



» 2022

環境、社會及管治報告

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

理士國際技術有限公司
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理士國際技術有限公司
Leoch International Technology Limited

目錄 Table of Contents

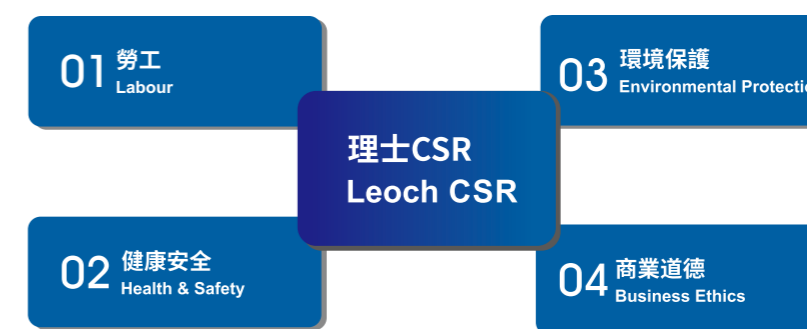


集團的環境、社會及管治 (ESG) 願景	The Group's Vision for Environment, Social and Governance (ESG)	02
董事會對環境、社會及管治事宜的監管	Board's Governance on Environmental, Social and Governance Topics	03
報告範圍	Reporting Scope	05
匯報原則	Reporting Principles	06
與持份者溝通	Communication with Stakeholders	06
環境、社會及管治績效	Environmental, Social and Governance Performance	09
環境	Environmental	09
環境及自然資源	The Environment and Natural Resources	09
排放物	Emissions	13
資源使用	Use of Resources	21
氣候變化的預備及應對政策	Preparedness and response plans for Climate Change	26
社會	Social	28
僱傭	Employment	28
健康與安全	Health and Safety	31
發展及培訓	Development and Training	34
勞工準則	Labour Standards	37
供應鏈管理	Supply Chain Management	38
產品責任	Product Responsibility	41
反貪污	Anti-corruption	45
社區投資	Community Investment	48

集團的環境、社會及管治 (ESG) 願景 The Group's Vision for Environment, Social and Governance (ESG)

理士國際技術有限公司（「公司」，連同其附屬公司，統稱「集團」）作為全球電源解決方案供應商，致力向電訊、汽車、電動汽車及設備行業等全球知名客戶，提供高度可靠的備用電源解決方案。電源解決方案根據應用分為三大類：備用電池、起動電池、及動力電池。集團承諾在上述高新技術的持續創新，並且按照相關商業聯盟的行為準則及國際認證，在原有的社會責任 (CSR) 體系上建立環境、社會及管治 (ESG) 的實踐，涵蓋環境保護、僱傭合規、健康與安全、供應鏈管理、產品責任和商業道德等多方面的政策及措施。

Leoch International Technology Limited ("The Company", and together with its subsidiaries, collectively referred to as "The Group") is a global supplier of power solutions and is committed to providing highly reliable backup power solutions to renowned global customers in the telecommunications, automotive, electric vehicle, and equipment industries. Those power solutions are divided into three categories based on their applications: reserve power batteries, SLI (starting, lightening and ignition) batteries, and motive power batteries. The Group is committed to continuous innovation in these advanced technologies and adheres to the code of conduct of relevant business associations and international certification for ESG implementation on top of the established Corporate Social Responsibility (CSR) system, which covers the policies and measures of various aspects like environmental protection, labour compliance, health & safety, supply chain management, product responsibility and business ethics.



- 社會責任SA8000認證
- 職業健康與安全管理ISO45001認證
- 環境管理ISO14001認證
- 能源管理ISO50001認證
- 有害物質過程管理QC080000體系認證
- 電池產品符合歐盟RoHS指令
- 知識產權管理體系認證

- SA8000 Certification
- Occupational Health and Safety Management ISO45001 Certification
- Environmental Management ISO14001 Certification
- Energy Management ISO50001 Certification
- Hazardous Substance Process Management QC 080000 Certification
- EU Directives for RoHS Compliance of Battery Products
- Intellectual Property Management System Certification

在此體系的框架內，集團在董事會所規劃的願景及戰略方向下，組織相關的架構及制定目標以達致體系持續及有效的運行，打造以客戶為中心，實現可持續發展的電池企業。

Within this system framework, the Group established the organizational structure and relevant targets for continual and effective implementation under the vision and strategies defined by the Board of Directors, aiming to become a customer focus and sustainable battery enterprise.



董事會對環境、社會及管治事宜的監管 Board's Governance on Environmental, Social and Governance Topics

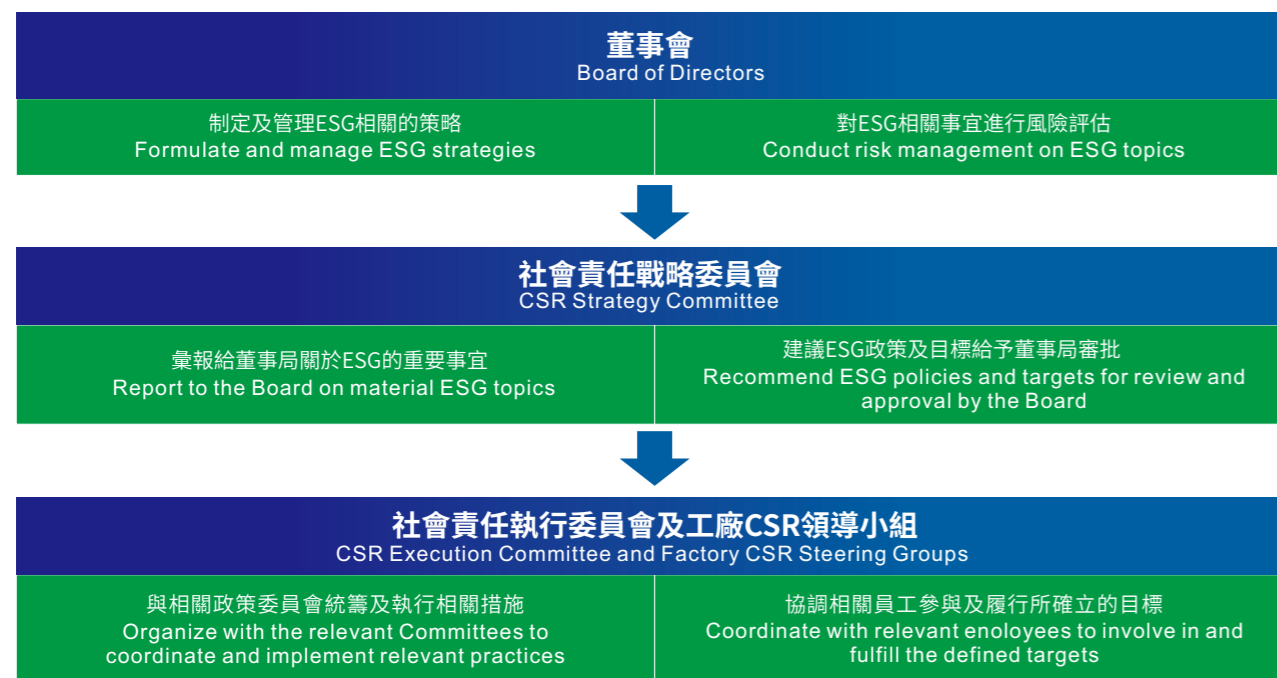
在目前各國關注能源供應的時代，本集團深明為世界各地客戶提供各項電源解決方案的重要使命，亦同時了解在電池製造過程中的環境影響及相關持份者的關注，本集團的董事會在目前業務策略的框架下，監管相關的環境、社會及管治(ESG)事宜，確保營運持續遵守，並符合業務當地的法律法規，藉此維護集團及其持份者的利益，並提升企業的品牌形象。此外，本集團致力為行業減少鉛酸蓄電池製造業務對環境的影響，因而於中華人民共和國（「中國」）從事回收鉛業務。

本集團透過不同的委員會及工作小組，定期收集環境、社會及管治資訊；然後匯總、分析及披露績效於ESG報告內；於董事會的年度會議，董事會成員審視在ESG報告中所披露的績效，評審與集團業務策略的合適性及合規狀況，及識別對集團及其持份者有重要性的可持續發展議題，從而作出合適決策，並在需要時調整相關策略。

In the current era where energy supply is a concern amongst various countries, the Group understands the important mission of providing various power solutions to customers around the world, whilst also recognizes the environmental impact of battery manufacturing and associated concerns from stakeholders. The Board of Directors of the Group oversees the relevant environmental, social and governance (ESG) aspects within the framework of the current business strategy in order to ensure that operations are in continued compliance with local laws and regulations in the local regions of the business, thereby safeguarding the interests of the Group and its stakeholders and enhancing the brand image of the company. Furthermore, the Group is committed to reducing the environmental impact of lead-acid battery manufacturing for the industry, and therefore engages in recycled lead business in the People's Republic of China (the "PRC").

The Group collects environmental, social and governance information on a regular basis through different functional departments and working groups, and then consolidates, analyses and discloses performance in the ESG report. At the annual meeting of the Board of Directors, board members will review ESG performance disclosed in the report, regarding the status of suitability and compliance with the Group's business strategy and identifying the sustainability topics being material to the Group and stakeholders, so as to make appropriate decisions and adjust the relevant strategies as necessary.

ESG治理架構 ESG Governance Structure



透過委員會/工作小組的定期滙報及每年制定的ESG報告資訊，董事會評估ESG資訊所顯示的潛在風險，優先管理有重大影響的ESG議題，制定有效的防控措施，確保集團的可持續發展。本年度集團在生產線及其設備的管理，持續安排資源，致力減少排放及節省能源，包括下列設置的例子：

- ▶ 減少的排放廢酸、酸霧、鉛煙塵、及含揮發性有機化合物的廢氣等污染物質
Reduced emissions of pollutants such as waste acid, acid mist, lead fumes, and volatile organic compounds in exhaust gas"
- ▶ 增加採用潔淨能源，減少燃煤發電所產生的污染
Increased use of clean energy to reduce pollution from coal-fired power supply
- ▶ 自動化設備減少產生鉛渣及報廢極板等廢棄物
Automated equipment to reduce waste production such as lead slag and scrapped electrodes
- ▶ 廠房及倉庫的太陽能發電系統
Solar power systems in factories and warehouses
- ▶ 利用熱回收的設備/技術，減少能源消耗
Equipment/technology that utilizes heat recovery to reduce energy consumption

在本年度的風險評估中，董事會確認全球經濟雖然從新型冠狀病毒 (COVID-19) 的疫情中不平均地復甦，但因俄烏衝突而引發的能源供應緊張以及急升的物流成本，全球產能受到干擾，導致供應鏈不平衡及原材料供應的挑戰，集團從多方面考慮應對措施，包括但不限於下列策略：

- ▶ 成立專責小組應對相關的ESG挑戰及機遇
Establishing a dedicated team to address relevant ESG challenges and opportunities
- ▶ 改變供應商的組合，及/或供應商的挑選準則
Changing the composition of suppliers and/or supplier selection criteria
- ▶ 改變採購政策或存倉設施，以應對無法預見的供應鏈事故
Changing procurement policies or storage facilities to respond to unforeseen incidents along supply chain
- ▶ 改變營運及/或生產基地，遠離政治動盪及不安的區域或市場
Changing operational and/or production bases to move away from politically unstable and insecure regions or markets

集團預期來年影響ESG表現的主因仍是持續的地緣衝突，及受到通脹、能源危機、以及新興市場與發展中經濟體不斷惡化的債務危機等不利因素影響，最終導致多國經濟放緩，窒礙電池業務的增長；故此針對來年的業務策略，集團須增強與優質供應商的戰略合作，及積極開發新的供應商，確保彈性的原料供應；並且定期評估各核心產品的競爭力，配合可靠的供貨渠道，從而建立穩定的客戶網絡。

另外，董事會將從下列方向，定期檢討相關政策或目標的需要，以配合集團長遠的可持續發展方向：

Through regular updates from committees/working groups and the annual ESG report information, the Board will evaluate the potential risks disclosed from the ESG information, to prioritize the management of the ESG topics with significant impacts, and formulate effective preventive and control measures in order to ensure the sustainable development of the Group. In the reporting year, the Group has continued to allocate resources to the management of production lines and equipment, and is committed to reducing emissions and saving energy, including but not limited to:

From risk assessment in the reporting year, the Board of Directors acknowledged that the global economy is recovering unevenly from the novel coronavirus (COVID-19) pandemic, however there are challenges such as energy supply tensions and surging logistics costs due to the Russia-Ukraine conflict, which are disrupting global production capacity and causing imbalances in supply chains and challenges in supply of raw materials. The Group has considered various measures to address these challenges, including but not limited to the following strategies:

The Group expects that the main factors affecting ESG performance in the coming year will continue to be ongoing geopolitical conflicts and adverse factors such as inflation, energy crises, and worsening debt crises in emerging markets and developing economies, ultimately leading to economic slowdowns in multiple countries and hindering the growth of battery business. Therefore, for formulation of business strategy in the forthcoming year, the Group needs to strengthen strategic cooperation with high-quality suppliers and strives to explore new supplier partnership for flexible supply of raw materials. The Group will also regularly evaluate the competitiveness of core products and establish a stable customer network with reliable supply channels.

In addition, the Board of Directors will review the need on a regular basis for relevant policies or goals from the following directions to align with the Group's long-term sustainable development direction :

- ▶ 提升生產線中設備及機器的環保特性
Enhancing the environmental characteristics of equipment and machinery in the production line
- ▶ 投資節能系統或其他可再生能源項目的開發及應用
Investing in development and application of energy-saving systems or other renewable energy projects
- ▶ 與客戶及供應鏈業務伙伴合作開發綠色技術
Collaborating with customers and business partners along supply chain to for development of green technologies
- ▶ 制定目標以應對氣候變化所帶來的環保及其他合規風險
Setting goals to address environmental and other compliance risks brought about by climate change

▶ 報告範圍 Reporting Scope

本《二零二二年環境、社會及管治報告》（「本報告」）的報告期為2022年1月1日至2022年12月31日，內容包含「理士國際技術有限公司」（「公司」），連同其附屬公司，統稱「集團」於本報告期內貢獻集團大部分營運收入及與環境有重要關連的下列6個營運地點，覆蓋鉛酸蓄電池與鋰電池的製造以及鉛回收業務：

The reporting period of This "Environmental, Social and Governance Report 2022" (the "Report") was from 1 January 2022 to 31 December 2022. It disclosed the content of "Leoch International Technology Limited" (the "Company", and together with its subsidiaries, collectively referred to as the "Group") of which the majority of business revenues and the significant implication with the environment were represented by the following six operating locations, covering the business in manufacturing of lead-acid batteries and lithium batteries as well as recycling of lead:

鉛酸蓄電池製造業務

Business for Manufacturing of Lead-acid Batteries

- | | |
|--|---|
| 1. 江蘇理士電池有限公司
江蘇省金湖縣工業園區理士科技園 | 1. Leoch Battery (Jiangsu) Corp.
Leoch Hi-Tech Park, Jinhu Industrial Park, Jiangsu Province. |
| 2. 肇慶理士電源技術有限公司
肇慶(大旺)高新開發區臨江工業園工業大街東 | 2. Zhaoqing Leoch Battery Technology Co., Ltd.
Industry Ave.(East), Riverside Industrial Park, Zhaoqing (Dawang) Hi-Tech Park. |
| 3. 安徽力普拉斯電源技術有限公司
安徽省濉溪縣經濟開發區女貞路1號 | 3. Anhui Uplus Energy Technology Co., Ltd.
Nvzhen Road 1, Suixi Economic and Technological Development Zone, Anhui Province. |
| 4. 安徽理士電源技術有限公司
安徽省濉溪縣經濟開發區迎春路頭 | 4. Anhui Leoch Power Supply Corp
Yingchun Road, Suixi Economic and Technological Development Zone, Anhui Province. |

鋰電製造業務

Business for Manufacturing of Lithium-ion Batteries

- | | |
|--|--|
| 5. 安徽理士新能源發展有限公司
安徽省淮北市經濟開發區梧桐大道32號 | 5. Anhui Leoch New Energy Co., Ltd.
No. 32 Wutong Avenue, Huaibei Economic and Technological Development Zone, Anhui Province |
|--|--|

鉛回收業務

Business for Lead Recycling

- | | |
|---|---|
| 6. 太和縣大華能源科技有限公司
安徽省阜陽市太和縣肖口鎮循環經濟示範園 | 6. Taihe Dahua Energy Technology Co., Ltd.
Recycling Economic Demonstration Park, Xiaokou Town, Taihe County, Fuyang City, Anhui Province. |
|---|---|

本報告內容是按照《香港聯合交易所有限公司證券上市規則》附錄二十七所載的「環境、社會及管治報告指引」而編寫，每年出版一次。

▶ 匯報原則 Reporting Principles

重要性：本集團定期參考本地和國際相同行業的可持續發展標準，致力與其接軌。同時，亦透過定期與各方持份者溝通，以識別對本集團而言最受關注及重要的可持續發展議題。該可持續發展議題亦會在公司的營運總基調下，融入公司的發展方針。本年度本集團更開展持份者的意見調查工作，識別他們對本集團的期望，並制定合適策略以回應他們的意見及需求。

量化：本集團致力量化和披露環境及社會範疇的關鍵績效指標及數據，並在適當可行的情況下，解釋收集數據和計算的方法，提升數據的透明度。

平衡性：為了維持報告內容的平衡，就集團及持份者關注的可持續發展績效及挑戰，都作出公平披露，向公眾提供不偏不倚的資訊。

一致性：本集團乃遵循香港聯交所的「環境、社會及管治報告指引」進行披露，在相同的框架下讓公司可就過去表現按年作出有意義的比較，並在需要時披露相關數據的更新計算方法。

The Report is prepared in accordance with the "Environmental, Social and Governance Reporting Guide" as set out in Appendix 27 to the "Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited", and is published annually in each financial year.

Materiality: The Group regularly makes reference to the industry sustainability standards at the local and international level and strives to integrate with them. At the same time, regular communication with stakeholders of various aspects is used to identify the most concerned and important sustainability topics for the Group. Those sustainability topics will also be incorporated into the company's development policies under the overall strategy of the company's operations. During the year, the Group also conducted stakeholder surveys to identify their expectations on the Group and developed appropriate strategies to respond to their views and needs.

Quantitative: The Group is committed to quantifying and disclosing key performance indicators and data within the environmental and social categories, and whenever feasible, explaining the methods of data collection and calculation to enhance transparency of the data.

Balance: In order to maintain the balance of reporting content, fair disclosure of sustainability performance and challenges related to the Group and stakeholders is provided with impartial information to the public.

Consistency: The Group adheres to the "Environmental, Social and Governance Reporting Guide" of the Hong Kong Stock Exchange for disclosure, which allows the Company to make meaningful annual comparisons of past performance under the same framework, and to disclose updated calculation methods of relevant data when necessary.

▶ 與持份者溝通 Communication with Stakeholders

集團每年召開股東會議，提供了一個有效的平台讓董事局與股東交流意見。除了股東大會外，為保持與客戶、供應商等持份者的緊密關係，集團不時拜訪各持份者，或與他們進行電話會議，並透過公司電子郵箱、客戶服務人員等與各持份者溝通，聆聽他們的意見及需求。集團的整體業績表現亦會每年刊載於公司年報上，向各投資者匯報。

The Group convenes annual general meeting (AGM) which provides an effective platform for the Board of Directors to exchange views with shareholders. In addition to AGM, for maintaining close relationships with stakeholders such as customers, suppliers, the Group communicates from time to time with stakeholders and listen to their views and needs through visit, phone conference, company e-mail, and customer service representatives, etc.. The Group's overall business performance is also reported to investors through the Annual Report of the Group.

為了更深入瞭解我們的持份者在環境、社會及管治方面的認識及期望，除了上述的持份者溝通途徑，本年度集團對持份者開展調查，採取下列三個步驟以準備及進行「重要性評估」：

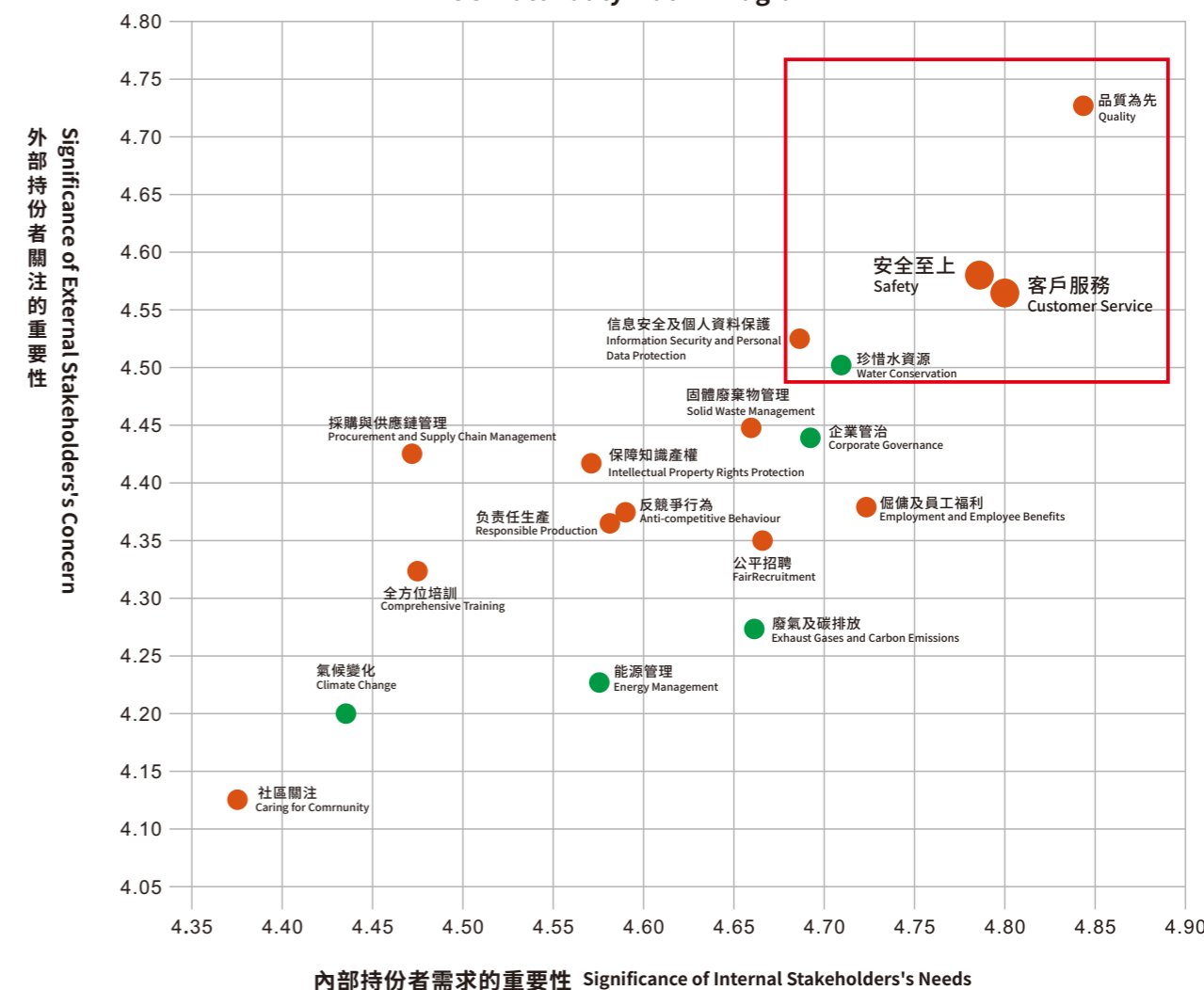
In order to better understand the environmental, social and governance awareness and expectations of our stakeholders, in addition to the above stakeholder communication channels, the Group conducted a survey of stakeholders this year and proceeded the following three steps to prepare and conduct the materiality assessment:

<p>第一步 識別環境、社會及管治議題</p> <p>Step 1 Identify topics on environmental, social and governance</p>	<p>按照「聯交所」的《環境、社會及管治報告指引》作為重要性評估的框架，並綜合公司發展戰略、行業發展趨勢、監管及資本市場要求等因素，制定對持份者的問卷；問卷從環境保護、僱傭及勞工管理、經營慣例及社區投資等四大範疇進行設定，識別了18個可持續發展的議題。</p> <p>In accordance with the Hong Kong Stock Exchange's Environmental, Social and Governance Reporting Guide as the framework for materiality assessment, and taking into account factors such as corporate development strategies, industry trends, regulatory and market requirements, the stakeholder questionnaire was developed to proceed survey on 18 sustainability topics in four categories: environmental protection, employment and labour management, operating practices and community investment.</p>
<p>第二步 確認持份者及設定調查問卷</p> <p>Step 2 Identify stakeholders and set up questionnaires</p>	<p>確認對本集團至為重要的持份者，分別是我們的客戶、供應商及員工；按照他們各自的觀感及期望，設定各自調查問卷中議題的具體內容；問卷完成後發放到被抽樣的持份者，在指定期限內收集他們的反饋。</p> <p>The stakeholders identified as utmost important to the Group are our customers, suppliers and employees. According to their respective perceptions and expectations, specific content of the topics was formulated in their respective questionnaires. The questionnaires were then distributed to the sampled stakeholders, whose feedback was collected within the specified time frame.</p>
<p>第三步 評估及確認重要議題</p> <p>Step 3 Evaluate and identify material topics</p>	<p>透過統計及分析外部持份者的調查反饋，及審視本集團的策略與內部持份者的優先事項，最終綜合這些外部及內部需求數據，編制「ESG重要性分析矩陣圖」，從上述初步識別的18項ESG議題中，確認與本集團相關的重要議題(在下頁矩陣圖右上角的紅色方格內標示)。</p> <p>Through statistical analysis of survey feedback from external stakeholders, and review of the Group's strategies and the priorities of internal stakeholders, data of both external and internal demands was consolidated for plotting the "ESG Materiality Matrix Diagram". From the aforesaid 18 sustainability topics, the ESG material topics of the Group were identified (within the red square in the upper right corner of the matrix diagram on next page).</p>

環境保護 Environmental Protection	僱傭及勞工管理 Employment and Labour Management	經營慣例 Operating Practices	社區投資 Community Investment
廢氣及碳排放 Exhaust Gases and Carbon Emissions	安全至上 Safety	品質為先 Quality	社區關注 Caring for Community
固體廢棄物管理 Solid Waste Management	僱傭及員工福利 Employment and Employee Benefits	客戶服務 Customer Service	
能源管理 Energy Management	公平招聘 Fair Recruitment	企業管治 Corporate Governance	

珍惜水資源 Water Conservation	全方位培訓 Comprehensive Training	反競爭行為 Anti-Competitive Behaviour	
應對氣候變化 Climatic Change		採購與供應鏈管理 Procurement & Supply Chain Management	
		負責任項目管理 Responsible Production	
		保障知識產權 Intellectual Property Right Protection	
		信息安全及個人資料保護 Information Security and Personal Data Protection	

ESG重要性分析矩陣圖
ESG Materiality Matrix Diagram



● 香港交易所的環境、社會及管治報告指引的「環境」層面
Environmental aspects of HKEX ESG Reporting Guide

● 香港交易所的環境、社會及管治報告指引的「社會」層面
Environmental aspects of HKEX ESG Reporting Guide

在本年度(2022年)的重要性評估中,首四個確認的重要性議題基本上與上年度(2021年)的結果相若,其中有一個ESG議題在兩年比較中有差異(在下表以紅色文字標示);在本年度才被確認的「信息安全及個人資料保護」議題,反映持份者在這方面的關注上升,在本報告的《6.2.6.6》章節中也有描述相關的信息安全維護措施。

During the materiality assessment in this reporting year (2022), four out of top five material topics were confirmed the same during the fiscal years 2021 and 2022. The remaining one top ESG topic was different amongst those two years (as identified in red text in the following table): "Information Security and Personal Data Protection", which indicated the increasing trend of stakeholders' concern on this topic, whereas Section 6.2.6.6 of This Report has depicted the relevant company's measures for protection of information security.

2021年度 FY 2021	2022年度 FY 2022
品質為先 Quality	品質為先 Quality
安全至上 Safety	安全至上 Safety
珍惜水資源 Water Conservation	客戶服務 Customer Service
能源管理 Energy Management	珍惜水資源 Water Conservation
客戶服務 Customer Service	信息安全及個人資料保護 Information Security and Personal Data Protection

環境、社會及管治績效 Environmental, Social and Governance Performance



環境及自然資源

The Environment and Natural Resources

因應社會大眾對環保議題的關注,集團致力滿足社會及客戶的需求,制定相關措施體現綠色文化。

In response to the public's concern over environmental protection topics, the Group is striving to satisfy the demands of the society and customers, and to formulate the relevant measures for fulfilment of the green culture.

環境風險監控

Monitoring of environmental risks

集團按照認可標準如ISO14001的環境管理體系,識別及評估所有環境因素,對重要環境因素制定方案以便監控;確保廢氣、廢水均按照國家標準及排污許可證規定達標排放;評估生產流程,找出有害廢棄物產生的源頭,制訂減少有害廢棄物的行動計劃,例如制訂有效措施減少含酸廢水的排放、鉛煙塵的排放,使用後的化學品容器須交由供應商回收處理等。

The Group adheres to recognized standards of environmental management system such as ISO14001 for identification and assessment of all environmental aspects. Schemes are developed to monitor the significant environmental aspects for ensuring the emissions of exhaust gases and wastewater in compliance with the specifications stipulated in the national standards and emission permits. Production processes are assessed to identify the source of hazardous waste generation and the associated action plans are formulated to reduce hazardous wastes, such as formulation of effective measures to reduce the discharge of acidic wastewater and lead dust, return of used chemical containers to suppliers for recycling and treatment, etc.

ISO 14001或同等的環境管理體系認證

ISO 14001 or equivalent Environmental Management System Certification



肇慶 Zhaoqing 江蘇 Jiangsu 安徽理士 Anhui Leoch Power Supply 安徽(力普拉斯) Anhui Uplus 安徽鋰電 Anhui Leoch New Energy 鉛回收 Lead Recycling

集團委派部門專責對污水處理站及廢氣淨化系統做好維護,確保正常運行,並制定《環境設施異常應急預案》,對應污水處理、除塵、廢氣淨化等設施在不能正常運行時須採取防止環境污染的必要措施。

The Group appoints dedicated department to maintain and ensure proper functioning of the treatment facilities for wastewater and exhaust gases. "Emergency Plan for Abnormalities in Environmental Facilities" is developed to guide the actions required for prevention of environmental pollution in event of malfunctioned facilities for sewage treatment, dust removal or exhaust gas purification, etc.

此外,集團亦明瞭業務耗用大量能源,因此主動建立國際認可的能源管理體系,並獲取ISO 50001認證,致力有系統地使用能源,減少不必要的消耗。

Furthermore, the Group is aware of considerable energy assumption by business operation and therefore proactively established internationally recognized energy management system and attained ISO 50001 certification, as a commitment to using energy in a systematic approach and reducing unnecessary consumption.

ISO 50001或同等的能源管理體系認證

ISO 50001 or equivalent Energy Management System Certification



肇慶 Zhaoqing 江蘇 Jiangsu 安徽理士 Anhui Leoch Power Supply 安徽(力普拉斯) Anhui Uplus 安徽鋰電 Anhui Leoch New Energy 鉛回收 Lead Recycling

環境目標 Environmental Targets

集團秉持企業社會責任，承諾保護環境，因此集團在下列方面制定目標，旨在管控營運時對環境所造成的負責影響。

The Group is committed to corporate social responsibility and protection of environment, therefore, has established the following targets with the aim to mitigate the adverse environmental impacts incurred from the operation:



環境目標 Environmental targets	方向性的陳述 Directional statements	本年度所採取的措施 Measures taken during the year
減少排放 Emission reduction	減少廢酸的排放 Reduce emission of waste acid	於鉛酸蓄電池製造廠房的加酸充電工序中，進行「廢酸」回收 Proceeded "waste acid" recycling in the acid addition and charging processes of lead-acid battery manufacturing factories;
	減少酸霧/含酸廢水的排放 Reduce emission of acidic mist / acid-containing wastewater	改善鉛酸蓄電池的充電工序，增加內化成型號，減少酸霧/含酸廢水的排放 Improved the charging process of lead-acid battery production by increasing inner formation model, for reducing emission of acidic mist / acid-containing wastewater
	減少在生產過程中產生的鉛煙塵排放 Reduce lead-containing smoke emission along the production processes	引入使用自動密封的生產設備，如：自動鑄焊機，減少在生產過程中產生及排放鉛煙塵 Introduced the use of sealed and automated production equipment, such as auto welding machine, for reducing the generation and emission of lead smoke in the production processes;
	減少含揮發性有機化合物的廢氣排放 Reduce emission of exhaust gases containing volatile organic compounds (VOC)	在鋰電池製造廠房，安裝「有機溶劑 (NMP / 甲基吡咯烷酮)的回收裝置」，藉此減少排放有機化合物的廢氣 Installed device for recycling of organic solvent (NMP / N-Methyl-2-Pyrrolidone) in the lithium battery manufacturing factory, for reducing emission of VOC-containing exhaust gases;
	加強廢氣 / 粉塵過濾處理系統； Enhance the filtration and treatment system for exhaust gases / dust	在制酸車間，利用「尾氣制酸技術」，減少二氧化硫、粉塵等物質排放； In the acid production workshop, adopt the "exhaust acid production technology" for reducing emission of substances like sulphur dioxides, dust;
	增加採用潔淨能源，減少燃煤發電所產生的污染 Increase the use of clean energy for reduction of pollution incurred from coal-fired power generation	在鉛回收廠房的熔煉 / 精煉工序，主要採用的能源是天然氣，減少在使用後產生的空氣污染物 In the smelting / refining processes of lead recycling factory, natural gas was adopted as the main energy source, for reducing air pollution incurred from fuel combustion.

環境目標 Environmental targets	方向性的陳述 Directional statements	本年度所採取的措施 Measures taken during the year
減少廢棄物 Waste reduction	利用及提升自動化設備，減少報廢物料或工業廢料 Deployment and enhancement of automated equipment for reducing scrap materials and industrial waste	在極板部門 / 分刷工序，利用「自動軋剪機」，減少報廢極板 In electrode plate department / separated polishing process, use of "automated roll-shearing machine" for reduction of scrap electrode plates
		在極板部門 / 鉛粉工序，利用「冷切機」，減少鉛渣 In electrode plate department / lead powdering process, use of "cold-cutting machine" for reduction of lead residues
		在組裝部門 / 包板工序，利用「自動包板機」，減少廢隔板的產生 In assembly department / plate-wrapping process, use of "auto plate wrapping machine" for reducing the generation of scrap separation plates
		改造在組裝與鑄板工序中的「一鍋多機鑄板機」，減少鉛渣的產生 In assembly and plate casting process, reformation of "one-furnace-multiple-plate casting machine" for reducing the generation of lead residues
		在鉛回收的熔煉 / 精煉廠房，提升改造熔煉工藝，採用「富氧側吹熔煉爐」，減少鉛冶煉渣的產生 In the smelting / refining workshops of lead recycling factory, advancement of smelting technology through adoption of "oxygen-rich side-blowing smelting oven", for reducing the generation of residues from lead metallurgy
能源使用效益 Energy use efficiency	增加採用可再生能源的工序 / 設備 Increase the use of renewable energy for process / equipment deployment	太陽能用於推動鉛粉機、充電機、廠房及倉庫的照明 Use of solar energy in driving lead powder machines, charging machines and lightings in workshops and warehouses
		在鉛酸蓄電池製造及鉛回收廠房，採用合適的熱回收設備 Use of appropriate heat recovery equipment in the lead-acid battery manufacturing and lead recycling workshops: <ul style="list-style-type: none"> ● 利用「空壓機餘熱回收系統」，通過熱交換器將水加熱，供給員工淋浴之用 Use of "air-compressor heat recovery system", for heating water with heat exchanger to provide hot water for employees' bathing ● 在注塑機的料斗進行循環加熱，透過在料斗更換節能發熱管及控制其溫度，以便回收熱量 Heat recycling adopted in the hoppers of injection moulding machines, and heat energy was recovered through installation of energy-saving heating tubes as well as temperature regulated device ● 在注塑部門，利用熱循環風機，建立熱循環系統，將熱能回收 In injection moulding department, use of hot air blower for establishing hot air circulation system for heat recovery ● 在鉛回收的熔煉部門，安裝餘熱鍋爐，作為熱回收設備 In smelting department of lead recycling factory, installation of waste heat boiler for heat recovery
	利用熱回收的技術，減少能源耗用 Adopt heat recovery technology for reducing energy consumption	

環境目標 Environmental targets	方向性的陳述 Directional statements	本年度所採取的措施 Measures taken during the year
用水效益 Water use efficiency	重用處理達標後的廢水 Reuse of wastewater that was treated and meeting the specified standards	透過污水處理設施，中水回用，處理後的廢水用於生產廠房的非生產用途，如：地面清潔及環保設備的用水 Through sewage treatment facilities and water recycling, the treated wastewater was used for non-production purpose in the factories, such as floor cleaning and water provision for environmental facilities
	減少工序中的耗水量 Reduce the amount of water consumption in the operating processes	在鉛回收廠區的粗煉與精煉工序的廢氣排控設備中，利用「尾氣治理噴淋設施」，節省用水； In the refining processes of lead recycling factory, spraying facilities for exhaust gases treatment were adopted for saving water 在鉛酸蓄電池製造及鉛回收廠房，採用合適的循環用水設備； Appropriate water recycling devices were used in lead-acid battery manufacturing and lead recycling workshops: <ul style="list-style-type: none"> 在加充工序中的充電水槽，可循環用水 Water in the grooves of recharging process could be recycled for use 設置粗煉污水池及精煉污水池，以便回用精煉冷卻水，節省新鮮供水 Septic tanks were set up in the refining processes for recycling of cooling water 冷卻循環水塔的設定，水可重複利用 Configuration of cooling tower would facilitate the recycling of cooling water
	採用循環用水的設備。 Adopt water recycling equipment	

員工環保培訓 Environmental training for employees

為了讓員工珍惜天然資源及更了解保護環境的措施，集團的培訓計劃及新員工入職培訓計劃都涉及環保的要求，包括環保意識及基礎、固體廢物、危險廢物規範化管理及環保法規等知識與技能，本年度員工參與這類別的培訓達11,789人次，合共59,397培訓小時。

For employees' better understanding on conservation of natural resources and the environmental protection practices, the Group organized both training programs and new employee orientation programs which involve environmental requirements, including knowledge and skills related to environmental awareness and fundamentals, standardized management of solid and hazardous wastes, as well as laws and regulations related to environmental protection. In the reporting year, there was a total of 11,789 employees participated in environmental-related training which amounted to a total of 59,397 training hours.

排放物 Emissions

集團深切瞭解業務對環境的影響，因此制定了完善的環保政策以管理各類污染物的排放，對廢水、廢氣、固體廢物等都制定相應的控制程式，嚴格監控營運過程，並積極尋求創新技術以不斷改進環境績效。

The Group has a clear understanding of the environmental impact of its business on the environment. Therefore, it formulates comprehensive environmental policy to manage the discharge of various pollutants. Relevant control procedures have been developed for wastewater, exhaust gases and solid wastes, etc. The operation processes are closely monitored and innovative technology is actively pursued for continuous improvement of environmental performance.

在報告期內，集團沒有發現關於排放或其他與環境相關的違規事件及投訴個案。

Within the reporting period, the Group did not identify any legal non-compliance or complaint related to emissions or other environmental topics.

廢水排放控制 Control of wastewater discharge

集團對公司活動、產品和服務過程產生的工業廢水和生活污水進行有效控制，制定《污水處理操作規程》妥善處理廢水。集團的生產廠房設有內部污水處理站以處理集團產生的廢水，並在確認達標後才排放到廠外的污水系統，防止因水污染物影響酸鹼度（pH）及含鉛量，對環境造成影響。

The Group has effectively controlled the industrial wastewater and domestic sewage generated by the activities, products and services of the Group, and also formulated the "Sewage Treatment Operating Procedure" for handling wastewater properly. The production plants of the Group have installed an internal sewage treatment facility to handle the wastewater generated by the Group and to ensure the compliance with discharge limit before release to the external sewage system. This prevents impact to the environment from the influence of water pollutants on pH and lead content.

為確保環境措施有效實踐，集團已建立環保部負責廢水排放的管理，包括收集國家和地方標準並列明集團廢水和污染物排放標準、嚴格監督檢查污水處理設施的維護保養和運行情況、有效處理集團產生的廢水並記錄其結果，與污水排放相關資訊的外部聯絡等。另外，集團也設有化驗室，負責對環保部每日送來的廢水樣本進行水污染物的濃度測量。一旦監測資料異常或排放超標，相關部門即時分析原因，並採取糾正及預防措施。

For effective implementation of environmental measures, the Group has established Environment Protection Department responsible for managing the wastewater discharge, including the collection of national and local standards as well as the Group's standards for discharge of wastewater and pollutants; close supervision of the maintenance and operation status of the wastewater treatment facilities; effective treatment and the associated recordkeeping of the wastewater generated by the Group; liaison with external parties on information relevant to wastewater discharge. In addition, the Group has established laboratory responsible for the testing of wastewater samples submitted daily from the Environment Protection Department for concentration measurement of water pollutants. The relevant department will analyse the cause timely, and implement corrective and preventive actions in event of abnormal findings or discharge exceeding limit.



集團各鉛酸蓄電池廠區藉著污水處理系統，減少廢水排放。

針對其他液體廢棄物，集團各鉛酸蓄電池組裝廠房的各用酸工序，包括加酸充電工序，都設有廢酸回收設備；全年平均回收率達90%以上，合共回收超過600噸的廢酸，致力減少排放到外部環境。

此外，於鉛回收營運，除了利用污水處理系統，更設有“再生鉛熔煉爐回水利用系統”；此系統作為降溫用途，利用水的循環使用，減少廢水排放。

Through the adoption of sewage treatment facilities, each lead-acid battery manufacturing site of the Group has reduced the emission of wastewater.

For the other liquid wastes, lead-acid battery assembly factories of the Group have equipped with waste acid recycling devices for those processes involved in use of acids, including for the process of acid addition recharging. Annual recycling rate reached 90% or above on average and the recycling amounted to exceeding 600 tonnes of waste acids. The recycling aimed for reducing emission to the external environment.

Moreover, in the operation of lead recycling, the “water recycling system in the lead-recycling furnace” was set up in addition to the sewage treatment system. Apart from the usage for lowering temperature, that recycling system reused water and reduced the wastewater discharge.

廢氣排放控制

Control of exhaust gases

廢氣處理設備

Equipment for exhaust gas treatment

集團也對廢氣進行有效控制，防止在營運中產生的硫酸霧、鉛煙、鉛塵及其化合物等大氣污染物質對環境造成影響。鉛酸蓄電池生產廠房已安裝完善的廢氣處理系統，所有可能產生廢氣與煙塵的工序都安排在風罩下操作，廢氣與煙塵會經過抽風管道進入處理設施，包括鉛煙淨化器、除塵器、酸霧中和塔/淨化器等，廢氣必須經內部監測並確認滿足排汙許可證規定的要求後，才可排放出廠。

The Group also controls gas emissions effectively to prevent the impact on the environment from atmospheric pollutants generated during operation such as sulphuric acid mist, lead fumes, lead dusts, and its compounds. The production plants of lead-acid batteries are equipped with a comprehensive exhaust gas treatment system. Processes that are likely to cause exhaust gases, fumes and dusts are operating under exhaust ventilation facilities, through which exhaust gases, fumes and dusts are channelled in ducts into the treatment facilities. These facilities include lead fume purifier, dust collector, acid fume neutralizer/purifier, etc. Gas emission is allowed to discharge to the external environment only when they comply with the requirements of internal monitoring and those requirements stipulated by the emission permit.



於鉛回收廠房，也有安裝廢氣處理系統，所管控的廢氣排放物質包括：鉛、二氧化硫、氮氧化物、煙塵等；於粗煉工序設有廢氣脫硫裝置，以減少二氧化硫的排放；相關區域更安裝煙塵自動測試儀器與煙氣排放連續監測系統，協助管控廢氣排放。

環保部同時作為專責管理廢氣排放的部門，負責收集國家和地方方法例要求、列明排放標準、維護處理設施與排放相關資訊的外部聯絡等。集團亦編制各類處理設施的操作指南，要求相關的崗位嚴格遵守，並做好日常保養確保廢氣處理設施正常運行，在必要時採取糾正及預防措施。

減排的工藝改善

Enhancement in emission reduction technology

除了建立完善的廢氣處理系統，集團亦改造工藝，於鉛酸蓄電池生產廠房採用『無鍋內化成』以減少酸霧排放；利用無鎘合金進行內化成工藝，內化成全部使用連體酸壺，防止酸液溢出，同時去除極板化成、極板乾燥等工序，以減少酸霧導致的污染。此外，部分廠區改善“加充/充電工序”，增加內化成型號，減少酸霧的排放。

同時，考慮到工藝與設備息息相關，相關廠區利用自動密封的生產設備，例如：自動軋剪機、自動鑄機、自動鑄錠機等；或提升整條生產線，如從半自動改為全自動鑄焊線，及將手工焊接線改為半自動操作等；目標利用自動工藝，減少在生產過程中產生鉛煙塵，因而減輕廢氣過濾的壓力及對空氣質素的影響。

潔淨能源的使用

Use of clean energy

為了減少廢氣排放中的污染物，集團致力使用潔淨能源代替燃煤供應的電能，積極使用天然氣作為能源供應。

In the lead-recycling factory, exhaust gas treatment system has also been installed and the controlled air pollutants include: lead, sulphur dioxide, nitrogen oxides, smoke, etc. Sulphur removal devices have been installed in the roasting operation to reduce the emission of sulphur dioxides. Relevant areas have even been installed with smoke auto-testing equipment for continuous monitoring and control of exhaust gas emission.

The Environment Protection Department also holds responsibility for managing exhaust gas discharge, including the collection of the requirements stipulated by the national and local legislations; identification of emissions standards; maintenance of treatment facilities and liaison with external parties on information relevant to the gas emission. The Group prepares the operation guidelines for various treatment facilities, and requests the relevant departments to abide by the guidelines strictly, and to ensure normal operation of these facilities by arrangement of routine maintenance and implementation of corrective and preventive measures where necessary.

Apart from the establishment of comprehensive exhaust gas treatment system, the Group has reformed the technology and adopted the “cadmium-free inner formation” in lead-acid battery manufacturing regions for reducing the emission of acidic mist. The inner formation technology uses the cadmium-free alloy and adopts the sealed acid containers completely for prevention of acid spilling, at the same time eliminates the processes like plate formation and drying for minimizing the pollution incurred by acidic mist. Moreover, some manufacturing regions have improved the “recharging / charging process” with enhanced inner formation models for reducing emission of acidic mist.

At the same time, considering the correlation between technology and equipment, relevant manufacturing sites adopted production equipment with sealed automation feature, such as automated roll-shearing machine, automated cast-welding machine, automated casting machine, or enhanced the entire production line, such as reforming cast-welding line from semi-automated mode to full automation, as well as reforming the manual-welding production line to semi-automation. With the use of automation technology, it aims for reducing generation of lead fumes in the production processes, and consequently mitigating both the load of exhaust filtration and the adverse impact to air quality.

For reducing pollutants within exhaust gas emission, the Group is dedicated to using clean energy in replacement of electricity from coal-fired generation, hence is striving to use natural gas as the energy source.

減少溫室氣體的措施

Measures for reducing greenhouse gas (GHG)

除了管控上述大氣污染物的排放，集團亦致力在業務過程中減少溫室氣體的排放。集團目前積極拓展清潔能源的使用，如推動太陽能發電項目，致力減少在傳統發電過程導致的溫室氣體。營運場地的生活區（如宿舍內的浴室和飯堂等）已從燃煤全面改為使用天然氣，藉此大幅減少排放溫室氣體。

此外，集團理解交通運輸會造成溫室氣體的排放，因而制定相關行政措施以減少交通需求。如在採購過程中，由於採用非本地供應商需要額外的運輸過程，在滿足品質及交貨能力的前提下，集團會優先選用本地供應商。在辦公室的管理，公司提倡通過視訊會議、Skype、電子郵件及電話等多種溝通方式，盡量減少出差次數。

在報告期內，透過落實上述多項減排措施，本報告所覆蓋的營運地點共產生溫室氣體369,896噸二氧化碳當量；每一噸的鉛酸蓄電池成品產生0.51噸二氧化碳當量，比較去年度同業務的排放密度(0.86噸二氧化碳當量/噸)，本年度的排放密度減少約41%。

In addition to emission control of the aforesaid air pollutants, the Group is striving to reduce greenhouse gas (GHG) generation in its operation. The Group is actively expanding the use of clean energy to reduce GHG coming from the conventional power generation, such as by promotion of solar energy projects. Living areas within the operation boundaries (such as bathrooms and canteens in the dormitories) have fully switched from the use of coal to natural gas for reducing GHG drastically.

Moreover, the Group is aware of transportation incurring GHG generation and therefore develops administrative measures for reducing transportation needs. As an example in procurement process, owing to the fact that engaging overseas suppliers requires additional transportation, the Group prefers to engage local suppliers given that the compliance with quality and delivery requirements. While in office management, the Group encourages the use of various communication channels such as video conference, Skype, email, telephone in order to reduce business trips.

During the reporting period, through implementation of the aforesaid emission reduction measures, the operating regions covered by the Report have generated greenhouse gases of totally 369,896 tonnes carbon dioxide equivalent, i.e., 0.51 tonne carbon dioxide equivalent was generated per tonne of production of lead-acid batteries. As compared with the previous year (0.86 tonne carbon dioxide equivalent per tonne of production), the emission intensity of the reporting year was reduced by around 41%.



溫室氣體排放總量¹
Total GHG emission¹
369,896
噸 二氧化碳當量
Tonne CO₂ equivalent



直接溫室氣體排放量² (範圍1)
Direct GHG emission² (Scope 1)
24,637
噸 二氧化碳當量
Tonne CO₂ equivalent



能源類間接溫室氣體排放量³ (範圍2)
Energy Indirect GHG emission³ (Scope 2)
345,259
噸 二氧化碳當量
Tonne CO₂ equivalent

「鉛酸蓄電池製造」業務
“Lead-acid Battery Manufacturing”
business
溫室氣體排放總量¹
GHG emission¹
320,015
噸 二氧化碳當量
Tonne CO₂ equivalent

「鋰電池製造」業務
“Lithium-ion Battery Manufacturing”
business
溫室氣體排放總量¹
GHG emission¹
4,825
噸 二氧化碳當量
Tonne CO₂ equivalent

「鉛回收」業務
“Lead Recycling”
business
溫室氣體排放總量¹
GHG emission¹
45,056
噸 二氧化碳當量
Tonne CO₂ equivalent

「鉛酸蓄電池製造」業務
“Lead-acid Battery Manufacturing”
business
每噸生產的溫室氣體
排放密度⁴
GHG emission intensity⁴
per tonne of production
0.51
噸 二氧化碳當量/ 噸
Tonne CO₂ equivalent/ tonne

「鋰電池製造」業務
“Lithium-ion Battery Manufacturing”
business
每千瓦時生產的溫室氣體
排放密度⁴
GHG emission intensity⁴
per kWh of production
0.01
噸 二氧化碳當量/ 千瓦時
Tonne CO₂ equivalent/ kWh

「鉛回收」業務
“Lead Recycling”
business
每噸生產的溫室氣體
排放密度⁴
GHG emission intensity⁴
per tonne of production
0.61
噸 二氧化碳當量/噸
Tonne CO₂ equivalent / tonne

1. 溫室氣體計算時所採用的全球變暖潛能值 (GWP) 是基於《政府間氣候變化專門委員會 (IPCC) 第五次評估報告 (AR5)》所發佈的數值。
2. 直接溫室氣體主要源自車輛燃料、廠內設施的天然氣及乙炔的耗用，計算方法是基於2006年出版的《政府間氣候變化專門委員會 (IPCC) 國家溫室氣體清單指南》。
3. 能源間接溫室氣體源主要源自外購電力及蒸氣的間接排放，計算過程所採用的區域電網基準線排放因子則參考「中華人民共和國國家發展和改革委員會 (NDRC)」所發佈的數值；外購蒸氣的間接排放則以蒸氣供應商提供的參數 [單位kgce/t (千克標準煤/每噸)] 作計算。
4. 排放密度的計算利用鉛酸蓄電池製造業務的生產量作基數。

1. Global Warming Potential (GWP) adopted in this GHG calculation were based on the values disclosed in the Fifth Assessment Report (AR5) of Intergovernmental Panel on Climate Change (IPCC).
2. Direct GHG emission was mainly originated from fuel combustion during gasoline consumption by vehicles, natural gas and acetylene consumption by plant facilities. Method of calculation was based on “2006 IPCC Guidelines for National Greenhouse Gas Inventories”.
3. Energy indirect GHG emission was originated from consumption of electricity and steam purchased from external source. Regional grid emission factors used in the calculation were referenced to the values issued by National Development and Reform Commission (NDRC) in People's Republic of China. The parameter data from steam supplier (unit in kgce/t (kilograms of coal equivalent / tonne) was used for calculation of indirect emission incurred by purchased steam.
4. The base for calculation of emission intensity is the total production units from the business for manufacturing of lead-acid batteries.

固體廢棄物控制

Control of solid wastes

集團制定廢棄物分類制度，對可回收利用的廢棄物盡量回收，不能回收利用的廢棄物要及時清理，不會任意丟棄。並與廢棄物處理承辦商簽訂協定書，列明對一般廢棄物的處理要求。

The Group has established waste classification system. Wastes are recycled as much as possible or disposed timely if they could not be reused. Wastes shall be disposed in a controlled manner and also waste handling vendors are contracted on the specified requirements for handling of general wastes.

廢棄物的分類處理

Classification of wastes

對於固體廢棄物，集團首先按其危害性分成兩大類：危險廢棄物和一般廢棄物，再按是否可回收利用分為四小類。固體廢棄物包括置於容器中而沒有直接排向水體和大氣的液體和氣體廢物，例如：用容器盛裝的廢油、廢清洗劑等。

For solid wastes, the Group classifies them firstly into two main categories according to their hazards: hazardous wastes and non-hazardous wastes, which are further divided into four sub-groups based on the recyclability. Solid waste includes those liquid and gas wastes which are stored in containers and not directly discharged to external waters and atmosphere, for example: waste oil and waste cleaning solvent in container.

可利用的危險廢棄物
Recyclable hazardous waste

廢鉛粉、廢電池等
Waste lead powders,
waste batteries, etc.



廢棄物類別 Classifications of Wastes

例子 Examples

可回收的一般廢棄物
Recyclable general waste

廢紙、廢膠筐/桶、廢設備、廢五金等
Waste papers, scrap plastic basket/barrel,
scrap equipment, scrap metals, etc.



不可回收的一般廢棄物
Non-recyclable general waste
辦公、生活垃圾等
Office and domestic wastes, etc.



不可利用的危險廢棄物
Non-recyclable hazardous waste
廢油、含鉛垃圾、勞保垃圾等
Waste oil, wastes containing lead
content, scrap protective
equipment, etc.

各廢棄物產生部門按制定的程式對廢棄物進行分類收集，存放於固定地點。集團的生產廠房設立固體廢棄物的專用臨時儲存區，並按照相關法例放置標誌及採取防止污染與洩漏措施。

危險廢棄物按當地的危險廢物名錄及相關法例處理，交由相關合資格單位妥善處理，並禁止將危險廢棄物混入一般廢棄物中貯存。

Every department shall follow the established procedures to collect the generated wastes in accordance to the classification and to store them at the designated area. Production plants of the Group designate temporary storage areas for solid wastes and signs are placed according to the relevant legislations. Also measures are in place to prevent pollution and leakage.

Hazardous wastes are handled according to the local hazardous waste registry and the applicable legislations. They are provided to the relevant qualified agencies for proper handling and are prohibited to store together with general wastes.

廢棄物的種類及數量

Types and quantities of wastes

於2022年，有害廢棄物主要包括廢電池、廢極板、廢鉛邊角料、鉛泥、鉛渣、鉛灰、水處理污泥及被鉛污染的廢棄物，有害廢棄物在本報告所覆蓋的營運地點共排放43,384噸；同期，鉛酸蓄電池業務所產生的有害廢棄物比去年度(2021: 33,425噸)少約20%；廢電池及含鉛相關廢物將交給合資格單位回收及再提煉金屬鉛。

In 2022, hazardous wastes mainly included scrap batteries, discarded electrode plates, leftover lead materials, lead sludges, lead residues, lead ashes, sludge from water treatment and lead-contaminated wastes. Those hazardous wastes generated from the operating regions covered by the Report amounted to 43,384 tonnes in total. In the same period, the weight of hazardous wastes generated from lead-acid battery business was around 20% less than that of the previous year (2021: 33,425 tonnes). Waste batteries and other lead-bearing wastes would be conveyed to qualified agency for collecting and refining lead metal.

另一方面，無害廢棄物主要是在鉛回收業務中熔煉工序產生出來的水淬渣，其餘是廢棄紙箱、廢膠包裝、及辦公與生活垃圾；期內在本報告所覆蓋的營運地點共排放無害廢棄物20,922噸。與去年度比較，鉛酸蓄電池業務所產生的無害廢棄物減少約51%。

On the other hand, non-hazardous wastes were mainly water quenched slag generated from refining process of lead recycling business. The remaining were discarded carton boxes, scrap plastic packaging, office and domestic wastes. Consolidated from all operating regions covered by this Report, the total weight of non-hazardous wastes amounted to 20,922 tonnes. As compared with the figure of the previous year, the amount of non-hazardous wastes generated from lead-acid battery business was reduced by around 51%.

鉛酸蓄電池業務 (廢棄物排放密度) Lead-acid Battery business (Weight of Wastes Generated)	2021	2022	對比2021% 差異 %variation against 2021
有害廢棄物 (噸) Hazardous wastes (tonne)	33,425	26,677	-20.19%
無害廢棄物 (噸) Non-hazardous wastes (tonne)	5,145	2,518	-51.06%
廢棄物總量 Total wastes	38,569	29,195	-24.31%

鉛酸蓄電池業務 (廢棄物排放密度) Lead-acid Battery business (Weight of Wastes Generated)	單位 Unit	有害廢棄物 Hazardous wastes	無害廢棄物 Non-hazardous wastes	廢棄物總量 Total wastes
排放密度 (每噸生產單位) 2022 Emission intensity (per tonne of production unit)	(噸 / 噸) (tonne / tonne)	0.0687	0.0331	0.0463
排放密度 (每噸生產單位) 2021 Emission intensity (per tonne of production unit)	(噸 / 噸) (tonne / tonne)	0.0635	0.0817	0.0719

減少廢棄物的方案

Measures for waste reduction

於2022年，集團在多個營運區域利用相關設備，減少鉛渣及其他工業金屬廢物的產生；

In 2022, various operating regions of the Group adopted appropriate equipment for reducing the generation of lead residues and other metallic wastes :

- ▶ 自動軋剪機 – 在極板車間的分刷工序中，可減少報廢極板，全年減少報廢極板超過100噸；
- ▶ Automated roll-shearing machine – in the separated polishing process of electrode plate workshop, it reduced the amount of discarded electrode plates exceeding 100 tonnes in the entire reporting year;
- ▶ 冷切機 – 在極板車間的鉛粉工序中，減少鉛渣的產生，全年減少鉛渣超過140噸；
- ▶ Cold-cutting machine – in the lead powder process of electrode plate workshop, it reduced the generation of lead residues exceeding 140 tonnes in the entire reporting year;
- ▶ 一鍋多機鑄板機 – 在鑄板工序中，減少鉛渣的產生；如於江蘇廠區，全年減少鉛渣約30噸。
- ▶ One-furnace-multiple-plate casting machine – in the plate casting process, it reduced the generation of lead residues, such as reduction of around 30 tonnes of lead residues in the Jiangsu factory region during the reporting year.



資源使用 Use of Resources

集團注重環境保護，致力實現能源與資源的合理使用，並推廣適當措施提升利用效率。

The Group pays attention to environmental protection and is striving to realize reasonable utilisation of energy and resources. Appropriate measures are advocated for enhancement of utilisation rate.



能源管理 Energy Management

本報告所涵蓋的各家鉛酸蓄電池製造工廠，都已獲取 ISO 50001能源管理體系認證，制定及實踐相關政策及程序，達致節能效果。

For each lead-acid battery manufacturing factory covered by this report, they have achieved certification in ISO 50001 energy management system, which included the establishment and implementation of the related policies and procedures for energy saving performance.



節能設備及措施 Equipment and measures for energy conservation

在設計工業技術和選擇設備時，集團優先採用低電耗或能源效益較高的設備及產品。對於電耗高的設備，將以電耗低的技術和設備逐步取代；對現行的技術及設備策劃並實施技術改造，優化各生產部門流程，以提高能源的利用率。盡量減少部門設備在無負荷的情況下空轉，對生產間隙可停機的設備，及時關閉能源供應，並根據生產計劃的變動彈性調節設備的運作負荷。

針對辦公室的節能管理，集團提倡白天充分利用日光，減少電燈的使用時間；辦公室的空調設定只在合適的溫度範圍運作；要求員工下班時關閉辦公室內各種電源設備，盡量杜絕一切不必要的耗電情況。

During the phases for development of industrial technology and equipment selection, the Group gives priority to equipment and products that are of low power consumption or higher energy efficiency. For equipment of high power consumption, they will be gradually replaced by technology and equipment of low power consumption. Technology re-engineering is planned and implemented to the existing technology and equipment for process optimisation and enhancement of energy utilisation rate in various production departments. Departments shall minimise the equipment operating at production idle time, and shall shut off the power supply to those equipment at non-production time interval. Operation load of the equipment is flexibly adjusted according to the change in production planning.

For office administration in energy saving, the Group encourages full use of natural daylight to reduce the duration of electrical lighting; air-conditioners are preset to function only at the suitable temperature range; employees are required to turn off the power of all equipment in the office when they get off duty for minimisation of unnecessary power consumption.

可再生能源的使用 Use of renewable energy

集團明白城市供電的過程畢竟會增加溫室氣體排放，因此致力減少使用市電，在營業地點積極推動太陽能發電系統，部分工廠廠房頂部已全面安裝太陽能板，讓產生的電能用於電池充電、極板化成等工序，多餘的電力則與市電並網使用；如在肇慶及江蘇廠區，利用太陽能發電系統，於2022年的光伏發電量合共提供約11,000,000千瓦時。

Being aware of municipal power generation leading to the ultimate emission of greenhouse gases, the Group is striving to reduce use of municipal electricity, and hence solar power supply system is actively developed in the operating locations. Some production plants have completed the installation of solar panels on the roof and such solar power is used in production processes such as battery charging, plate formation. Excess power from solar sources will be connected to municipal power grid for consumption. For example, in the Zhaoqing and Jiangsu factory regions, solar power system was adopted for generation of photovoltaic electricity which amounted to around 11,000,000 kWh in the year of 2022.

熱能回收 Recovery of heat energy

除了利用太陽能，集團亦設有設備把熱能回收，節省市電的消耗；在本年度的例子包括在江蘇的空壓機房，安置熱回收設備，藉此全年節省約234,000立方米的天然氣；另外，在肇慶的注塑部門，注塑機的料斗加上節能發熱管，熱量進行回收利用，以及通過熱風乾燥機把熱能回收，藉此全年節省了約310,000千瓦時。

In addition to utilisation of solar energy, the Group has also installed equipment for recovery of heat energy and consequently reducing consumption of municipal power. Example of the reporting year included heat recovery devices installed in the air compressor rooms of Jiangsu factory for annual saving in natural gas of around 234,000 cubic metres. Another example happened in injection moulding department of Zhaoqing factory, in which hoppers of injection moulding machines were equipped with energy-efficient heating tubes for capturing and reusing of heat energy, as well as hot-air dryers utilized for heat recovery to achieve annual saving of around 310,000 kWh.

用水管理 Water management

循環用水 Recycling of water resources



集團善用廢水處理系統，循環使用處理後的廢水，減少耗用新鮮供水。廠內污水處理設施建有中水回用池，將處理達標後的廢水重用於生產廠房清潔、環保設備用水及沖廁等；如在安徽的鉛酸蓄電池廠區，通過上述的中水回用，全年共節省的新鮮供水量約18,000立方米。

The Group makes best utilisation of the wastewater treatment system. Treated wastewater is recycled for use to reduce the consumption of fresh water. In-house sewage treatment facilities were built with reclaimed water reservoirs, from which treated wastewater complying with environmental standard was reused for cleaning of factory, processing of environmental protection facilities and toilet flushing, etc. For example, through the use of reclaimed water at lead-acid battery factory in Anhui, a total of around 18,000 cubic metres of fresh water was saved during the reporting year.

除了中水回用，集團致力採用、優化、改造設備等方法持續降低耗水量；部分鉛酸蓄電池廠區在合適工序中利用循環用水的設備，例如在安徽的鉛酸蓄電池廠區，加充工序的冷卻塔及充電水槽，全年共節省的新鮮供水量約41,000立方米。

Apart from use of reclaimed water, the Group is striving to use methods such as adoption, optimization, and reforming for achieving continual reduction of water consumption. Some lead-acid battery factories even utilise equipment which reuse water in the appropriate operations, such as cooling towers and charging water grooves in the recharging process of lead-acid battery factory in Anhui, which achieved saving of freshwater around 41,000 cubic metres during the reporting year.

節約用水方案 Measures for water conservation

此外，部分電池生產廠設有雨水收集池，收集的雨水會經過處理後回用，主要用途為廠房清潔及供水給環保設備；如在江蘇廠區，著此類收集系統，全年合共節省用水約19,800立方米。

In addition, some battery factories have been installed with rainwater collection reservoirs, in which the collected rainwater would be reused after treatment, mainly for cleaning of workshops and supplying of water to environmental protection facilities, for example, the use of such collection system in Jiangsu factory achieved water saving of around 19,800 cubic metres during the reporting year.



除了經常提醒員工及訪客節約用水之外，集團致力尋求設備更新改造、技術優化及管理改進等方法持續降低耗水量，並定期實施清潔生產審核，監督及識別可以減少用水的工序，杜絕一切不必要的耗水情況。

Apart from frequent reminding employees and visitors of water conservation, the Group is striving to continuously reduce water consumption by equipment innovation, technology optimisation and enhancement in management practices, etc. Moreover, regular clean production audits are conducted to monitor and identify the processes capable of reducing water consumption; this prevents the occurrence of unnecessary water consumption.



節約物資措施 Measures of resource conservation

集團對可回收利用的固體廢棄物進行分類收集，並盡可能在公司內部利用，例如：對木卡板和紙箱會在公司內部循環再用；在生產過程中的廢棄塑膠會用於生產塑膠卡板，以作為廠房循環利用卡板，並損壞後重用廢棄塑膠繼續生產周轉卡板。

The Group collects and categorises the recyclable solid wastes, which will be used internally as much as possible, for example: wooden pallets and carton boxes are reused internally; scrap plastics from the production processes are recycled for production of plastic pallets, which are used within the factory and will be recycled for production of new pallets after damaged.

辦公室紙張的有效使用 Effective use of office papers

集團的一般用紙原則是優先使用環保紙、列印時雙面使用，及在可行情況下以電子文件管理系統代替紙質文件，務求盡量減少使用紙張。

The Group's general principle on paper utilisation is the preference in using environmental-friendly paper, printing on both sides and whenever possible the deployment of electronic document management system to reduce the use of paper.

集團研發內部文件管理系統，文件通過系統進行發放與簽收，鼓勵員工使用電子檔案，顯著減少紙質文件的發放。此外，集團運用SAP-ERP系統和內部電子郵件交流等措施減少使用紙張。

The Group developed an internal document management system, through which documents are distributed, received and acknowledged. This encourages employees to use electronic files and hence considerably reduce the release of paper document. In addition, the Group adopts the SAP-ERP system and measures such as internal e-mail communication to reduce the use of papers.

主要資源耗用一覽表 Listing of key resource consumption

本報告所覆蓋的營運區域於2022年所消耗之各種主要資源概列如下：
The following table set forth the main resources consumed in 2022 by the operating regions covered by this Report:

資源 Resources	全年耗用量 Annual Consumption
電力 Electricity (千瓦時) (Kwh)	567,659,940
天然氣 Natural gas (立方米) (cubic metre)	10,754,189
水 Water (立方米) (cubic metre)	1,467,290
柴油 Diesel oil (公升) (litre)	109,475
汽油 Gasoline (公升) (litre)	43,225
乙炔 Acetylene (公斤) (kilogram)	200,538
蒸氣 Steam (立方米) (cubic metre)	63,270
包裝物料 (紙材) Packaging material (paper) (噸) (tonne)	10,340
包裝物料 (膠材) Packaging material (plastic) (噸) (tonne)	1,321
包裝物料 (木質) Packaging material (wood) (噸) (tonne)	19,351
包裝物料 (金屬) Packaging material (metal) (噸) (tonne)	241

另外，綜合各個的鉛酸蓄電池廠區，下表簡列它們在報告期間所耗用的主要資源，及每噸產品的耗用密度：

On the other hand, consolidated from all lead-acid battery factory regions, the following table set forth the consumption and associated intensity per tonne of production during the reporting period :

鉛酸蓄電池業務 (資源) Lead-acid Battery business (Resources)		全年耗用量 Annual Consumption	耗用密度 ⁵ (每噸生產單位) Consumption Intensity ⁵ (per tonne of production unit)
電力 Electricity	(千瓦時) (kwh)	491,163,531	778.16
天然氣 Natural gas	(立方米) (cubic metre)	8,275,361	13.11
水 Water	(立方米) (cubic metre)	1,417,845	2.25
柴油 Diesel oil	(公升) (litre)	107,815	0.17
汽油 Gasoline	(公升) (litre)	43,225	0.07
乙炔 Acetylene	(公斤) (kilogram)	200,538	0.32
蒸氣 Steam	(立方米) (cubic metre)	63,270	0.10

5.耗用密度的計算利用鉛酸蓄電池製造業務的生產量作基數。

5.The base for calculation of consumption intensity is the total production units from the business for manufacturing of lead-acid batteries.

包裝材料的有效使用

Effective use of packaging materials

在包裝過程中，集團優先使用可分解和可循環使用的包裝物料（如木卡板、紙箱、鐵箱等），減少塑膠包裝材料的使用。如須使用塑膠包裝材料，也盡量採用較輕或較環保的物料。在鉛回收廠區，一般只用塑膠材料打包及捆紮產品，並不需要其他材質的物料。

In the packing process, the Group prioritise the use of degradable and recyclable packaging materials (such as wooden pallets, cartons, iron boxes, etc.) to reduce the use of plastic packaging materials. Whenever plastic packaging is deemed necessary, materials of less weight or more environmental-friendly should be adopted as far as possible. In the lead-recycling factory, products are generally packaged and bundled with plastic materials only, and there is no need for other types of materials.

於報告期間，下表綜合在本報告範圍所覆蓋各廠區的主要包裝物料耗用量，及每噸鉛酸蓄電池產品的耗用密度：

During the reporting period, the following table consolidated the main packaging materials consumed in the operating regions covered by this Report, and the associated consumption intensities per tonne of lead-acid battery production:

鉛酸蓄電池業務 (包裝材料的種類) Lead-acid Battery business (Types of Packaging Materials)	全年耗用重量(噸) Annual consumption weight (tonne)	每噸產品的耗用密度 ⁶ (公斤 / 噸) Consumption Intensity ⁶ per tonne of production (kilogram / tonne)
紙材 Paper	10046.69	15.92
膠材 Plastic	1203.59	1.91
木材 Wood	12805.49	20.29
金屬 Metal	240.75	0.38

6.耗用密度的計算利用鉛酸蓄電池製造業務的生產量作基數。

6.The base for calculation of consumption intensity is the total production units from the business for manufacturing of lead-acid batteries.

氣候轉變的預備及應對政策

Preparedness and response plans for Climate Change

集團明瞭溫室氣體是導致氣候變化的主因，在合適的情況下制定預算，用於改進設施或技術以減少溫室氣體或污染排放；並且致力增加使用潔淨能源（如：天然氣）及可再生能源（如：太陽能）的設施，減少溫室氣體的排放。

The Group is convinced greenhouse gases being the main cause of climate change, and prepares budgets where appropriate to improve facilities or technologies to reduce greenhouse gas or pollution emissions. Also, increase in use of clean energy (e.g. natural gas) and renewable energy (e.g. solar energy) is highly encouraged for reducing greenhouse gas emissions.



風險評估

Risk assessment

氣候變化引致的極端天氣及相關的災害，集團定期評估這些對廠房、其基礎設施及生產流程的下列風險：

In response to extreme weather and related disasters caused by climate change, the Group regularly assesses the following risks to the plant, its infrastructure and production processes:

- 廠房及其基礎設施是否位於受氣候變化導致海平面上升威脅的地區（如低海拔沿海地區）；
Whether the plant and its infrastructure is located in area threatened by sea-level rise due to climate change (e.g. low-altitude coastal areas);
- 因應氣候變化所導致的潛在熱浪，對生產過程的影響（如：空調及自動機器的運作）；
Whether any impact on production processes as a result of potential heat waves caused by climate change (such as: air conditioning and automatic machine operation) ;
- 廠區是否處於缺水乾旱地區，威脅相關生產過程（如：水冷降溫設備）；
Whether the plant is located in water-scarce and arid area, and related production process (such as: water cooling equipment) are threatened ;
- 氣候變化是否影響個別物料供應鏈的中斷，影響原材料採購（如價格和數量）；
Whether climate change may interrupt individual material supply chain which affects procurement of raw materials (e.g. prices and quantities);
- 氣候變化所造成的資源緊張，是否須制定改變材料組合的計劃。
Whether resource constraints caused by climate change require plans to change the composition of materials.

災害管理預案

Preparedness plan for disaster management

對於已識別的極端天氣可能引起的相關緊急情況(如：水浸)，集團建立災害風險管理策略和措施的相關文件，管控生產和倉庫設施附近的水浸風險，制定應急預案，防範因極端天氣造成的破壞，包括安排下列設施及措施：

For those identified emergencies (e.g. water immersion) that may be caused by extreme weather, the Group has established relevant documentation for disaster risk management strategies and measures which control the risk of flooding in the vicinity of production and warehouse facilities, and develop contingency plans to prevent damage caused by extreme weather. They include the following facilities and measures:

- ▶ 安裝抵禦更高洪水水位的防洪閘板；
Installation of flood gates to withstand higher flood levels;
- ▶ 強化廠房結構，使其更能抵禦超強颱風；
Strengthen the plant structure for enhancing its strength against super typhoons;
- ▶ 於地區較容易受颱風吹襲的營運點，窗戶逐步換上超強力擋風玻璃；
In the region more vulnerable to attacks by typhoons, windows are gradually replaced with ultra-strong glass;
- ▶ 於超強颱風發出前，鞏固(如：使用繩索)室外的設備或機械；
Prior to super typhoons hoisted, outdoor equipment or machinery are secured (e.g. using ropes);
- ▶ 對於廠區接近天然山坡或人造斜坡，作好防護措施(例如：建設泥石防護壩)，以降低山泥傾瀉的破壞。
Protective measures are taken against the plant in close proximity to natural slopes or man-made slopes (for example: construction of mud and stone protection dam) to reduce the damage caused by landslides.

其他應對措施

Other responsive measures

除了制定預防措施，集團也制定氣候災害發生時的應對策略，包括購買保險，轉移因天災而導致的可能損失；及制定業務持續計劃，當遇到極端天氣導致營運中斷，執行預定計劃以恢復生產及持續營運。

In addition to developing preventive measures, the Group also develops strategies to respond to climate disasters, including the purchase of insurance to divert possible losses caused by natural disasters, and the development of business continuity plans for implementation of scheduled plans to resume production and continue operations in the event of an extreme weather disruption.

另外，為了確保員工掌握相關防範及應對知識，集團提供防災知識培訓及應急措施培訓：如在颱風前，確保所有窗戶被關閉；並定期檢查窗戶，應對極端天氣。

In addition, in order to ensure that employees are knowledgeable about prevention and response measures, the Group provides trainings on disaster preparedness knowledge and emergency response measures: for example, to ensure that all windows are closed prior to a typhoon, and to regularly inspect windows in preparation for extreme weather.

社會

Social

僱傭

Employment

集團除了遵守業務當地的僱傭條例要求外，亦制定了一系列的僱傭政策，保障僱員獲得公平合理的待遇。

In addition to compliance with employment regulations of the countries where the Group's business is in place, the Group has also developed a series of employment policies to ensure employees entitled to fair and reasonable benefits.

在報告期內，集團沒有發現或收到有關於歧視或招聘的重大違規事件及投訴個案。
During the reporting period, the Group did not identify any significant legal non-compliance or complaint pertaining to discrimination or recruitment.

招聘及晉升

Recruitment and Promotion

集團確保招聘過程符合國家法例規定，避免出現歧視。集團清晰列明招聘原則：公開招聘、公平競爭、全面考核、擇優取錄。對每位應聘者都平等對待，規定招聘時不得因種族、民族、社會等級、國籍、宗教、殘疾、性別、性別取向、婚姻狀況、年齡、工會會員資格或政黨等原因出現歧視行為，禁止任何形式的歧視女性，特別是懷孕女性。

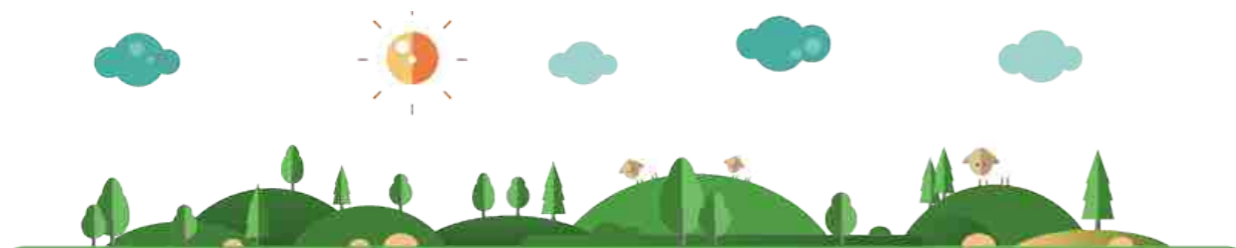
The Group ensures the recruitment process in compliance with the country's applicable legislations pertaining to discrimination. The Group specifies clearly the recruitment principles: open recruitment, fair competition, comprehensive evaluation and recruitment of the outstanding candidates. Each candidate is given the equal opportunities during recruitment and discrimination is prohibited against race, ethnicity, social class, nationality, religion, disability, gender, sexual orientation, marital status, age, trade union / party membership, as well as prohibiting all forms of discrimination against female, particularly to pregnant women.

集團制定《招聘管理規定》，旨在建立公正和公平的人事招聘和錄用標準，準確地選拔和合理地使用人才。集團現有的員工來自多個省份，僱員的多元化印證招聘決定僅基於崗位元需要與應聘人員的技能要求。

The Group formulates the "Recruitment Management Rules" to define fair and equitable recruitment and hiring standards for selection of the right candidates and reasonable assignment of talent. At present employees of the Group come from various provinces and this diversity of the employees indicates clearly that recruitment decision is purely based on the fulfilment of job requirements by the skills of the candidate.

此外，集團的晉升制度也確保人員的晉升政策公開平等。當有崗位空缺時，各部門負責人提拔具有相應資格能力的人員，人事部門先進行資格審查，對員工的業績、執行能力、出勤情況、貢獻程度進行評估，然後經過測評擇優錄用。集團不會考慮其他跟工作無關的因素，如種族、性別、婚姻狀況等。人事部只根據業績與意願等進行考核，確保有效配對人員與崗位。

In addition, the Group's promotion mechanism ensures that promotion of employees is transparent and fair. When there is job vacancy, candidates with appropriate qualifications and competence are nominated by departmental head. Human resources department will firstly conduct qualification review which covers evaluation of performance, competence, attendance history, and the contribution of the candidate. Right candidate is selected after the aforesaid evaluation and will be promoted after further assessment. The Group will not consider factors that are not job-related such as race, gender, marital status, etc. Human Resources Department only pursues the assessment on historical performance and willingness, etc. for effective alignment between the employee and the position.



薪酬與福利

Wages and Benefits

集團制定《工資及福利管理規定》確定員工的薪酬及福利計算方法，對加班人員按法定要求給予補償，及規定其他福利及各項員工權益，包括：法定休假日、有薪年假、有薪產假、為員工繳納社會保險等。另外，員工手冊對事假、年休假、特批假、病假、婚假、喪假、產假、工傷假等都有詳細規定；對特殊貢獻或者重大貢獻的人員更給予特別獎勵。

對於工作達到法定退休年齡的人員，經內部綜合評估後，會根據國家相關法例進行退休手續辦理，協助社會保險的轉移，讓退休人員依法享受相關社保福利。

集團的《員工手冊》亦規定在合同履行過程中的勞資糾紛，員工可以透過申訴程式向上級或者責任部門提出申訴，一旦申訴失敗也可向行政總經理進一步申訴。

除了一般的員工待遇與福利，廠區更成立愛心基金組織，對出現重疾及重大事故情況的員工，向他們發放法規要求以外的貨幣性福利，如本年度在安徽理士，全年向11名員工合共發放35,660元愛心基金。

僱傭成就及獎項

Achievement and awards related to employment

此外，集團各鉛酸蓄電池製造廠區都已成功考獲第三方機構頒發的社會責任管理體系如SA8000等認證，認證範圍包含符合僱傭法規及滿足其他員工待遇的要求，這充分顯示廠方在僱傭關係上付出的努力。

SA 8000或同等的社會責任管理體系認證

SA 8000 or equivalent Social Accountability Management System Certification

The Group formulates "Wages and Benefits Rules" to define the calculation approach for wages and benefits. It specifies overtime compensation to employees according to legal requirements as well as other benefits and rights entitled to employees, which include: statutory holidays, paid annual leave, paid maternity leave and payment of social insurance for employees, etc. Moreover, the Employee's Handbook specifies in details for casual leave, annual leave, special leave, sick leave, marriage leave, funeral leave, maternity leave, work injury leave, etc. Special rewards are even given to employees who have made special or significant contributions.

For employees who reach the statutory retirement age, the Group will abide by the relevant legislations to arrange the retirement process after internal comprehensive evaluation, and will support the transfer of the social insurance to enable the retired employees entitle to the relevant social insurance benefits.

The Employee Handbook of the Group stipulates that employees can file complaint through appeal procedure to supervisors or responsible departments about the disputes on the employment contract. Whenever the feedback is not satisfactory, the disputes could be escalated to the Administrative General Manager for further handling.

Apart from the general remuneration and benefits for employees, the Group's factories also established caring fund for provision of monetary benefits beyond legal requirements to those employees who suffered from serious illnesses or severe accidents. With referencing of the example at the factory of Anhui Leoch Power Supply, 11 employees were sponsored from the caring fund a total of RMB 35,660 during the reporting year.

Moreover, lead-acid battery factories of the Group have successfully achieved the third-party certification on social accountability management system such as SA8000, of which the certification scope covered the compliance with employment regulations and fulfilment of the other benefits to employees. This fully demonstrated the efforts of those factories on building the employment relationship.



員工人數及流失率

Number and turnover rate of employees

截至2022年12月31日，本報告所覆蓋的營運區域共有9,281名員工，當中9,074人是全職員工；2022年度各區綜合的每月平均僱員流失率是5.84%，比去年度整體輕微高了約1.8%。

As of 31 December 2022, there was a total of 9,281 employees amongst the operating regions covered by this Report, in which 9,074 employees were under full-time employment. From consolidation of all operating regions in 2022, the monthly average employee turnover rate was 5.84%, which was around 1.8% slightly higher than the overall rate of the previous year.

性別 Gender	員工人數 Number of employees	每月平均僱員流失率(%) Monthly average employee turnover rate (%)
男性 Male	5,762	5.79
女性 Female	3,519	5.90
工作類別 Employment type		
全職 Full-time	9,074	/
兼職 Part-time	207	/
年齡 Age		
18 - 30	1,574	10.45
31 - 45	4,727	4.68
46 - 60	2,942	5.00
>60	38	5.82
地區 Region		
安徽 Anhui	6,078	4.38
江蘇 Jiangsu	1,924	6.20
肇慶 Zhaoqing	1,279	11.32
總數 Total	9,281	5.84
總平均率 Overall average		

健康與安全

Health and Safety

集團建立職業健康與安全管理制度，制定有效措施防範員工患有職業病及工業傷亡的發生，並照顧員工的身心健康。

The Group establishes Occupational health and safety management system which formulates effective measures to prevent the occurrence of occupational disease and casualty, as well as to look after the physical and mental wellness of the employees.

工作場所的管理

Workplace Management

集團按照認可標準如ISO 45001，建立職業健康與安全管理體系，識別各操作工序危險源並進行評估，制定相應的控制方案。此管理體系確保工作環境符合法例及相關健康與安全的要求，對不符合法例及相關要求由責任部門督促在限期內整改。並制定應急預案對應火災、職業危害事故、災難性事件及化學品相關事故，例如：鹽酸、丙酮、氧氣、氫氧化鈉等現場處理及棄置方案。

The Group adheres to the recognized standards of occupational health and safety management system such as ISO 45001, which identify and assess the sources of hazards in various operation processes and formulate the corresponding controls. This management system ensures the working environment complies with the legislations on the health and safety requirements, and the designated departments rectify any non-compliance in the specified time frame. Also emergency plan is formulated for fire, occupational hazards, disasters as well as incidents related to chemicals, such as the plan for site management and disposal of hydrochloric acid, acetone, oxygen, sodium hydroxide, etc.

ISO 14001或同等的環境管理體系認證

ISO 14001 or equivalent Environmental Management System Certification



安徽理士
Anhui Leoch
Power Supply



肇慶
Zhaoqing



安徽鋰電
Anhui Leoch
New Energy



安徽(力普拉斯)
Anhui Uplus



江蘇
Jiangsu



鉛回收
Lead Recycling

設備管理

Facility management

集團致力提供安全的工作場所，包括引入合適的生產設備；如所有工廠都採用輥剪設備，取代手工分刷板，既提升了員工作業安全效果，也降低了職業危害暴露。

The Group is striving to provision of a safe workplace, including the installation of the appropriate production equipment. For example, all factories adopt roller shearing devices instead of manual counterparts, this enhances safety effectiveness of employees' operations and concurrently mitigates the exposure to occupational hazards.



生產廠房安裝了換新風系統，並安排所有可能產生廢氣與煙塵的工序都在風罩下操作。這些崗位人員都需佩戴防塵口罩，以減少員工吸入的危害；同時產生廢氣的設備都安裝了集氣罩並連接環保設備如：鉛塵與鉛煙淨化器、酸霧中和塔等，防止廢氣排放到大氣對公眾的危害。

化學品倉庫設置了通風、防爆燈、可燃氣體報警儀、消防等設施。並在化學品接觸區域張貼安全標籤、《物料安全數據表 (MSDS)》及現場處理及棄置方案。

健康及安全監控

Monitoring of health and safety

集團定期監控工作環境的安全情況，包括定期對生產廠房內有害物質濃度（如鉛、酸）進行監測，並張貼監測結果。每年為員工進行職業健康身體檢查，識別職業病的發生，以確認工作場所安全和管理完善。本年度安排參與體檢的員工達8,029人次，當中沒有確診職業病的個案；參與員工類別包括高溫、高噪音、燒焊工、加酸工、接觸酸霧、鉛煙、鉛塵、粉塵及危害化學品等崗位。

集團亦會監測廠房各工序的噪音水準，在噪音可能超標的崗位，要求操作人員及進入的訪客全部佩戴耳塞。

在報告期內，集團沒有發現重大違反業務當地職業健康及安全相關的法例。過去3年包括本報告期內，也沒有發現因工作關係而死亡的事務；另在本報告期內因工傷而損失的工作日數則有1,516天。

Production plants are installed with fresh air supply system, also all processes which may potentially generate exhaust gases and dusts are operating under exhaust ventilation facilities. Employees in these positions are required to wear masks for minimising the hazards from inhalation. In addition, equipment that generates exhaust gases is installed with fume hoods which are connected to environmental protection facilities such as lead dust and lead fume purifier, acid fume neutralizer, etc. This approach prevents the emission of exhaust gases to the external atmosphere which may cause hazards to the public.

Chemical warehouses are equipped with ventilation system, explosion-proof lighting, flammable gas alarm, fire equipment, etc. Safety label, Material Safety Data Sheet (MSDS), site management and disposal guidelines are also posted in areas where chemicals are in place.

The Group regularly monitors the safety conditions of the workplace environment; this includes the regular monitoring on the concentration of hazardous substances (such as lead, acid) in the production plants, and posting of the monitoring results. Annual occupational health examination is arranged to employees for detecting occurrence of any occupational disease and confirmation of comprehensive workplace safety management. During the reporting year, the headcounts of health examination arranged to employees reached 8,029, from which no case of occupational disease was diagnosed. The types of participated employees included the job positions exposed to high temperature, high noise level, welding, acid addition, environment with acidic mist, lead fumes, lead powder, dust and hazardous chemicals.

Also, the Group monitors the noise level in various processes within the production plants; for positions where noise level may exceed the standard, workers and visitors are required to wear earplugs.

During the reporting period, the Group did not identify any significant legal non-compliance against the relevant occupational health and safety regulations in the regions of operation. In each of the past 3 years including the reporting period, there was no work-related fatal incident, while the number of working days lost from work-related injuries was 1,516 days during the reporting period.

員工安全設備與培訓

Provision of protective equipment and training to employees

集團為員工配發崗位所需的防護用品，例如各種防鉛塵/煙的口罩、防砸鞋、護目鏡等，並要求所有在廠房操作與進入廠房的人員都必需佩戴合適的個人防護用品。

集團制定《勞動防護用品管理規定》規範各工序必須佩帶的勞保用品的標準，勞保用品使用區域，及在各崗位的勞保防護用品的配置方法。

The Group provides employees with protective equipment required for the positions, for example, various masks against lead dust/smoke, anti-smashing shoes, goggles, etc. All workers and visitors within the production plants are required to wear the appropriate personal protective equipment.

The Group formulates "Regulations on the Management of Protective Equipment at Workplace" to standardise the specifications of the required protective equipment in various processes, the areas where protective equipment to be used, and the way by which the protective equipment is deployed.

集團更為員工提供職業健康及安全培訓，使員工理解所處環境的潛在危害及相關的規避方法。於2022年，本報告所覆蓋的營運區域共有16,353人次參與安全培訓，合共77,985個培訓小時；本年度的培訓範圍除了包括一般的安全教育及職業健康防護外，還覆蓋下列的範疇：

風險管理：風險辨識與職業防護、勞工保護工具的佩戴等；

應急培訓：消防培訓、硫酸洩漏事故的應急演練、宿舍疏散演練等；

特殊安全操作：有限空間作業安全演練、及應對新冠病毒的防護及管控措施等。

此外，本年度江蘇廠區更與醫院合作，在廠內舉辦“急救知識”培訓(見下圖)，加強員工在遇到緊急情況時的應對技巧。

In addition, the Jiangsu factory cooperated with hospital in the reporting year for hosting "First Aid Knowledge" training at the factory's premises (as illustrated in the diagram below), with the aim of enhancing response skills of employees in emergency situations.

The Group provides employees with occupational health and safety training, which enables them aware of the potential hazards in their workplace and the relevant risk mitigation measures. In 2022, the counts of employee safety trainings amongst the operating regions covered by this Report were 16,353 and the total duration of employee training amounted to 77,985 hours. During the reporting year, apart from the general safety education and occupational health protection, the scope of trainings also covered the following aspects:

Risk management : risk identification and occupational protection, wearing of labour protection devices, etc.;

Emergency training : fire training, emergency drill in event of sulphuric acid spill, dormitory evacuation drill, etc.;

Special operational safety : Safety drill for confined space operation, and protective and management measures against novel coronavirus pandemic.



工作與生活的平衡

Work and Life Balance

集團建立考勤及社會責任制度以規範員工權益與作息時間，藉此控制加班安排，規定不得以任何形式強迫員工加班工作，而員工加班必須本著自願申請的原則，使員工有時間兼顧家庭生活，達至生活與工作的平衡。

此外，集團提供康樂活動場所給員工，並不定期組織員工活動，協助員工舒緩工作壓力，保持身心健康。

Moreover, the Group provides employees with recreational areas and organises activities for employees to help them alleviate work pressure and maintain their physical and mental wellness.

The Group establishes attendance and social accountability systems to standardise the rights of the employees and their rest schedules. These control the overtime work arrangement and prohibit the forced overtime work in any form. Overtime work must be taken voluntarily by employees and this enables them sufficient time for family activities for achieving the balance between their work and private lives.



發展及培訓

Development and Training

集團針對不同部門的需要而制定年度培訓計劃，新員工入職時會按照其岗位要求提供特定培訓，並要求員工通過培訓考核，確保新員工能獨立勝任崗位。

The Group formulates annual training programmes according to the specific needs of various departments. New employees are required to attend the specific training required for the positions and to go through the training assessment. This ensures the new employee has the competence to complete task independently.



培訓種類

Types of training

集團的全體人員都要接受【公司基礎培訓（入職培訓）】和【崗前基礎培訓（上崗培訓）】，並根據需求參加【在職提高培訓（在職培訓）】。

【公司基礎培訓（入職培訓）】內容的深度，可視崗位而有不同的制定，在入職培訓計劃表中說明。一般的公司基礎培訓（入職培訓）內容包括企業概況（如：組織架構、產品及技術概況），體系基礎（如：ISO9001、ISO14001、ISO45001、SA8000、IATF16949）及行為準則（如：基本規章制度、行為規範）。

【崗前基礎培訓（上崗培訓）】內容通常包括：相關規章制度、操作指南、工作流程、操作技能、職業防護與安全生產、設備保養等崗位有關的知識和技能。各部門都根據崗位任職要求對新員工進行崗前基礎培訓。

The Group requests all employees to attend Corporate Fundamental Training (Induction Training) and Pre-assignment Basic Training (Position's Skill Training), and where necessary the On-the-job Enhancement Training (On-the-job Training).

Corporate Fundamental Training (Induction Training): the depth of details may vary from positions to positions and this will be defined in the induction training plan. The Corporate Fundamental Training (Induction Training) generally includes company overview (example: organisational structure, products and technologies), management system fundamentals (example: ISO9001, ISO14001, ISO45001, SA8000, IATF16949), and code of conduct (example: company's rules and regulations, code of practices).

Pre-assignment Basic Training (Position's Skill Training): it generally includes knowledge and skills that are relevant to the positions such as the applicable rules and regulations, operation guidelines, workflows, operating skills, occupational safety, safety production and equipment maintenance, etc. Each department is required to deliver Pre-assignment Basic Training to new employees in accordance with the job requirements.

【在職提高培訓（在職培訓）】的安排是為更新、擴展員工知識面、提升任職能力與管理水準、增進工作效率或準備職務晉升。

On-the-job Enhancement Training (On-the-job training): it aims to update and extend the knowledge of the employee, enhance the competence and management skills, improve the work efficiency or prepare for the employee's promotion.

培訓計劃與執行

Training plan and execution

培訓的執行模式按照各區需求及／或年度培訓計劃而制定，可以每日早會部門培訓、特定培訓班、現場指導、或其他混合模式進行。

The mode of training execution would be varied and defined in response to the regional needs and /or the annual training plan. This could be the daily departmental morning meeting, the specified training class, onsite coaching, or other modes of combination.

團根據員工意願、能力潛質和業務發展需要，採用晉升與調動等方法，讓公司與員工個人共同發展。集團制定《員工調整管理辦法》確定員工的晉升和崗位調整準則，並促進員工的職業發展。此外，集團制定內部職稱評定方案給研發、技術、設備、品質、安全、環保、售服等相關崗位，識別員工的發展與培訓需求。

According to the employee's willingness and potential as well as the business development needs, the Group makes use of promotion and job transfer to enable synergy in development of both the Group and employees. The Group formulates "Regulations on Mobilisation of Employees" to define the criteria for promotion and job transfer and this facilitates the career development of employees. Moreover, the Group formulates internal competence evaluation scheme to employees in functions of R&D, technology, equipment, quality, safety, environmental protection, after-sale service, etc. in order to identify the development and training needs of these employees.

每年年底，集團都會進行員工培訓需求調查，範圍覆蓋晉升與調動的需要，並確定不同崗位員工的培訓需求，以制定和實施下個年度的培訓計劃。

At the end of each year, the Group conducts survey in the training needs of the employees. It covers the needs for promotion and job transfer, also ascertains the training needs of different positions so as to formulate the training plan in the following year.



培訓績效

Training performance

在本報告所涵蓋的營運區域，於2022年綜合各區受訓僱員的每月平均比例62.87%；每名員工之每月平均培訓時數是3.85小時。

From consolidation of data in 2022 of the operating regions covered by this Report, the monthly average proportion of employees trained was 62.87%, and the monthly average number of training hours per employee was 3.85 hours.



全年培訓總人次	55,616	全年培訓總時數	353,419
Total number of training participants in the reporting year	55,616	Total number of training hours in the reporting year	353,419

性別 Gender	受訓僱員的總人次 Total number of employees trained	受訓僱員的每月平均比例(%) Monthly average proportion of employees trained (%)
男性 Male	33,934	61.98
女性 Female	21,682	64.09
僱員級別 Employee category		
高級管理層 Senior management	1,475	79.34
中級管理層 Middle management	3,273	76.44
初級員工 Junior staff	50,868	62.89
總數 Total	55,616	62.87
總平均率 Overall average		

性別 Gender	僱員培訓總時數(小時) Total number of employee training hours (hours)	每名僱員的每月平均培訓時數 Monthly average number of training hours per employee
男性 Male	222,114	3.84
女性 Female	131,306	3.87
僱員級別 Employee category		
高級管理層 Senior management	10,059	4.11
中級管理層 Middle management	19,152	4.06
初級員工 Junior staff	324,208	3.86
總數 Total	353,419	3.85
總平均率 Overall average		

勞工準則

Labour Standards

集團規定禁止使用童工（未滿16歲的未成年人），並通過驗證身份證等方法防止誤聘童工。集團嚴禁與任何故意使用童工的供應商合作。

The Group prohibits using child labour (young people below 16 years of age). Measures are in place to prevent the employment of child labour by checking their identity cards during recruitment. The Group forbids the engagement with any supplier who intentionally uses child labour.

童工的防控措施

Measures for child labour prevention

人事部定期抽查員工的實際年齡，鼓勵員工舉報使用虛假身份證入職本公司的事件，盡早發現因任何原因進入公司的童工。集團一旦發現童工，將立即停止其工作，指定專人負責遣送該童工到醫院接受身體檢查。若該童工確認身體健康，經勞動部門同意後，將安排專人送返其父母住處。集團將調查誤聘童工的原因，採取有效的措施杜絕類似事件。

Human Resources Department regularly performs sample check on the actual age of employees. Employees are encouraged to report any incident of using fake identity card during recruitment so as to discover any unknown child labour as early as possible. In event of child labour discovered, the Group will terminate his/her duties and send him/her to the hospital for medical examination. Given the good health of child labour confirmed from hospital and consensus granted from the local labour authority, the Group will designate person to send the child labour back to the place where the child's parents reside. Also the Group will investigate the reason behind the unintentional employment of child labour and take effective measures to prevent its recurrence.

強迫勞工的防控措施

Measures for forced labour prevention

集團亦制定控制程式禁止任何強迫性勞動，確保員工在自願的基礎上工作，並規定了員工申訴的途徑。強迫性勞動包括：在僱用期間收取員工抵押金或抵押物、扣押身份證件、扣押工資、違反員工意願的加班、抵債勞動、以暴力與威脅或非法限制人身自由的做法等。

The Group formulates control procedure to prohibit all forms of forced labour. This ensures the employees to work on voluntary basis and also provides the approach for employees to file the related complaint. Forced labour includes: requesting of deposits or collateral during employment, detention of personal identification document with the employer, withholding of wages, involuntary overtime work, bonded labour, and practices to force working by using violence, threat or other illegal restriction of personal liberty.



申訴及調查制度

Appeals and investigation system



集團建立員工意見收集箱或透過工會代表等申訴管道，給員工有機會反映其在工作上的意見及感受。如發現有強迫性勞動時，集團向員工進行調查及收集意見後，與管理層進行討論並共同尋求解決方法。

The Group collects opinions from employees through establishment of suggestion box and appealing channels via the trade union representatives, etc. These provide employees the opportunities to provide feedback about the jobs. In event of forced labour discovered, the Group will conduct investigation and collect opinion from the employee, then discuss with the management to seek for the resolution.

在報告期間，集團未有發現聘用童工或違反強制性勞動相關法例的個案。

During the reporting period, the Group did not identify any employment of child labour or any legal non-compliance pertaining to forced labour.

供應鏈管理

Supply Chain Management

供應商評估

Supplier evaluation

集團制定《供應商評審控制程序》規定供應商的挑選準則及供應商須遵守的要求。

對現正合作的供應商，集團定期對他們的產品品質狀況、交貨及時狀況、配合度、技術創新等方面進行績效評審；整體來說，本年度的關鍵材料供應商全部都經過評估；鉛酸蓄電池業務的關鍵材料供應商包括鉛、塑膠粒子、硫酸、化工產品及包裝材料等，鋰電池業務的關鍵材料供應商則包括主機殼、電芯及模組等供應商；上述超過150家現有供應商通過評估。

在篩選新供應商時，對一般供應商進行品質、成本等商業要求的評估；另外，對關鍵材料如電解鉛等供應商，還須評估其環保與社會責任績效，且供應商必須簽訂《環境保護協議書》與《社會責任協議書》，承諾對相關要求的符合。

The Group formulates "Supplier Evaluation Procedure" to specify criteria for supplier selection and the requirements that the suppliers need to abide by.

For existing suppliers, the Group regularly conducts performance evaluation on their aspects of product quality, on-time delivery, level of coordination and technological innovation, etc. Overall speaking, all key suppliers of essential materials have been evaluated in the reporting year. For the business of lead-acid battery, the key suppliers included those providing lead, plastics, sulphuric acid, chemical products, and packaging materials, etc. While for the business of lithium-ion battery, the key suppliers included those providing main case, electronic cores and modules. More than 150 existing suppliers belonged to the aforesaid scope and have passed the assessment.

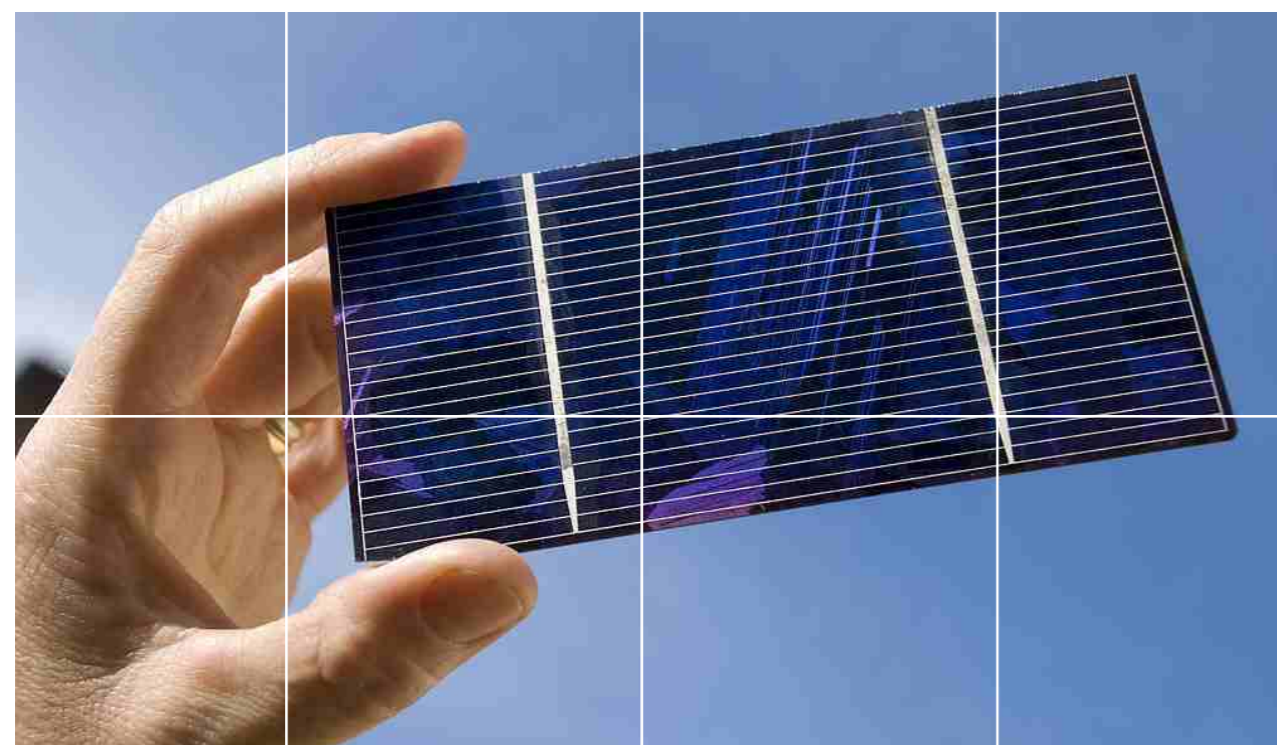
During the selection of new supplier, supplier is generally evaluated on the commercial requirements such as quality and cost. In addition, for suppliers of key materials such as electrolytic lead, their performance on environmental protection and social responsibility will also be reviewed. They are also required to sign the "Agreement for Environmental Protection" and "Agreement for Social Responsibility" for acknowledging commitment to the compliance with relevant requirements.

因應不同的供應商物料涉及不同風險等級，將供應商進行風險分類及評定等級。按照風險評定標準，在原則上將採用不同嚴格程度的評估，比如送檢測樣板的頻率、物料有害物質檢測報告所要求的內容可因應不同風險等級而有所差異；在必要時可要求供應商在整改後接受重新評估。

Different supplied materials are assigned with different risk ratings, suppliers are categorised based on risks and assigned with different assessment criteria. In accordance with the defined risk assessment standard, the depth of supplier evaluation will vary accordingly in principle; for example, frequency of sample submission for testing and the required report content of hazardous substances testing may vary according to different risk ratings. Whenever necessary, suppliers may be subjected to re-evaluation after implementation of corrective actions.

評估結果會具體地記錄（如以分數標示），及指示所需要的跟進行動，給予供應商適當期限執行整改措施；若滿期限供應商仍未能達到規定的評估要求，集團不予它們准入《綠色合格供應商名單》，及不允許向名單以外的供應商進行採購。成為合格供應商的企業，若在核准時認為有潛在風險，集團更會考慮在採購開發時與供應商簽訂“社會責任承諾書”及“職業健康安全責任書”。本年度被採用及通過上述評估的新供應商合共超過160家。

Evaluation results will be recorded in detail (for example illustrated by scores) and indicate the required follow-up actions requesting the supplier to take corrective actions within the appropriate timeframe. For those suppliers who still could not fulfill the specified evaluation requirements by the defined timeline, the Group will prohibit the entitlement of their names in "List of Green Qualified Suppliers", and forbid any procurement from suppliers who are out of the List. Being approved suppliers, when potential risk is identified during the evaluation, the Group may even consider to sign with them the "Social Responsibility Commitment" and "Occupational Health & Safety Responsibility Commitment" at the time of engaging procurement. In the reporting year, the Group has engaged more than 160 new suppliers which have passed the above-mentioned assessment.



供應鏈的環境及社會風險管控

Management of environmental and social risks in supply chain

對有污染環境風險的材料（如：化工類、電鍍類），集團要求供應商的材料符合環保法例如RoHS, REACH的要求，必須通過相關的環保檢測；檢測範圍主要覆蓋：鎘 (Cd)、鉛 (Pb)、汞 (Hg)、六價鉻 (Cr (VI))等重金屬，及多溴聯苯 (PBBs) 等有害物質的含量。

For materials which impose risks of environmental pollution (e.g. chemicals, electroplating types), the Group will request the supply of materials in compliance with environmental laws such as the requirements of RoHS, REACH. The supplied materials need to attain pass results in the related environmental testing and the scope of testing mainly covered the content of heavy metals such as Cadmium (Cd), Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr VI), as well as the content of hazardous substances like Polybrominated Biphenyls (PBBs).

本集團優先選擇不會對環境造成重大危害的供應商，評估他們對外部環境的排放、污染或其他負面的影響；同時考慮供應鏈中的業務合作伙伴的營運合規性，評估他們涉及的相關社會風險，如：員工勞動合規、安全合規等；因而優先考慮已獲取環境或社會責任相關認證（如ISO14001、SA8000）的供應商，本年度集團聘用這類認證供應商的數目超過35家。

The Group will prioritize the engagement with those suppliers without incurring significant hazards to the environment. They will be evaluated on their emission, pollution, or other adverse impacts to the environment. At the same time, business partners in the supply chain will also be evaluated on their operational compliance and the associated social risks, such as compliance in employment of labour, safety compliance. Consequently, priority was given to those suppliers who have already attained certification related to environmental or social responsibility (e.g. ISO14001, SA8000). In the reporting year, the Group has engaged more than 35 suppliers with such types of certification.

針對重要的採購物料，包括鉛、酸、隔板等，相關的供應商在核准前需進行社會責任審核；而且有審核條款規定：未能通過審核，無法成為合格供應商。在鉛回收營運中，採購原材料的過程是從個人採購廢舊電池，被審核的供應商一般屬於資產供應商，提供設備及建築工程服務等。

For important procured materials, including lead, acid, separation plate, etc., relevant suppliers are required to proceed social responsibility assessment before approval. Moreover, the audit requirements stipulated that supplier could not be eligible if not able to pass through the audit. In the lead-recycling operation, raw materials are procured from scrap batteries through personal means. The suppliers being evaluated are generally those asset providers, which provide equipment and construction engineering services, etc.

綠色採購

Green procurement

在符合營運要求的情況下，集團優先選擇符合環保特性的設備及物料；在選擇耗能設備時，會優先考慮取得節能認證或高效能源標籤的產品。在採購關鍵材料如隔板、鉛、合金、硫酸時，合格的有害物質檢測報告，譬如符合歐盟RoHS檢測要求，便是其中一項重要的採購準則。

Under the conditions complying with the operational requirements, the Group will prioritize the use of equipment and materials possessing environmentally friendly characteristics. Upon selection of energy consuming equipment, priority will be given to those attained with energy saving certification or product label of high energy efficiency. For procurement of essential materials such as separation plate, lead, alloy, and sulphuric acid, report of testing hazardous substance content with pass result, such as in compliance with EU's RoHS testing requirement, could be one of the important selection criteria during procurement.

此外，集團制訂了本地性採購政策，作為綠色採購的其中一項措施；在具備相同質素的狀況下，優先選用位於本地（中國內地）供應商所提供的產品及服務，以減少在採購運輸過程中的溫室氣體排放。

Furthermore, the Group has formulated the local procurement policy, as one of the measures in green procurement. When encountering suppliers with the same level of quality, preference will be using products and services from those suppliers situated in the local region (Mainland China), for mitigating emission of greenhouse gases during transportation along the procurement process.

供應商分佈

Supplier distribution

截至2022年12月31日，集團所聘用的供應商超過450家，絕大部分都位於中國，餘下供應來自歐洲地區，本地供應佔集團整體比例超過99%以上。

As of 31 December 2022, the Group has engaged exceeding 450 suppliers. Most of them were situated in China, while the remaining suppliers came from Europe. The proportion of local suppliers accounted for more than 99% of the total supply base of the Group.

產品責任

Product Responsibility

集團按照ISO9001及IATF16949標準實施品質管理體系，從來料到出貨的各環節均保證產品品質符合客戶要求，及產品性能均達到適用的國家和行業標準。電池成品須經過相關測試，滿足品質條件後才允許出貨。

The Group adheres to ISO9001 and IATF16949 standards in the implementation of quality management system, which assures the quality compliance with customer requirements during the stages from receipt of raw materials to product delivery. Also, it assures the fulfilment of product functionality to the applicable national and industry standards. All battery finished products are approved for delivery only after they passed all relevant testing and met the quality standards.

ISO 9001 或同等質量管理體系認證

ISO 9001 or equivalent Quality Management System Certification



肇慶
Zhaoqing



安徽(力普拉斯)
Anhui Uplus



安徽理士
Anhui Leoch
Power Supply



江蘇
Jiangsu



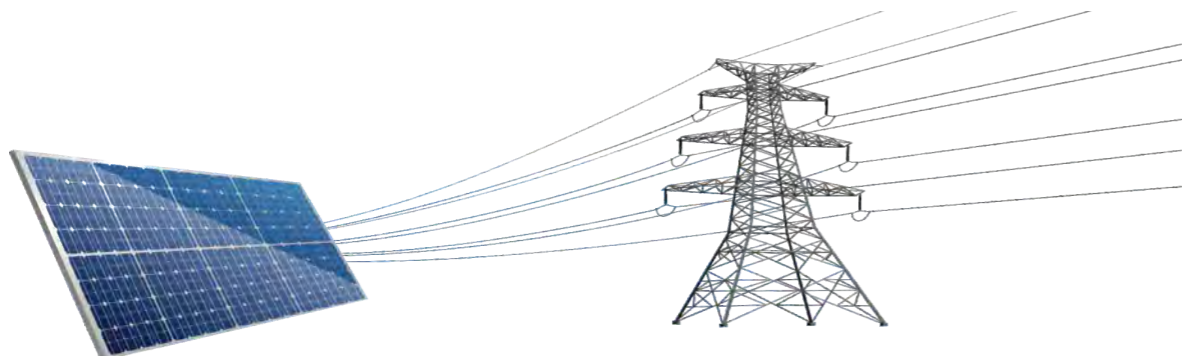
安徽鋰電
Anhui Leoch
New Energy



鉛回收
Lead Recycling

此外，集團亦按照ISO14001環境管理體系進行生產，確保鉛酸蓄電池內的鎘和砷含量符合鉛蓄電池行業規範的相關要求。同時，集團清楚識別產品所用物料（含零部件）的環境管理物質風險等級和供應商風險等級，確保有環保要求的產品（符合電池法令）所配套採購的物料都符合歐盟RoHS的規定要求。

In addition, the Group adheres to ISO 14001 environmental management system for manufacturing. It assures the amount of cadmium and arsenic in the lead-acid battery complies with relevant requirements in the industry standards of the lead-acid batteries. Moreover, for environmental management of all materials (including the components) in the products, the Group clearly identifies the risk ratings for both the restricted substances and the associated suppliers. This ensures the materials procured for the environmental products (in compliance with battery directives) fulfil the EU RoHS specified requirements.



產品之合規設計

Compliant Product Design

在產品設計階段會充分參考適用的國際、國家標準，進行FMEA分析，確保達到安全要求。

At the product design stage, applicable international or national standards are considered to the full extent. Together with FMEA analysis, it ensures the applicable safety requirements are fulfilled.

在新產品開發時，對產品可靠性進行測試，合格才能投入生產；生產過程中定期抽樣進行可靠性週期監測，以確保產品安全可靠。按照各相關國家對產品安全的要求，申請相關的安全認證（如：UL、CE、CQC），確保產品安全性符合相關國家要求。

For new product development, product reliability test is conducted and only pass result will trigger the mass production. During the production process, periodic sampling is conducted to monitor reliability for assuring safe and reliable products. According to the product safety requirements of the relevant countries, safety certification (for example, UL, CE, CQC) is applied to ensure the compliance of product safety to the relevant national requirements.

通過從設計及原材料選用、程式控制等方面嚴格管控有害物質，確保產品符合環保要求，如電池可接觸部分，ABS、絲印油墨、電池標籤、外置的連接線，必須符合RoHS要求。每年都委託協力廠商實驗室檢測產品的環保特性，務必符合電池法令的要求。

Through product design, selection of raw materials, process control, etc., hazardous substances are strictly controlled to ensure the products in compliance with the environmental requirements; for example, RoHS compliance at the battery's accessible parts, ABS, inks for silk screen printing, battery labels and external connection cords, etc. Third-party laboratory is appointed annually to test the environmental attributes of products for assuring the compliance with the battery's directives.

產品之公平宣傳

Fair Promotion of Products

集團制定《商業道德規範控制程序》堅持競爭的公平原則，承諾拒絕假冒、混淆、虛假宣傳、商業賄賂等不正當的商業競爭行為。

The Group formulates the "Business Ethics Control Procedure" to uphold the principle of fair competition, and to commits not to engage improper business competitive behaviours such as fake, confused or false promotion, and bribery.

集團確保在宣傳資料上公開的產品參數與提供給客戶的產品資料，都是基於產品的測試結果，而產品都經過國家相關認證，確保產品參數真實可靠。

The Group ensures both product parameters disclosed on the promotional materials and product information provided to the customers are based on the test results of the products. Also the products have achieved the relevant national certifications to ensure the product parameters are true and reliable.



售後服務

After-sales Services

集團會根據客戶要求制定與客戶配套的售後服務，比如對維修電池可提供上門服務；為客戶購買的產品提供保質期；對超出保質期的電池，集團會定期向客戶回收舊件。

集團建立專門的售後服務團隊對客戶提供技術支援，包括產品安裝、維護及更換。

質量檢定過程

Quality Assurance Process

集團制定完善的質檢過程，包括來料檢驗標準、制程檢驗規程，及成品出貨檢驗標準。相關的電池成品出貨檢驗標準旨在確保鉛酸蓄電池符合國家與行業標準或客戶的出貨要求。集團在廠內設有實驗室，通過集團內部的測試確保符合相關的出貨要求。

The Group develops after-sales services specific to the requirements of the customers; such as on-site servicing for malfunctioned battery; provision of warranty period to customers for the purchased products; and for batteries used beyond the warranty period, the Group would collect from customers the old batteries on a regular basis.

The Group established a dedicated after-sales service team for technical support which covers product installation, maintenance and replacement.

The Group formulates comprehensive quality assurance process which includes standards for incoming quality check on materials, in-process inspection and testing procedure, and pre-shipment inspection and testing specifications for finished products. Relevant pre-shipment inspection and testing specifications for finished products aim to ensure lead-acid batteries fulfil the national and industry standards or delivery requirements from the customers. The Group has set up laboratories within production plants to proceed internal testing for assuring the product compliance with the relevant delivery requirements.

產品及物料檢測

Product and material testing

集團通過從設計、原材料選用、程式控制等方面嚴格管控有害物質，確保產品符合環保要求，委託第三方實驗室檢測產品符合電池法令的環保特性，如檢測原材料滿足RoHS法令對鉛、汞、鎘、六價鉻、多溴聯苯、多溴聯苯醚的限量要求；並通過制程管控，達到成品電池符合電池法令中對鉛、汞、鎘等有害物質的要求。

集團對重要原材料進行環保符合性驗證，並要求供應商定期提供材料的有害物質檢測報告，以證明材料符合相關環保法例如RoHS的要求。對RoHS有害物質含量超標的物料，相關部門會拒收，進行標識並隔離。

此外，集團依照國家標準和客戶要求定期抽取產品送到第三方實驗室進行測試，檢測產品符合電池法令的環保要求，及產品性能達到適用的國家和行業標準。

The Group strictly controls the hazardous substances through design, selection of raw materials, process control, etc., which ensures the product compliance with the environmental requirements. Third-party laboratories are appointed to test the compliance of environmental attributes as defined in the battery's directive; for example to test raw materials against the RoHS directive on the restricted amount in lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers. Moreover, process control is in place to assure the finished batteries in compliance with the battery's directive on the requirement of restricted substances such as lead, mercury, and cadmium.

For demonstrating material compliance with relevant environmental legislations such as RoHS, the Group conducts environmental compliance verification on the important raw materials and requires suppliers to regularly provide reports of hazardous substances testing. For those materials that contain hazardous substances higher than the RoHS specified limit, relevant departments will reject the materials, label and segregate them.

In addition, the Group conducts product sampling regularly in accordance with the national standards and customer requirements. The samples will be sent to third-party laboratories for testing the product compliance against the environmental requirements in the battery's directive, as well as for verifying fulfilment of product functionality to the applicable national and industry standards.

產品回收程序

Product recall procedure

集團也制定產品回收的程序，以處理因產品安全與健康理由而須回收的產品。在報告期內，在已售或已運送的貨品中，未有發現因產品安全與健康理由而須回收的個案。

The Group has also established product recall procedure, for handling of those products to be recalled owing to product's safety and health reason. During the reporting period, amongst the products being sold and delivered, there was no incident of product recall because of product's health and safety reason.

客戶投訴與意見處理

Handling of Customer Complaints and Feedback

集團制定《顧客投訴控制程序》以回應客戶投訴，跟投訴相關的產品會按《不合格品控制程序》處理，並採取糾正措施，以消除不符合產品或服務的原因，防止相同事件再次發生。

The Group formulates "Customer Complaint Control Procedure" to respond to the customer complaints. Those products related to the complaint will be handled in accordance with the "Nonconforming Product Control Procedure". Corrective actions will be taken to eliminate the cause of the non-compliant product or service for prevention of recurrence.

集團亦制定《顧客滿意控制程序》收集並分析客戶回饋與意見，對客戶滿意度進行調查，確認客戶服務的改善機會。

The Group also formulates "Customer Satisfaction Control Procedure" to collect and analyse the feedback and opinions from customers. It proceeds investigation on customers' satisfaction and identifies opportunities for improvement in the customer service.

在報告期內，集團未有發現違反產品責任相關法例的個案及客戶投訴。During the reporting period, the Group did not identify any legal non-compliance or customer complaint pertaining to product responsibility.

知識產權及信息安全的維護

Protection of Intellectual Property and Information Security

集團制定《顧客財產控制程序》對客戶的知識產權及個人私隱信息進行妥善保管。知識產權包括顧客的規格檔、圖紙、產品、及其他無形資產。採用文件控制機制有系統地管理顧客的文件、圖紙與其他資訊，只有獲得授權人士才能取閱。若須對顧客財產複製、借出等，必須先徵得顧客的書面許可。此外，集團對含有高技術或有保密要求的操作及產品，更會向相關國家機構進行註冊，確保相關的知識產權受到合適的法律保護。截至2022年底，集團於中國已註冊的專利累計超過150項，當中有1個項目屬於鋰電池業務；另外在海外也有一項關於鉛酸蓄電池的專利註冊。

The Group formulates "Customer Property Control Procedure" to properly maintain the intellectual property and privacy information of the customers. Intellectual properties include specifications, drawings, products and other intangible assets of the customers. Document control mechanism is in place to manage in a systematic way those documents, drawings and other information of customers, which can only be accessed by authorised persons. Prior written consent from the customers is also required for replication and borrowing of their properties. Moreover, for the operation and products associated with hi-tech information or confidential requirements, the Group will register patent with the relevant authorities of the country for assuring the appropriate legal protection of the relevant intellectual property. In 2022, the Group has registered in China exceeding 150 patents, amongst which 1 of them belonged to the lithium-ion battery business. Moreover, one overseas patent has already been successfully registered pertinent to lead-acid battery.

此外，個別廠區更獲得國家部門頒發相關的獎項，彰顯集團在知識產權管理上的成就。Also, individual factories have been honoured with relevant awards from national departments, highlighting the achievements of the Group in the management of intellectual property.

獎項名稱 Name of Award	頒發機構 Awarding Institution
中國專利獎 China Patent Award	國家知識產權局 China National Intellectual Property Administration
安徽省專利優秀獎 Anhui Provincial Patent Excellence Award	安徽省市場監督管理局 Anhui Administration for Market Regulation
國家知識產權示範企業 National Intellectual Property Demonstration Enterprise	國家知識產權局 China National Intellectual Property Administration

此外，管理人員入職時須簽訂《職業道德規範及知識產權約定書》，約定書範圍包括保密條款及競業禁止條款及要求員工承諾：嚴格遵守發言及訊息披露制度，禁止將商業機密轉交予任何第三者，不得為自己或他人的利益直接或間接使用集團的知識產權。

集團在知識產權的管理，本報告覆蓋的鉛酸蓄電池製造廠區更獲得政府及相關機構的獎項及認證，例如：知識產權管理體系GB/T29490:2013的認證。

In addition, management personnel are required to sign the "Code of Ethics and Agreement for Intellectual Property Rights" at the time of their recruitment. The Agreement covers the terms and conditions for confidentiality and competition business, in which employees are required to commit: in strict compliance with the mechanism for public speech and information disclosure; prohibition on transfer of business confidential information to third party; forbidden in neither direct nor indirect use of the Group's intellectual property for exchange of benefits of the employee himself/herself or others.

Regarding the Group's management of intellectual property, individual lead-acid battery factories covered by the scope of this Report have been awarded and certificated by government and relevant institutions respectively, such as certification of GB/T29490:2013 for Intellectual Property Management System.

知識產權管理體系的相關認證

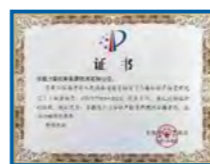
Certifications of Intellectual Property Management System



肇慶
Zhaoqing



安徽鋰電
Anhui Leoch
New Energy



安徽(力普拉斯)
Anhui Uplus



江蘇
Jiangsu

反貪污

Anti-corruption

集團制定《商業道德規範控制程序》的要求，與員工、供應商分別簽訂廉潔協議。此外，亦制定了《反商業賄賂程序》，整體內容包括合法經營、避免利益衝突、公平競爭等。

The Group formulates the "Business Ethics Control Procedure" which requires both employees and suppliers to sign the agreement for integrity. In addition, the "Anti-Corruption Procedure" is also formulated to cover lawful business, avoidance of conflict of interests, and fair competition, etc.

道德規範

Code of Ethics

集團要求所有員工應遵守商業道德，員工不得索取或者收受不恰當的酬金。
The Group requests all employees to abide by the business ethics, employees must not ask for or receive any improper compensation.

員工守則

Rules for Employees

管理人員入職時即簽訂《職業道德規範及知識產權約定書》，約定書範圍包括職業道德準則：承諾絕不與集團的交易對象約定或索取任何賄賂或其他不正當利益，包括但不限於回扣、佣金、不當饋贈或招待；避免工作中的利益衝突；合法經營；保護並合理利用公司資產；公平競爭等。

Management personnel are required to sign the "Code of Ethics and Agreement for Intellectual Property" at the time of their recruitment. The Agreement covers the criteria for business ethics: commitment not to agree with or request from the Group's business partner on bribes in any form or other improper benefits, which include but not limited to rebates, commissions, improper gifts or hospitality; avoidance of conflicts of interest at work; lawful business; protection and appropriate use of the company's assets; fair competition, etc.

反貪污相關的員工培訓

Employee Training related to Anti-corruption

為了保持實踐上述程序及規範的有效性，本年度集團繼續提供員工培訓，主題按照各廠區的情況，包含廉潔教育、誠信與商業道德、企業風險防範、強化公司治理、預防職務犯罪、舉報管理辦法等反貪污相關內容。

For maintaining effective implementation of the abovementioned procedures and practices, the Group continued to provide employee trainings in the reporting year. The themes varied according to the specific situation of various manufacturing regions and they included the topics related to awareness against corruption and bribery, integrity practices, business ethics, enterprise risk management, enhancement of corporate governance, prevention of job-related crime, and whistleblowing management methods.

在2022年，對於一般員工，本報告所覆蓋的營運區域合共培訓12,212人次，相關的培訓小時共有36,503小時，主題覆蓋下列範圍：

For general staff in 2022, throughout the operating regions covered by this Report, there was a total of 12,212 participants in the related trainings, and the employees' training duration amounted to 36,503 hours, covering the following themes:

- ▶ 公司的《企業文化和價值觀》
Company's "Corporate Culture and Values"
- ▶ 公司的《企業管理制度》相關的誠信及防貪措施
Integrity and Anti-corruption Measures related to Company's "Corporate Management System"
- ▶ 《員工手冊》中規範的廉潔行為
Code of Integrity Practices as stated in the "Employee Handbook"
- ▶ 其他主題關於提升防貪意識及闡明貪污相關的危害性
Other topics on enhancement of awareness against corruption and elaboration of impacts incurred by corruption

此外，按照企業管治的守則，採用港交所的《董事會及董事企業管治指引》，對現任董事提供相關內容的培訓；針對本年度一位新委任的獨董，集團也安排了律師給予他關於上市公司的合規培訓。

In addition, in accordance with the principles of corporate governance, the Group adopted the "Corporate Governance Code for Directors and Board of Directors" issued by the Hong Kong Stock Exchange for provision of training to current directors on relevant content. To a newly appointed independent director in the reporting year, the Group also arranged a lawyer for delivery of training on compliance requirements of listed companies.

防貪採購管理

Anti-corruption Procurement

集團在採購合同中訂立廉政交易條款，內容包括賣方不得為推銷交易物、擴大交易份額、提高交易價格，因而壓低品質、虛報數量、或對買方人員請客、送禮、提供回扣、傭金、有價證券、娛樂或其它形式的腐敗利益。

根據採購的訂單金額或不同類別，由不同級別的管理人員審核，加強採購過程中的監督。

在招標的過程上，資訊必須公開發佈，並確保公佈的資訊是準確及真實，使招標程式符合「公平、公開、公正」的完善機制。

The Group sets out the integrity terms & conditions in the procurement contract, which include seller shall not lower the product quality, falsify the volume or give bribes to buyer in the form of hospitality, gifts, rebates, commissions, securities, entertainment, or other corruption for the benefits of product promotion, increase of trading volume and selling prices.

According to the contract amount and categories in the procurement contract, the review and approval of contract is conducted by different levels of the management personnel to strengthen the supervision of the procurement process.

For open tendering, information must be made public and such disclosed information shall be accurate and true. This ensures the tendering process is conducted in a fair, open and equitable manner.

舉報程序

Whistle-blowing Procedure

集團制定了《舉報申訴管理規定》，就舉報程序及如何查處、被舉報人申訴進行了詳細規定。員工可通過總經理信箱、電話及當面交流等途徑向集團高層管理者告密及投訴，集團保護告密者的個人私隱和相關權利。

為了保障員工的合法權益，維護企業整體利益並及時發現和處理隱患問題，集團監督各規章制度及執行人員在過程中的行為，故申訴內容可包括貪污、賄賂、舞弊違法、欺詐勒索及其他違反誠信的事件。

在報告期內透過上述的內部舉報程序，本報告所覆蓋的各營運區域沒有發現與誠信或貪污相關的重大違規個案。

The Group formulates the "Regulations for Management of Whistle-blowing and Appeals" which stipulates in detail the procedure of whistleblowing, the methodology of investigation and the way of appeal by the person under investigation. Employees can complain or report in a confidential manner to the Group's senior management through the General Manager's letterbox, telephone, and face-to-face communication, etc. The Group protects the personal privacy and the related rights of the whistle-blower.

For protection of the legitimate rights of employees, enterprise interests and timely identification and handling of potential issues, the Group supervises the enforcement of company regulations and the behaviours of the executives in the processes. Therefore, the scope of whistleblowing may include corruption, bribery, misconduct, illegality, fraud, extortion and other breaches of integrity.

During the reporting period, through the above-mentioned internal reporting procedure, there was no case of significant legal non-compliance related to integrity or corruption amongst the operating regions covered by this Report.

財務帳目管理

Financial Account Management



集團每年邀請第三方審計機構對公司財務進行獨立審計，維持精確的財務帳目，保障股東的權益。

Every year the Group invites third-party auditors to conduct independent audits of financial accounts. This maintains accurate financial accounts for protection of the interests of shareholders.

社區投資

Community Investment



本集團多年來與不同的外部持份者合作，秉承履行社會責任的企業核心價值，透過自家建立的【理士國際愛心基金會】作為慈善捐贈平台，支援社區內有需要人士和相關組織。過去多年，集團所支持社區的範圍包括扶貧、支援受災、助學、慰問探訪、及環保意識提升工作等。本年度集團繼續秉持這份責任，積極了解社區人士及組織的需求，並給予他們支援及關愛。

The Group has been partnering with a wide range of external stakeholders over the years, for fulfillment of the corporate core values on social responsibility. With the charity donation platform established by the Group, "Leoch International Caring Foundation", the Group utilised it to support the needy people and organizations in the community. For many years, the scope of community support activities covered poverty alleviation, post-disaster assistance, education sponsorship, caring visit, and enhancement in environmental awareness, etc. During the reporting year, the Group continued to uphold this responsibility for identification of the community needs as well as provision of support and caring to the needy people and organizations therein.

下表展示本年度集團於不同範疇的個別活動例子：

The following table set forth some examples of community events in different categories during the reporting year :

區域 Region	服務範疇 Category	活動詳情 Details of Event
安徽 Anhui	抗疫 Anti-pandemic 	物資捐贈「百善高速」路口防疫人員，支援抗擊疫情。 Donation of supplies to support the pandemic control personnel at the "Baishan Expressway" intersection 
肇慶 Zhaoqing	社區慰問 Community Outreach 	為了企業與村民互助發展，公司和「正隆居委會」聯合主辦，捐贈物資及進行義工慰問活動，惠顧約110戶家庭。 For promoting mutual development between the Group and the villagers, the Group and the "Zhenglong Neighborhood Committee" jointly organized donation of supplies and volunteering activities for visiting about 110 households 
江蘇 Jiangsu	社區教學 Community Education 	與市政府合作，安排「淮安技師學院」參觀工廠，提升同學見識及讓大眾瞭解行業運作。 Under collaboration with the municipal government, factory visit was arranged to "Huai'an Technician College", for enhancing knowledge of students and the public's awareness of the industry's operations 