Law of the PRC 《中華人民共和國商標法》 Detailed Rules for Implementation of the Patent Law of the PRC 《中華人民共和國專利法實施細則》
Anti-corruption 反貪腐	 Criminal Law of the PRC 《中華人民共和國刑法》 Anti-Unfair Competition Law of the PRC 《中華人民共和國反不正當競爭法》 Supervision Law of the PRC 《中華人民共和國監察法》 Prevention of Bribery Ordinance in Hong Kong 香港《防止賄賂條例》 Competition Ordinance in Hong Kong 香港《競爭條例》



		2018	2019
	Total Headcount 總人數	418	412
	By Geographical Distribution (full time) 按地理分佈(全職)		
	Hong Kong 香港	30	21
	Mainland China 中國內地	388	391
	 By Age 按年齡		
	<31	(43.5%) 182	(41.5%) 171
	31-40	(45.2%) 189	(47.3%) 195
	≥41	(11.2%) 47	(11.2%) 46
Workforce Demographics	By Gender 按性別		
僱員統計	Male 男性	(81.6%) 341	(84.0%) 346
	Female 女性	(18.4%) 77	(16.0%) 66
	By Educational Background 按教育背景		
	Doctor 博士	(0.2%) 1	(0.5%) 2
	Master 碩士	(7.4%) 31	(7.0%) 29
	Bachelor 學士	(52.4%) 219	(44.9%) 185
	Non-tertiary qualification and below 大專及以下學歷	(40.0%) 167	(47.6%) 196

SELLER

A Performance Data Summary 績效數據摘要

2019

	General staff	(86.1%) 360	(88.3%) 364
	普通員工 Middle management team 中級管理團隊	(11.2%) 47	(9.2%) 38
	Senior management team 高級管理團隊	(2.6%) 11	(2.4%) 10
	Employee Turnover Rate (Retirement and Contract Termination) 僱員流失比率(退休及合約終止)		
	Male 男性	0.0%	0.3%
	Female 女性	1.3%	1.5%
	Employee Turnover Rate (Resignation) 僱員流失比率 (辭任)		
Workforce	Male 男性	24.3%	19.7%
Demographics 僱員統計 一	Female 女性	66.2%	28.8%
	Employee Turnover Rate (Dismissed) 僱員流失比率 (解僱)		
	Male 男性	2.9%	3.8%
	Female 女性	11.7%	7.6%
	New Hire Employees by Age 新招聘員工 [,] 按年齡		
	<31	(47.8%) 54	(59.8%) 61
	31-40	(37.2%) 42	(32.4%) 33
_	≥41	(15.0%) 17	(7.8%) 8
	New Hire Employees by Gender 新招聘員工 [,] 按性別		
	Male 男性	(73.5%) 83	(85.3%) 87
	Female 女性	(26.5%) 30	(14.7%) 15

		2018	2019
	Return to work and retention rates after parental leave, by gender 育嬰假後的返崗及留任比率 [,] 按性別		
	Male 男性	100%	100%
Workforce	Female 女性	100%	100%
Demographics 僱員統計	Number of Minority Employees by Gender 少數民族僱員人數 [,] 按性別		
	Male 男性	12	19
	Female 女性	5	5
	Total 總計	(4.1%) 17	(5.8%) 24
	Employees Training 僱員培訓		
	Percentage of Employees Attending Training by Gender 受訓僱員比例 [,] 按性別		
	Male 男性	81%	91%
Employees Training 僱員培訓	Female 女性	74 %	68%
	Percentage of Employees Attending Training by Function 受訓僱員比例 [,] 按職能		
	General staff 普通員工	79%	88%
	Middle management team 中級管理團隊	56%	90%
	Senior management team 高級管理團隊	30%	80%

	Employees Average Training Hours by Gender (Hours) 僱員受培訓平均時數 [,] 按性別 (小時)		
-	Male 男性	26	25
-	Female 女性	6	8
-	Employees Average Training Hours by Function (Hours) 僱員受培訓平均時數 [,] 按職能 (小時)		
	General staff 普通員工	24	8431
-	Middle management team 中級管理團隊	3	208
-	Senior management team 高級管理團隊	0.5	25
Employees Training 僱員培訓	Number of Employees Training by Gender (Person-times) 受培訓僱員人次 [,] 按性別 (人次)		
-	Male 男性	6,901	6,661
-	Female 女性	337	235
-	Number of Employees Training by Function (Person-times) 受培訓僱員人次 [,] 按職能(人次)		
-	General staff 普通員工	7,148	6,760
-	Middle management team 中級管理團隊	86	120
-	Senior management team 高級管理團隊	4	16
	Total Employee Training Cost Per Person (RMB) 僱員培訓成本總額 (每人)(人民幣元)	931	537

2018	2019
2010	2010

	Occupational Health and Safety Performance 職業健康與安全表現		
	Number of safety accidents 安全事故數量	0	0
	Number of first level accidents 一類事故數量	0	0
	Number of mis-operation accidents 誤操作事故數量	0	0
	Number of near-miss accidents 未遂事故數量	0	0
Health and Safety	Number of fire accidents 火災事故數量	0	0
健康與安全	Number of traffic accidents 交通事故數量	0	0
	Work-related injuries per 1,000 workers 每1,000名員工的工傷數	0	0
	Lost days due to work-related injury 因工傷損失工作日數	0	0
	Work-related fatalities 因工作關係死亡人數	0	0
	Percentage of employees who received physical health check-ups 接受健康檢查的僱員比例	97%	99%

	2019
	2019
	2010

	Education on Occupational Safety and Health 職業安全與健康教育		
	Total person-times training 培訓總人次	1,195	987
	Total training hours 培訓總時數	986	1,128
	Percentage of employees trained 受培訓僱員比例	98%	97%
	Total Resources Consumption in Offices 辦公室總資源消耗量		
	Electricity (kWh) 電力(千瓦時)	498,062	351,081
	Gasoline (Litres) 汽油 (公升)	49,627	306,115
	Water (Tonnes) 水(噸)	1,273	961
	Total Resources Consumption in Power Plants 電站總資源消耗量		
	Electricity (kWh) 電力(千瓦時)	25,983,943	25,379,151
Environment 環境	Natural gas (m³) 天然氣 (立方米)	2,684	5,916
	Gasoline (Litres) 汽油 (公升)	124,633	90,431
	Diesel (Litres) 柴油 (公升)	15,806	18,371
	Water (Tonnes) 水(噸)	20,652	35,742
	Total Energy Consumption in Offices and	101,560	92,629
	Power Plants (GJ) 辦公室及電站總能源消耗量(千兆焦耳)		
	Energy intensity (GJ per GWh electricity generated) 耗能強度(千兆焦耳/千兆瓦時發電量)	32.7	33.5

		2018	2019
Environment 環境	Total Water Consumption in Offices and Power Plants (Tonnes) 辦公室及電站總用水量(噸)	21,925	36,703
	Water intensity (Tonnes per GWh electricity generated) 用水強度 (噸/千兆瓦時發電量)	7.1 ⁹	11.6
	Emissions 排放物		
	Air Pollutant ¹⁰ 大氣污染物 ¹⁰		
	SO _x (kg) 硫氧化物(公斤)	2.8	6.1
	NO _x (kg) 氮氧化物(公斤)	870.9	530.4
	PM (kg) 懸浮微粒(公斤)	75.2	47.5
	Waste 廢棄物		
	Photovoltaic panels (recycled) (Tonnes) 光伏電池板(已回收) (噸)	20.36	6.30
	Hazardous waste (Tonnes) 有害廢棄物 (噸)	0.94	0.47
	Intensity (kg per GWh electricity generated) 強度(公斤/千兆瓦時發電量)	0.30	0.15
	Waste circuit board (Tonnes) 廢電路板 (噸)	0.29	0.22
	Waste oil (Tonnes) 廢油(噸)	0.65	0.25
	Non-hazardous waste (Tonnes) 無害廢棄物 (噸)	37.24	21.09
	Intensity (kg per GWh electricity generated) 強度 (公斤/千兆瓦時發電量)	12.011	6.70
	Recyclable waste (Tonnes) 可回收廢棄物 (噸)	13.11	5.90

⁹ Water intensity for 2018 has been restated

2018的用水強度已重新呈列

¹⁰ The emission factors are based on the Hong Kong Environmental Protection Department's EMFAC-HK Vehicle Emission Calculation model and the United States Environmental Protection Agency's Vehicle Emission Modeling Software – MOBILE6.1.

排放因子根據相關環境保護署EMFAC-HK汽車排放計算模型及美國環境保護署的汽車排放建模軟件 – MOBILE 6.1 計算。

Non-hazardous waste intensity for 2018 has been restated 2018的無害廢棄物強度已重新呈列
		2018	2019
	Non-recyclable waste (Tonnes) 不可回收廢棄物 (噸)	24.14	15.19
	Wastewater (Tonnes) 廢水(噸)	-	2,321.5
	Greenhouse Gases Emissions and Intensity 溫室氣體排放量及強度		
	GHG emissions (tCO₂e) 溫室氣體排放 (噸二氧化碳當量)	18,888	19,259
	Scope I (tCO₂e) 範圍一 (噸二氧化碳當量)	512	1,183
	Scope II ¹² (tCO2e) 範圍二 ¹² (噸二氧化碳當量)	18,376	18,076
Environment 環境	Emission intensity (tCO₂e per GWh electricity generated) 排放強度 (噸二氧化碳當量/千兆瓦時發電量)	6.07	6.07
	Environmental Benefits 環境效益		
	Total photovoltaic electricity generation (MWh) 總光伏發電量(兆瓦時)	3,093,322	3,172,916
	Total wind power electricity generation ¹³ (MWh) 總風力發電量 ¹³ (兆瓦時)	99,308	-
	Equivalent to standard coal saved (Tonnes) 相當於節約標準煤 (噸)	1,020,000	1,260,000
	Equivalent to carbon dioxide emission reduced (Tonnes) 相當於減少二氧化碳排放 (噸)	2,680,000	3,160,000

¹² The computation of GHG emissions arising from the purchased electricity of Tibet Grid is based on the emission factor of China Southern Power Grid due to unavailable emission factor of Tibet Grid.

由於西藏電網未有可用的排放系數,故西藏電網購買電量產生的溫室氣體排放乃根據中國南方電網的排放系數計算。

¹³ The wind power plants were disposed during the Year.

風力發電站已在本年度出售。

		2018	2019
	Equivalent to nitrogen oxides emission reduced (Tonnes) 相當於減少氮氧化物排放(噸)	26,000	47,000
Environment	Equivalent to smoke and dust emission reduced (Tonnes) 相當於減少煙塵排放 (噸)	1,567	863,000
環境	Equivalent to number of trees planted (Million) 相當於種植樹木數目 (百萬)	144	172
	Equivalent to number of household's electricity consumed in a year 相當於居民一年用電量之用戶數目	1,720,000	2,110,000
Community 社區	Donation (RMB '000) 捐贈(人民幣千元)	2,000	10 (HKD'000)

GRI & HKEX ESG Content Index 全球報告倡議組織及聯交所ESG內容索引

The Content Index below reflects the outcomes of our materiality assessment and links together the location of each indicator and its reference to the GRI Standards and the HKEX ESG Reporting Guide. 以下內容索引反映我們重要性評估的結果並 連接各指標的位置及對GRI準則及聯交所ESG 報告指引的引用。

GENERAL DISCLOSURES

Disclosures Aspects 披露層面	GRI Indicator GRI指標	ESG Guide ESG指引	Description 説明	Page Number/ Remarks 頁碼/備註
Organisational Profile 組織概況	102-1	-	Name of the organisation 組織名稱	Cover page 封面
	102-2	-	Activities, brands, products, and services 活動、品牌、產品及服務	P. 4-11 第4至11頁
	102-3	-	Location of headquarter 總部位置	Shenzhen 深圳
	102-4	_	Location of operations 營運位置	Annual Report P. 21 年報第21頁
	102-5	_	Ownership and legal form 所有權及法律形式	Listed on the HKEX 於聯交所上市
	102-6	-	Markets served 服務的市場	Annual report P. 139 年報第139頁
	102-7	_	Scale of the organisation 組織規模	Annual report P. 6 年報第6頁
	102-8	B1.1	Information on employees and other workers 有關僱員及其他工作者的資料	P. 54-55 第54至55頁
	102-9	B5.1	Supply chain 供應鏈	P. 39-42 第39至42頁
	102-10	-	Significant changes to the organisation and its supply chain 組織及其供應鏈的重大變動	No significant change 並無重大變動
	102-11	_	Precautionary principle or approach 預防原則或方法	P. 26-27 第26至27頁
	102-12	_	External initiatives 外部倡議	P. 59-60 第59至60頁
	102-13	_	Membership of associations 協會的成員資格	P. 7 第7頁

一般標準披露

Disclosures Aspects 披露層面	GRI Indicator GRI指標	ESG Guide ESG指引	Description 説明	Page Number/ Remarks 頁碼/備註
Strategy 策略	102-14	-	Statement from senior decision-maker 高級決策者報告	P. 12-15 第12至15頁
Ethics and Integrity 道德與誠信	102-16	_	Values, principles, standards, and norms of behaviour 價值、原則、標準及行為規範	P. 42-45 第42至45頁
Governance 管治	102-18	_	Governance structure 管治架構	Annual Report P. 32 年報第32頁
	102-40	_	List of stakeholder groups 利益相關群體列表	P. 20-23 第20至23頁
	102-41	-	Collective bargaining agreements 集體談判協定	None of our employees are covered by collective bargaining agreements 我們的僱員 — 概無獲 集體談判協議保障
	102-42	_	ldentifying and selecting stakeholders 利益相關者的識別和遴選	P. 18-19 第18至19頁
	102-43	_	Approach to stakeholder engagement 利益相關者參與方針	P. 20-23 第20至23頁
	102-44	_	Key topics and concerns raised 提出的主要議題和關切問題	P. 20-23 第20至23頁
Reporting practice 報告常規	102-45	_	Entities included in the consolidated financial statements 綜合財務報表中所涵蓋的實體	Annual Report P. 158-161 年報第158至161頁
	102-46	_	Defining report content and topic boundaries 界定報告內容與議題邊界	P. 3 第3頁
	102-47	_	List of material topics 實質性議題列表	P. 19 第19頁

GRI & HKEX ESG Content Index 全球報告倡議組織及聯交所ESG內容素引	Y
& HKEX ESG Content Index 全球報告倡議組織及聯交所ESG內容素	GRI
全球報告倡議組織及聯交所ESG內容素	<u>c</u>
全球報告倡議組織及聯交所ESG內容素	HKEX
全球報告倡議組織及聯交所ESG內容素	ESG
全球報告倡議組織及聯交所ESG內容素	Content
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	全球報告倡議組織及聯交所ESG內容素

Disclosures Aspects 披露層面	GRI Indicator GRI指標	ESG Guide ESG指引	Description 説明	Page Number/ Remarks 頁碼/備註
	102-48	-	Restatements of information 信息重述	P.6, 25, 70 第6、25、70頁
	102-49	-	Changes in reporting 報告變化	No significant change 無重大變動
	102-50	-	Reporting period 報告期	P. 3 第3頁
	102-51	-	Date of most recent report 最近報告日期	29/7/2019 2019年7月29日
	102-52	_	Reporting cycle 報告週期	P. 3 第3頁
	102-53	_	Contact point for questions regarding the report 有關本報告問題的連絡人資訊	P. 87 第87頁
	102-54	_	Claims of reporting in accordance with the GRI Standards 符合GRI標準進行報告的聲明	P. 3 第3頁
	102-55	_	GRI content index GRI內容索引	P. 73-86 第73至86頁
	102-56	-	External assurance 外部審核	The Company will seek external assurance when appropriate 本公司將適時尋求 外部審核

SPECIFIC STANDARDS DISCLOSURE – MATERIAL TOPICS

特定標準披露-實質性議題

Disclosures Aspects 披露層面	GRI Indicator GRI指標	ESG Guide ESG指引	Description 説明	Page Number/ Remarks 頁碼/備註
1. Environmental 環境				
Energy 能源	103	A2	Report how the organisation manages the material aspect or its impacts 説明機構如何管理該實質性層面或其影響	P. 28, 33 第28、33頁
	302-1	A2.1	Energy consumption within the organisation 組織內部的能源消耗量	P. 29 第29頁
	302-3	A2.1	Energy intensity 能源密度	P. 29 第29頁
	_	A2.3	Reduction of energy consumption 減少能源消耗	P. 33 第33頁
Emissions 排放	103	A1, A3	Report how the organisation manages the material aspect or its impacts 説明機構如何管理該實質性層面或其影響	P. 28, 33 第28、33頁
	305-1	A1.1, A1.2	Direct (Scope 1) GHG emissions 直接溫室氣體排放 (範疇一)	P. 30 第30頁
	305-2	A1.1, A1.2	Energy indirect (Scope 2) GHG emissions 能源間接溫室氣體排放 (範疇二)	P. 30 第30頁
	305-4	A1.2	GHG emissions intensity 溫室氣體排放密度	P. 30 第30頁
	_	A1.5	Reduction of GHG emissions 減少溫室氣體排放	P. 25 第25頁
	305-7	A1.1	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions 氮氧化物、硫氧化物及其他主要大氣排放	P. 30 第30頁

Disclosures Aspects 地震民态	GRI Indicator	ESG Guide	Description ≝x □□	Page Number/ Remarks 古班 /供計
披露層面	GRI指標	ESG指引	説明	頁碼/備註
Environmental Compliance 環境合規	103	A1(b) A3	Report how the organisation manages the material aspect or its impacts 説明機構如何管理該實質性層面或其影響	P. 28 第28頁
	307-1	A1(b)	Non-compliance with environmental laws and regulations 不符合環境法例及規例	We were not aware of any significant non-compliance in 2019 我們並不知悉在2019 年發生任何重大不合規 情況
Green Product 綠色產品	103	A3	Report how the business involves in developing green product 説明業務如何融入發展綠色產品工作	P. 6, 26-27, 35-38 第6頁、26-27、35-38頁
	_	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them. 描述業務活動對環境及天然資源的重大影 響及已採取管理有關影響的行動	P. 26-27 第26至27頁
2. Social 社會				
Socioeconomic Compliance 社會經濟合規	419-1	B1(b), B2(b B4(b), B6(b), B7(b)	regulations in the social and economic area	We were not aware of any significant non-compliance in 2019 我們並不知悉在2019 年發生任何重大不合規 情況
Employment Communication 員工溝通	103	_	Report how the organisation manages the material aspect or its impacts 説明機構如何管理該實質性層面或其影響	P. 57 第57頁

Disclosures Aspects 披露層面	GRI Indicator GRI指標	ESG Guide ESG指引	Description 説明	Page Number/ Remarks 頁碼/備註
Product Health and Safety 產品健康與安全	103	B6	Report how the organisation manages the material aspect or its impacts 説明機構如何管理該實質性層面或其影響	P. 37-38 第37至38頁
	416-2	B6	Non-compliance concerning the health and safety impacts of products and services 有關產品及服務健康與安全的違規情況	We were not aware of any significant non-compliance in 2019 我們並不知悉在2019 年發生任何重大 不合規情況
Business ethics 商業道德	103	B7	Report how the organisation manages the material aspect or its impacts 説明機構如何管理該實質性層面或其影響	P. 44-45 第44至45頁

GRI & HKEX ESG Content Index 全球報告倡議組織及聯交所ESG內容索引

SPECIFIC STANDARDS DISCLOSURE – NON-MATERIAL TOPICS

特定標準披露-非實質性議題

	GRI	ESG		Page Number/
Disclosures Aspects	Indicator	Guide	Description	Remarks
披露層面	GRI指標	ESG指引	説明	頁碼/備註
1. Economic 經濟				
Economic Performance 經濟績效	201-2	_	Financial implications and other risks and opportunities due to climate change 氣候變化導致的財務影響以及其他風險及 機會	P. 59-60 第59至60頁
2. Environmental 環境				
Materials 材料	-	A2	Policies on efficient use of resources including energy, water and other raw materials 有效使用資源(包括能源、水及其他原材 料)的政策	P. 33 第33頁
	_	A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced 製成品所用包裝材料的總量(以噸計算)及 每生產單位佔量(如適用)	Our business mainly includes development, operation and management of renewable energy plants. There is no consumption of packaging materials involved in our operations. 我們的業務主要包括發 展、經營及管理可再生 能源電站。我們的營運 並不涉及包裝材料的耗 用。

Disclosures Aspects 披露層面	GRI Indicator GRI指標	ESG Guide ESG指引	Description 説明	Page Number/ Remarks 頁碼/備註
Water 水	-	A2	Policies on efficient use of resources including energy, water and other raw materials 有效使用資源 (包括能源、水及其他原材 料) 的政策	P. 33 第33頁
	303-1	A2.2	Water withdrawal by source 按源頭劃分的總用水量	P. 30 第30頁
	_	A2.4	lssue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved 求取適用水源上的問題、提升用水效益計 劃及所得成果	P. 30, 33 第30頁、33頁
Effluents and Waste 污水和廢棄物	_	Α1	 Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste 有關廢氣及溫室氣體排放、向水及土地的排污、有害及無害廢棄物的產生等的: (a) 政策:及 (b) 遵守對發行人有重大影響的相關法律及規例的資料 	P. 28, 31-32 第28、31至32頁
	306-2	A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity 所產生有害廢棄物總量(以噸計算)及(如 適用)密度	P. 31 第31頁

Disclosures Aspects 披露層面	GRI Indicator GRI指標	ESG Guide ESG指引	Description 説明	Page Number/ Remarks 頁碼/備註
	306-2	A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility) 所產生無害廢棄物總量(以噸計算)及(如 適用)密度(如以每產量單位、每項設施計 算)	P. 31 第31頁
	_	A1.6	Description of how hazardous and non- hazardous wastes are handled, reduction initiatives and results achieved 描述處理有害及無害廢棄物的方法、減低 產生量的措施及所得成果	P. 31-32 第31至32頁
3. Social – Labour Practices and Decent Work 社會一勞工實踐和體 工作	面			
			Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	
Employment 僱傭	_	В1	relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare	P. 56-57 第56至57頁
			有關薪酬及解僱、招聘及晉升、工作時數、 假期、平等機會、多元化、反歧視以及其他 待遇及福利的:	
			(a) 政策:及(b) 遵守對發行人有重大影響的相關法律及 規例的資料	

Disclosures Aspects 披露層面	GRI Indicator GRI指標	ESG Guide ESG指引	Description 説明	Page Number/ Remarks 頁碼/備註
	401-1	B1.2	New employee hires and employee turnover 新聘僱員及僱員流失	P. 55 第55頁
			Information on:	
			(a) the policies; and	
			(b) compliance with relevant laws and regulations that have a significant impact on the issuer	
Occupational Health and Safety 職業健康與安全	_	B2	relating to providing a safe working environment and protecting employees from occupational hazards	P. 49-53 第49至53頁
			有關提供安全工作環境及保障僱員避免職 業性危害的:	
			(a) 政策: 及	
			(b) 遵守對發行人有重大影響的相關法律及 規例的資料	
	_	B2.1	Number and rate of work-related fatalities 因工作死亡的人數及比率	P. 50 第50頁
	_	B2.2	Lost days due to work injury 因工傷損失工作日數	P. 50 第50頁
	_	B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored 描述所採納的職業健康與安全措施,以及 相關執行及監察方法	P. 49-53 第49至53頁

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Disclosures Aspects 披露層面	GRI Indicator GRI指標	ESG Guide ESG指引	Description 説明	Page Number/ Remarks 頁碼/備註
Training and Education 培訓與教育	404-2	B3	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. 有關提升僱員履行工作職責的知識及技能 的政策。描述培訓活動。	P. 47-48 第47至48頁
	-	B3.1	The percentage of employees trained by employee category (e.g. senior management, middle management, etc.) 按僱員類別 (如高級管理層、中級管理層 等) 劃分的受訓僱員比例	P. 66 第66頁
	404-1	B3.2	Average hours of training per year per employee 每名僱員每年平均培訓時間	P. 67 第67頁
4. Social – Human Rights 社會-人權				
			Information on:	
			(a) the policies; and	
			(b) compliance with relevant laws and regulations that have a significant impact on the issuer	
Child Labour 童工	-	B4	Relating to preventing child or forced labour.	P. 56 第56頁
			有關防止童工或強制勞工的:	
			(a) 政策:及	
			(b) 遵守對發行人有重大影響的相關法律及 規例的資料。	

	GRI	ESG		Page Number/
Disclosures Aspects	Indicator	Guide	Description	Remarks
披露層面	GRI指標	ESG指引	説明	頁碼/備註

5. Social - Society

Supply Chain 供應鏈	-	Β5	Policies on managing environmental and social risks of the supply chain 管理供應鏈的環境及社會風險政策	P. 39-41 第39至41頁
	_	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored 描述有關聘用供應商的慣例,向其執行有 關慣例的供應商數目、以及有關慣例的執 行及監察方法	P. 39-42 第39至42頁
			Information on:	
			(a) the policies; and(b) compliance with relevant laws and regulations that have a significant impact on the issuer	
Anti-Corruption 反貪腐	_	Β7	relating to bribery, extortion, fraud and money laundering	P. 44-45 第44至45頁
			有關防止賄賂、勒索、欺詐及洗黑錢的:	
			(a) 政策 : 及	
			(b) 遵守對發行人有重大影響的相關法律及 規例的資料	

Disclosures Aspects 披露層面	GRI Indicator GRI指標	ESG Guide ESG指引	Description 説明	Page Number/ Remarks 頁碼/備註
	205-3	B7(b), B7.1	Confirmed incidents of corruption and actions taken 已確認貪腐事件及所採取措施	We were not aware of any reported incident in 2019 我們並不知悉在2019 年有任何已報告的事件
	-	B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored 描述防範措施及舉報程序,以及相關執行 及監察方法	P. 44-45 第44至45頁
Local Communities 當地社區	_	B8	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests 有關以社區參與來了解發行人營運所在社 區需要及確保其業務活動會考慮社區利益 的政策	P: 59-60 第59至60頁

Disclosures Aspects 披露層面	GRI Indicator GRI指標	ESG Guide ESG指引	Description 説明	Page Number/ Remarks 頁碼/備註
6. Social – Product Responsibility 社會-產品責任				
			Information on:	
			(a) the policies; and	
			(b) compliance with relevant laws and regulations that have a significant impact on the issuer	
Product Responsibility 產品責任	417-2 417-3	B6	Relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress	P. 37-39, P. 42-45 第37至39頁、 第42至45頁
			有關所提供產品和服務的健康與安全、廣 告、標籤及私隱事宜以及補救方法的:	
			(a) 政策 : 及	
			(b) 遵守對發行人有重大影響的相關法律及 規例的資料	
	418-1	B6.2	Substantiated complaints concerning breaches of customer privacy and losses of customer data 經證實關於侵犯客戶隱私及遺失客戶資料 的投訴	We were not aware of any complaints related to breaches of data 我們並不知悉任何有關 侵犯資料的投訴
	_	B6.3	Description of practices relating to observing and protecting intellectual property rights 描述與維護及保障知識產權有關的慣例	P. 43 第43頁
	_	B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored 描述消費者資料保障及私隱政策,以及相 關執行及監察方法	P. 42-43 第42至43頁

環境、社會及管治報告 2019 Environmental, Social and Governance Report 2019

Feedback 反饋

Dear reader,

Hello!

Thank you for taking the time to read the 2019 ESG Report of Beijing Energy International Holding Co., Ltd. In order to further improve our ESG management and report quality, your comments and suggestions are very much appreciated. We will take your comments into consideration and all information provided will be kept confidential.

You may contact us via:

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尊敬的讀者:

您好!

非常感謝您在百忙之中閲覽《北京能源國際 控股有限公司2019年ESG報告》。為進一步提 升ESG管理工作和報告的質量,我們誠摯邀 請您對本報告提出寶貴的意見與建議。我們 將充分考慮您的意見與建議,並承諾妥善保 護您的信息不被第三方獲取。

您可通過以下方式聯繫我們:

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Report Team September 2020 報告編寫組 2020年9月

Please rate your level of agreement with the following statements (1 being strongly disagree and 5 being strongly agree):

請以1至5表示您是否同意下列陳述(1為完全 不同意,5為完全同意):

1.	I am satisfied with this report.
	我對此報告感到滿意。
2.	This report reflects the Company's impacts on the environment and the society.
	這份報告反映本公司對環境及社會之影響。
3.	I am satisfied with the ESG performance of the Company.
	我對本公司的ESG實踐成效感到滿意。
4.	I am satisfied with the disclosure level of this report.
	我對此報告的信息披露程度感到滿意。
5.	I am satisfied with the format and design of this report.
	我對此報告的版式及設計感到滿意。

Other comments:

請您在此提出其他意見與建議:

Your Contact Information: 您的聯繫資料:	
Name	Company
姓名:	工作單位 :
Tel:	Email:
電話 :	電子郵件:



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