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(於開曼群島註冊成立之有限公司)

股份代號：00819

(Incorporated in the Cayman Islands with Limited Liability)

Stock Code:00819



# 2022

## 環境、社會及管治報告

2022 Environmental,  
Social and Governance Report

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# 走進天能

## ABOUT TIANNENG



# 企業概況

## COMPANY PROFILE

天能動力國際有限公司（「天能」或「本公司」）連同其附屬公司（「本集團」）是中國新能源行業的領軍企業，創始於1986年。2007年，天能在香港聯合交易所有限公司（「聯交所」）主板上市。歷經三十多年綠色發展，本集團現已成為以電動輕型車動力電池、儲能電池、廢舊電池回收與可再生資源循環利用業務為主，集新能源動力電池、汽車起動啟停電池、電動特種車動力電池等多品類電池的研發、生產、銷售，以及綠色智能製造產業園、智慧物流平臺等為一體的大型新能源集團。

展望未來，天能將積極把握發展機遇，專注提升品牌影響力，繼續打造社會型企業、社會化品牌。天能將更加重視環境責任、經濟責任、員工關懷、消費者保障、社會公益等各方面的工作，將企業發展置於時代浪潮與社會議題之下，將內部員工、外部環境與企業的「共生」發展與「普世價值」相結合，樹立行業內的責任品牌典範。

在董事長張天任的明確要求與率先垂範下，天能積極落實國家「雙碳」戰略，通過建造綠色智造工廠、打造綠色智造園區、開發綠色智造產品、構建綠色智造供應鏈，全面建立起貫穿產品全生命周期的可持續發展優勢。

Founded in 1986, Tianneng Power International Limited ("Tianneng" or "the Company") and its subsidiaries ("the Group") are leading companies in the new energy industry in China. In 2007, Tianneng was listed on the Main Board of the Stock Exchange of Hong Kong Limited (the "SEHK") (Stock code:00819). After more than 30 years of green development, the Group has become a large-scale new energy group mainly engaged in battery business for electric light vehicles, energy storage systems (ESS) and waste battery recovery and recycling, integrating the research and development ("R&D"), production and sales of various types of batteries such as new energy power batteries, car start-stop batteries and electric special vehicle power batteries, as well as green smart manufacturing industrial park construction and smart logistics platform.

Looking to the future, Tianneng will actively seize the opportunity for development, focus on improving brand influence and continue to build a social enterprise and social brand. Tianneng will attach great importance to environment responsibilities, economic responsibilities, staff care, consumer guarantee, social welfare and so on, place enterprise development under the tide of times and social issues, combine internal staff, external environment, "Symbiotic" development of the enterprise and "Universal Value" to establish a responsible brand paradigm in the industry.

Under the clear requirements of Zhang Tianren, Chairman of the Board of Directors (the "Board") of the Company, and taking the lead in setting an example, Tianneng actively implements the national "Carbon Peaking and Carbon Neutrality" strategy and establishes sustainable development advantages throughout the whole life cycle of the products through building green intelligent manufacturing factories, constructing green intelligent manufacturing parks, developing green intelligent manufacturing products and forming green intelligent manufacturing supply chain.



# 發展理念

## DEVELOPMENT CONCEPT

### 使命

#### MISSION

奉獻綠色能源，締造美好生活

To devote to green energy and create happy life

### 企業願景

#### ENTERPRISE VISION

成為最受尊敬的世界一流新能源公司

To be the most respected new energy company among the world's best

### 核心價值觀

#### CORE VALUE

責任 創新 奮鬥 分享

Responsible, Innovative, Hard-working and Sharing

# 產品與服務

## PRODUCTS AND SERVICES

本集團產品與服務的核心板塊包括高端環保電池、新能源電池以及可再生新材料。

The core segments of the Group's products and services include high-end environmentally friendly batteries, new energy batteries and recyclable materials.

### 高端環保電池

#### HIGH-END ENVIRONMENTALLY FRIENDLY BATTERIES

高端環保電池是天能依托研發與工藝創新打造的密封型免維護鉛蓄電池系列產品，是高穩定性、高性價比、可回收性優秀的環境友好型電池產品，應用領域涵蓋電動輕型車、儲能、電動特種車、汽車起動啟停等。

The high-end environmentally friendly batteries are a series of sealed, maintenance-free lead-acid batteries created by Tianneng relying on R&D and technological innovation. They are environmentally friendly battery products with high stability, high cost performance and excellent recyclability. Their application fields cover electric light vehicles, electric special vehicles, starting and stopping of cars, ESS, etc.

### 新能源電池

#### NEW ENERGY BATTERIES

新能源電池以鋰離子電池為主，亦包括燃料電池、鈉離子電池和固態電池等下一代電池產品的生產和研發。新能源電池業務應用領域主要分為動力類領域和非動力類領域兩類。其中，動力類的應用領域包括電動輕型車、工業車輛、電動乘用車以及電動商用車等，非動力類的應用領域包括儲能領域和消費類電子產品。

The company's new energy batteries are mainly lithium-ion battery (Li-ion battery), and also involve the production and R&D of next-generation battery products such as fuel cells, sodium-ion batteries and solid-state batteries. The application fields of new energy batteries are mainly divided into two categories: power applications and non-power applications. Among them, power applications include electric light vehicles, industrial vehicle, electric passenger cars, and electric commercial vehicles, the non-power applications include ESS and consumer electronics.

### 可循環產業

#### RECYCLING INDUSTRY

天能積極履行生產者責任延伸義務，對廢舊電池中的金屬、塑料、殘酸等物質進行回收利用，構建百萬噸級廢舊鉛蓄電池和鋰離子動力電池梯級利用及綠色回收再利用能力的「鉛+鋰」循環經濟生態圈。

Tianneng actively fulfills the producer's extended obligation to recycle metals, plastics, residual acids and other substances in used batteries and builds a "lead and lithium" circular economy ecosystem with the gradient utilization and green recycling capacity of millions of grade waste lead batteries and lithium-ion power batteries.

# 經營狀況

## OPERATING CONDITIONS

當前，天能聚焦「實業+科技+資本」三輪驅動戰略，在新能源賽道上加速奔跑，將持續通過奉獻綠色能源來保護自然資源與生態環境，積極應對氣候變化；同時，實施產品全生命周期可持續，促進綠色低碳循環經濟發展。

目前，天能上榜國家綠色工廠、綠色設計產品、綠色供應鏈管理企業、綠色設計示範企業等綠色製造名錄40余項，由天能參與製定的國家、行業等各類標準多達150余項，充分詮釋了新能源領軍企業「不負青山」的綠色使命。

截至二零二二年十二月三十一日止年度，本公司綜合營業額約為人民幣745.99億元，較上年同期減少12.87%，其中製造業營業額為人民幣419.71億元，較去年同期增加約10.68%；本公司擁有人應佔溢利約為人民幣17.96億元，較上年增長38.19%。

Currently, Tianneng focuses on three-wheel driving strategy of "Industry, Technology and Capital". It will speed up at the new energy track, protect natural resources and ecological environment through continuous devotion to green energy and actively coping with climate change; at the same time, it will implement whole life cycle sustainability of products and promote green and low carbon circular economic development.

At present, Tianneng has been listed in more than 40 national green manufacturing directories such as green factories, green design products, green supply chain management enterprises and green design demonstration enterprises, and has participated in the formulation of more than 150 national and industrial standards, fully explaining the green mission of new energy leaders to "live up to the green mountains".

For the year ended 31 December 2022, the Company's consolidated turnover was approximately RMB74,599 million, representing a year-on-year decrease of 12.87% as compared to that of the previous year, of which the turnover of manufacturing business was RMB41,971 million, representing a year-on-year increase of approximately 10.68%. Profit attributable to owners of the Company was approximately RMB1,796 million, representing an increase of 38.19% as compared to that of the previous year.

# 治理有道 行穩致遠

## GOOD GOVERNANCE GO STEADY AND GO FAR



# 治理架構

## GOVERNANCE STRUCTURE

本集團始終將「依法治企、誠信經營」作為行為準則，遵循香港聯合交易所《證券上市規則》的指引，通過規章制度、內部管理、風險防控和及時、全面、公開的信息披露構建企業管治平臺。

本集團重大事項的決策由董事會作出。董事會由八名董事組成，其中三人為獨立非執行董事。各位董事忠實勤勉履職，主要職能包括審核及批准企業戰略、審查內部控制製度及運營合規製度等。本集團定期召開董事會，所有董事可在會議上對管理層和其他事項發表意見。

董事會下設審核委員會、提名委員會和薪酬委員會三個專門委員會。審核委員會之主要職責為審閱本集團之財務報告程序及內部控制系統，以及就委任、續聘及辭任本公司獨立外聘核數師及相關薪酬以及委任條款向董事會提供建議。提名委員會負責物色合格的董事會人員，並在需要時就董事的委任或續聘等相關問題向董事會提供建議。薪酬委員會的主要責任為就本公司與董事及高級管理人員薪酬有關的政策向董事會提供建議。

本集團聘請專業法律工作者作為常年的法律顧問，並設立了內控法務中心、審計監察中心，實時對經營決策、經營過程和內部規章製度進行監督、審核。為維護股東合法的知情權，本集團製定了嚴格的信息披露製度及措施。信息披露的內容分為定期報告和臨時報告，定期報告每年披露兩次，包括中期報告和年度報告。

The Group always regards "Managing Enterprises in Accordance with the Laws and Operating in Good Faith" as the code of conduct, follows the guidelines of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Listing Rules"), and builds a corporate governance platform through rules and regulations, internal management, risk prevention and control, and timely, comprehensive, and public information disclosure.

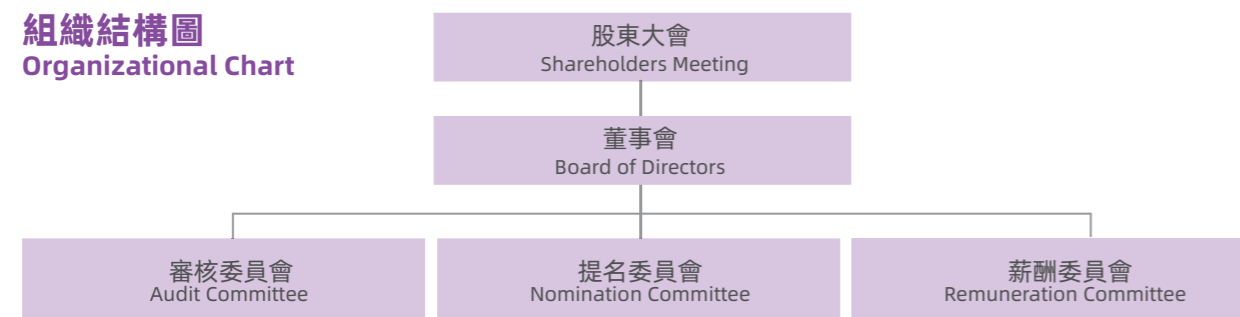
Decisions on major issues of the Group are made by the Board. The Board consists of eight directors, three of whom are independent non-executive directors. Directors perform their duties faithfully and diligently, whose main duties include reviewing and approving corporate strategies, reviewing internal controls and operational compliance. The Group convenes meeting of the Board on a regular basis, and all directors can express their opinions on management and other matters at the meeting.

There are three special committees under the Board: the Audit Committee, the Nomination Committee and the Remuneration Committee. The main duties of the Audit Committee are to review the Group's financial reporting procedures and internal control systems, and to advise the Board on the appointment, renewal and dismissal of the Company's independent external auditor and related terms of remuneration and appointment. The Nomination Committee is responsible for identifying qualified Board members and advising the Board on related issues such as the appointment or renewal of directors when needed. The main responsibility of the Remuneration Committee is to advise the Board on the Company's policies related to the remuneration of directors and senior management.

The Group employs professional legal practitioners as its perennial legal consultants, and has established an Internal Control Legal Affairs Center and an Audit Supervision Center to supervise and review business decisions, business processes and internal rules and regulations in real time. In order to safeguard the shareholders' legitimate right to know, the Group has formulated strict information disclosure systems and measures. The content of information disclosure is divided into periodic reports and provisional reports. Periodic reports are disclosed twice a year, including interim reports and annual reports.

### 組織結構圖

#### Organizational Chart



# 利益相關者溝通

## STAKEHOLDER COMMUNICATION

利益相關者的參與對本集團的可持續發展至關重要。本集團與各利益相關方建立合作並保持密切聯繫，通過組織會議、調查、研討等活動，全方位打通溝通渠道，用心傾聽各方聲音，履行相應責任。為促進有效的ESG管理，本集團積極鼓勵利益相關者的參與，了解利益相關者的期望，並迅速作出響應。本集團對相關利益相關者期望的響應如下：

Stakeholder participation is essential for the sustainable development of the Group. The Group builds cooperation and keeps close contact with interested parties, through conferences organization, investigation, seminars and other activities, gets through multiple communication channels, listens to voices of all parties with concentrated attention, and performs related responsibilities. To facilitate effective ESG management, the Group actively encourages stakeholder engagement, understands stakeholder expectations and responds promptly. The Group's response to relevant stakeholder expectations is as follows:

利益相關者 STAKEHOLDERS	期望 EXPECTATIONS	溝通與響應 COMMUNICATION AND RESPONSE
投資者 Investors	合理可持續的投資回報 Reasonable and sustainable return on investment 合規經營 Operation in compliance 公開信息披露 Public information disclosure	穩健經營 Sound operation 優化治理 Optimized governance 及時、公開地披露信息 Disclose information in a timely and public manner
員工 Employees	職業健康與安全 Occupational health and safety 職業發展 Career development 合理的薪酬和福利 Reasonable pay and benefits 多元化與平等機會 Diversity and equal opportunity	改善工作與生活環境 Improve the working and living environment 員工培訓與活動 Staff training and activities 具吸引力的薪酬待遇 Attractive compensation package 員工考核與晉升系統 Employee assessment and promotion system
客戶 Customer	產品質量與安全 Product quality and safety 服務質量 Service quality 研發與創新 R&D and innovation	質量管理體系 Quality management system 客戶滿意度調查 Customer satisfaction survey 多層次研究開發體系 Multi-level research and development system
政府與監管機構 Governments and regulators	按國家政策營運 Operation according to national policy 反腐與商業道德 Anti-corruption and business ethics 依法納稅 Pay taxes according to law	遵守法律法規 Compliance with laws and regulations 審計監察體系 Audit and supervision system 促進地方經濟發展 Promoting local economic development
供貨商 Suppliers	長期合作 Long term cooperation 公平競爭及誠信經營 Fair competition and honest management 互利共贏 Mutual benefit and win-win	供貨商管理體系 Supplier management system 供貨商分級製度 Supplier grading system 供貨商戰略合作 Supplier strategic cooperation
公眾與社區 Public and community	社會公益 Social welfare 廢棄物資管理 Waste material management 鄉村振興共同富裕 Rural revitalization and common prosperity	公益慈善項目 Public welfare and charity projects 循環回收 Recycling and recovery 鄉賢帶富工程 Seek common prosperity with support of village elites

# 合規與風險管理

## COMPLIANCE AND RISK MANAGEMENT

### 獨立審計

#### INDEPENDENT AUDIT

本集團設立了董事長直接領導的獨立審計機構——審計監察中心，製定了《審計工作製度》和《監察管理製度》，明確了各項審計流程。審計監察中心獨立開展本集團內部的經營管理審計、專項審計等工作，不受任何其他部門的幹預和限制。

本集團還聘請德勤•關黃陳方會計師行為本集團提供會計報表審計、淨資產驗證等相關審計服務。外部審計結果由事務所人員直接向董事會匯報，既加強了企業內部風險管控，又有效避免違法違規現象的發生。

### 風險監控

#### RISK MONITORING

本集團不斷深化內控體系建設，發布內控稽核指引，升級印章管控手段，強化陽光採購建設，創新資產管理機制，全面開展流程管理創新變革，加強數字化風控平臺建設，識別年度風險，開展風險研討和培訓活動，進一步降低了經營風險。對項目基地開展內控評價，及時識別相關缺陷，並進行有效整改；對經營管理巡視巡察，開展各類審計，有效開展了降本減損工作。對新產業、新平臺、新業務發展，從項目投前調研、架構設計到運營管理，實行全過程、全流程、全方位管控，確保穩健運營。集團開展合規運營建設，優化流程製度，其中鉛酸事業部本部和10個基地2022年度新增和修訂286個製度，涉及質量管理、人力資源管理、行政管理、財務管理和供應鏈管理等各個方面。此外，公司為加強商業秘密的保護，構築有效的信息安全防護壁壘，升級規範解密權限，並實行責任到人的問責製度。

The Group has set up the Audit Supervision Center, an independent audit institution directly led by the Chairman of the Board, formulated the Audit Work System and Audit Supervision Management System, and clarified various audit processes. The Audit Supervision Center independently conducts internal management audits and special audits of the Group, without any intervention or restrictions from other departments.

The Group also hires Deloitte Touche Tohmatsu to provide the Group with related audit services such as auditing of accounting statements and verification of net assets. The results of external audit are reported directly to the Board by the firm's staff, which not only strengthens the internal risk management of the enterprise, but also effectively avoids the occurrence of violations of laws and regulations.

The Group has continuously deepened the construction of internal control system, issued internal control and audit guidelines, upgraded seal control means, strengthened sunshine procurement construction, innovated asset management mechanism, comprehensively carried out process management innovation and reform, strengthened the construction of digital risk control platform, identified annual risks and conducted risk seminars and training and further reduced operational risks. It carries out internal control evaluation of the project base, identifies relevant defects in time, and makes effective rectification; Inspects operation and management, carries out all kinds of audit, effectively carries out the work of reducing costs and losses. For the development of new industries, new platforms and new businesses, from pre-investment research, architecture design to operation management, it implements the whole process and all-round control to ensure sound operation. The Group has carried out compliance operation construction and optimized process systems, among which 286 systems have been added and revised in 2022 in the Lead Acid Division Headquarters and 10 bases, involving quality management, human resource management, administrative management, financial management and supply chain management. In addition, in order to strengthen the protection of business secrets, the company has built effective information security protection barriers, upgraded the standard decryption authority, and implemented the accountability system of responsibility to person.

## 本集團風險控制框架如下：

### THE GROUP'S RISK CONTROL FRAMEWORK IS AS FOLLOWS:

角色 ROLE	責任人 PERSON IN CHARGE	責任 DUTIES
<p>由上而下，識別和管理公司層面的戰略及業務風險</p> <p>Top-down identification and management of company-level strategic and business risks</p>	<p>董事會（通過審核委員會、審計監察中心等部門）</p> <p>Board(through the Audit Committee, Audit Supervision Center, etc.)</p>	<ol style="list-style-type: none"> <li>1. 監察公司的風險管理政策及流程。 Monitor the company's risk management policies and procedures.</li> <li>2. 確定可能出現及新出現風險的性質和程度。評估和發布風險管理及內部控制製度並確保所有流程妥善執行。 Determine the nature and degree of possible and emerging risks. Assess and publish risk management and internal control systems and ensure that all processes are properly implemented.</li> <li>3. 定期就香港聯合交易所上市規則等組織中層以上管理人員學習。 Regularly organize the management staff of middle-level and above to study the Listing Rules.</li> </ol>
<p>由下而上，通過各經營、職能部門進行風險評估、監督及有效溝通避免運營層面的風險</p> <p>Bottom-up risk assessment, supervision and effective communication through various operating and functional departments to avoid operational risks</p>	<p>各經營及職能部門分管領導</p> <p>Leaders in charge of each operational and functional department</p>	<ol style="list-style-type: none"> <li>1. 識別、評估及管理公司面臨的經營風險。 Identify, assess and manage the business risks the company is faced with.</li> <li>2. 監察風險管理及內部控制系統及實施新的控制。 Monitor risk management and the internal control systems and implement new controls.</li> <li>3. 將風險控制及評估納入各部門考核評價體系。 Set risk control and assessment into each department's evaluation system.</li> </ol>
<p>由下而上，通過各經營、職能部門進行風險評估、監督及有效溝通避免運營層面的風險</p> <p>Bottom-up risk assessment, supervision and effective communication through various operating and functional departments to avoid operational risks</p>	<p>經營及職能部門具體執行人員</p> <p>Specific executives of the operational and functional departments</p>	<ol style="list-style-type: none"> <li>1. 於各自組織內各部門進行風險識別、評估及減緩，並形成內部控制報告。 Conduct risk identification, assessment and mitigation in each department within their respective organizations, and form internal control reports.</li> <li>2. 於組織內的業務營運及職能方面制定並推行風險管理流程。 Develop and implement risk management processes for business operations and functions within the organization.</li> <li>3. 持續改進流程和做好風險評估。 Continuously improve processes and conduct risk assessments.</li> </ol>
<p>獨立機構</p> <p>Independent Institution</p>	<p>外部審計機構及專業公司</p> <p>External audit institutions and professional institution</p>	<p>向審核委員會、董事會報告及討論工作中所出現的有關會計及經營系統中的內部控制缺陷，並協助改進。</p> <p>Report to the Audit Committee and the Board and discuss any internal control deficiencies in the accounting and operating systems that have emerged during the work, and assist in improvement.</p>

## 保護知識產權

### INTELLECTUAL PROPERTY PROTECTION

本集團高度重視科技研發，先後與8名院士合作，引進國家級引才計劃人才11名，省級引才計劃人才17名，組建了由美國、日本、韓國等國際頂尖專家組成的創新團隊，研究產業涉及新能源電池、新能源材料、智能製造、綠色循環等多個領域。

本集團設有項目與知識產權管理部，專門負責政策研究、項目申報及知識產權管理工作，有效保證本集團核心競爭力。本集團2022年參與製定國標行標等技術標準13份，參與編製的第一份國際標準已正式發布實施；完成專利申請700余件，並獲得國家綠色設計產品、國家綠色供應鏈管理企業、中國專利優秀獎、全國供應鏈創新與應用示範企業、中國輕工業科技創新先進集體、中國輕工業聯合會科學技術進步一等獎、「中國民營企業500強」第40位、入選「2022年全國質量標桿」、入選「中國再生鉛綠色領軍企業」等榮譽。工信部工業互聯網創新發展工程、科技部國家重點研發計劃等重點項目順利推進；工信部綠色供貨商招標、工信部國家電子信息發展基金等重大項目通過驗收。

本集團堅持不斷提高知識產權資產的數量和品質，通過合理的標準制定和專利佈局，建立起強大的競爭壁壘，從而提升企業的核心競爭力。

The Group attaches great importance to scientific and technological research and development. It has cooperated with 8 academicians and introduced 11 national talent introduction program talents and 17 provincial talent introduction program talents. It has set up an innovation team composed of top international experts from the United States, Japan, South Korea and other countries. The research industry covers many fields such as new energy batteries, new energy materials, intelligent manufacturing and green cycle.

The Group has set up the Project and Intellectual Property Management Department, which is especially responsible for Policy Studies, project declaration and intellectual property management, effectively ensuring the core competitiveness of the Group. In 2022, the Group participated in the formulation of 13 national standards, industrial standards and other technical standards, and the first national standard has been officially released and implemented. It has completed more than 700 patent applications and has obtained honors like National Green Design Products, National Green Supply Chain Management Enterprises, China Patent Excellence Award, National Supply Chain Innovation and Application Demonstration Enterprise, China Light Industry Science and Technology Innovation Advanced Collective, First Prize of Science and Technology Progress of China Light Industry Federation, being ranked 40th on the "500 Top Private Enterprises of China" list, and selected as the "2022 National Quality Benchmark". "Green Leader of Recycled Lead in China". It has key projects such as the Industrial Internet Innovation and Development Project of the Ministry of Industry and Information Technology and the National Key Research and Development Plan of the Ministry of Science and Technology proceeded smoothly. Major projects such as bidding for green suppliers by the Ministry of Industry and Information Technology and National Electronic Information Development Fund by the Ministry of Industry and Information Technology have been accepted.

The Group keeps improving the quantity and quality of intellectual property assets and establishes a strong competition barrier through proper standards formulation and patent allocation to enhance the core competitiveness of the company.

標準名稱 Name of Standards	標準編號 Standards No.	標準類型 Standards Type
電驅動工業車輛用燃料電池發電系統 第1部分：安全 Fuel cell power systems for industrial electric trucks- Part 1: Safety	GB/T41134.1-2021	國家標準 National Standards
電驅動工業車輛用燃料電池發電系統 第2部分：性能試驗方法 Fuel cell power systems for industrial electric trucks- Part 2: Performance test methods	GB/T41134.2-2021	
儲能用蓄電池~光伏離網應用技術條件 Batteries used for ESS - Photovoltaic off-grid application technical conditions	GB/T22473.1-2021	
科學技術研究專案評價實施指南 應用研究專案 Guidelines of science and technology research project evaluation- Application research projects	GB/T41620-2022	
電動自行車用鋰離子蓄電池設計規範 Design specification for Li-ion battery for electric bicycles	T/CHINABICYCLE 11-2022	團體標準 Group Standards
電動自行車通信協議 Communication protocol for electric bicycles	T/JSEBA 002-2022	

標準名稱 Name of Standards	標準編號 Standards No.	標準類型 Standards Type
碳中和管理體系要求 Carbon neutrality management systems — Requirements	T/CAS612—2022	團體標準 Group Standards
鉛蓄電池產品碳足跡評價導則 Guidelines for carbon footprint assessment of lead-acid battery products	T/DZJN 90-2022	
質子交換膜燃料電池產品碳足跡評價導則 Guidelines for carbon footprint evaluation of proton exchange membrane fuel cell products	T/DZJN 098-2022	
飲用氫水機 Hydrogen drinking water machine	T/SDJD 003—2022	
質子交換膜燃料電池行業綠色工廠評價要求 Requirements for green plants evaluation in the proton exchange membrane fuel cell industry	T/SDJD 003—2022	強制性國家標準 Mandatory National Standards
自行車安全要求 第2部分：城市和旅行用自行車、青少年自行車、山地自行車與競賽自行車的要求 Safety requirements for bicycles—Part 2: Requirements for city and trekking bicycles, young adult used bicycles, mountain and racing bicycles	GB 3565.2-2022	
電動自行車電氣安全要求 Safety requirements for electric bicycles electrical	GB 42295-2022	
電動自行車用充電器安全技術要求 Safety technical requirements of charger for electric bicycles	GB 42296-2022	

**TOP1** 2022 亞洲品牌 500 強榜單，天能品牌價值達到人民幣 1,128.60 億元，位列行業第一  
BEEN RANKED FIRST IN THE INDUSTRY WITH THE BRAND VALUE OF RMB112.86 BILLION IN THE 2022 ASIAN TOP 500 BRANDS LIST RELEASED IN HAIKOU

截止 2022 年 12 月底，天能動力累計擁有授權專利 3,600 余件。

By the end of December 2022, Tianneng Power has accumulated more than 3600 authorized patents.

## 廉潔建設

### CLEAN CONSTRUCTION

本集團在其經營過程中提倡高標準的商業誠信，不容忍任何形式的貪污或賄賂。不論本集團在任何地區經營業務，均嚴格遵守所有關於反貪及賄賂的法律法規。本集團已製定嚴格的反貪污政策，並以培訓或巡查等方式預防並管理可能發生的利益衝突及行賄事件。

本集團在總結以往反貪污工作經驗的基礎上，結合案例強化相關培訓，開展廉潔自律專題會議並全員簽署個人廉潔承諾書，公布舉報管道（電話、郵箱、微信公眾號等），對檢舉、揭發損害公司利益行為的人員予以鼓勵和保護，對企業腐敗舞弊行為給予堅決打擊，有力維護企業和股東的合法權益，確保企業健康發展。

回顧年內，本集團在核心經濟活動的反貪污工作上，對採購、工程建設、資金資產管理等方面進行審計297項。公司嚴肅查處了91起內部違規違紀/違法犯罪案件。全年開展反貪污教育培訓112場，巡視巡查20場，製播廉潔微電影《一念深淵》，受教人數已超10,000余人，發現問題整改率達100%。

The Group promotes high standards of business integrity in its operations and does not tolerate any form of corruption or bribery. Regardless of the region in which the Group operates its business, we strictly abide by all laws and regulations regarding anti-corruption and bribery. The Group has formulated strict anti-corruption policies and prevents and manages possible conflicts of interest and bribery through training or patrol.

On the basis of summing up previous anti-corruption work experience, the Group strengthened relevant training in combination with cases, carried out special meetings on honesty and self-discipline with all employees signed personal integrity commitment and announced reporting channels (hotline, email, WeChat public account, etc.) to encourage and protect personnel who report and expose behaviors that harm the Company's interests, and to resolutely crack down corruption and fraud, so that the lawful rights and interests of the enterprise and shareholders are strongly protected to ensure the healthy development of the enterprise.

Looking back at the past year, the Group conducted audit on more than 297 items of procurement, engineering construction, capital asset management and other aspects in the anti-corruption work of core economic activities. The company has investigated and seriously dealt with 91 internal violation cases/crimes. 112 anti-corruption education trainings and 20 inspections and patrols were conducted throughout the year, the production and broadcasting of the incorrupt micro film Mortal Thoughts has influenced more than 10,000 trainees with 100% rectification rate.



# 保障權益 責任擔當

## RESPONSIBILITY FOR PROTECTING RIGHTS AND INTERESTS

# 保障員工權益

## PROTECTION OF EMPLOYEES' RIGHTS AND INTERESTS

本集團視員工為企業的最大財富。尊重員工的個人價值、重視人才培養與激勵，不斷提升員工的歸屬感、幸福感和成就感。本集團獲評為「全國模範勞動關係和諧企業」、「全國就業與社會保障先進民營企業」、「全國工人先鋒號」、「全國文明單位」等榮譽。

本集團建立健全良好的人才選用機制，秉持著「讓合適的人在合適的位置，讓有貢獻的人有等值的回報」的用人理念，在公司總體運營管理中重視內部人員培養和外部高端人才引入。公司積極努力為員工營造多元化、公平、公正的工作環境。建立《天能集團人力資源管控規定》《天能集團招聘管理辦法》等管理製度，並在製度中明確公司對員工的培訓、晉升、終止合同、退休等相關問題。確保所有員工不因宗教、性別、殘疾等因素而受到區別對待。

此外在員工收入、能力、關懷方面，天能積極響應浙江省建設共同富裕示範區，啟動「天能幸福共同體行動計劃」，致力構建企業和員工利益共同體、事業共同體、幸福共同體，讓員工共享企業高質量發展成果。

本集團員工總數近2.7萬人；所有員工中男性占比約62%，女性占比約38%，全職員工比例達100%，管理人員中本科及以上學歷占比近四成，擁有專業技術資格（職稱）人員近千人。

The Group regards employees as the biggest fortune of enterprise, respects individual value, pays attention to talent training and motivation, improves the sense of belonging, happiness and accomplishment. The Group has been rewarded as the "National Model Enterprise of Harmonious Labor Relations", "National Employment and Social Security Advanced Private Enterprises", "National Worker Pioneer" and "National Workers Pioneer".

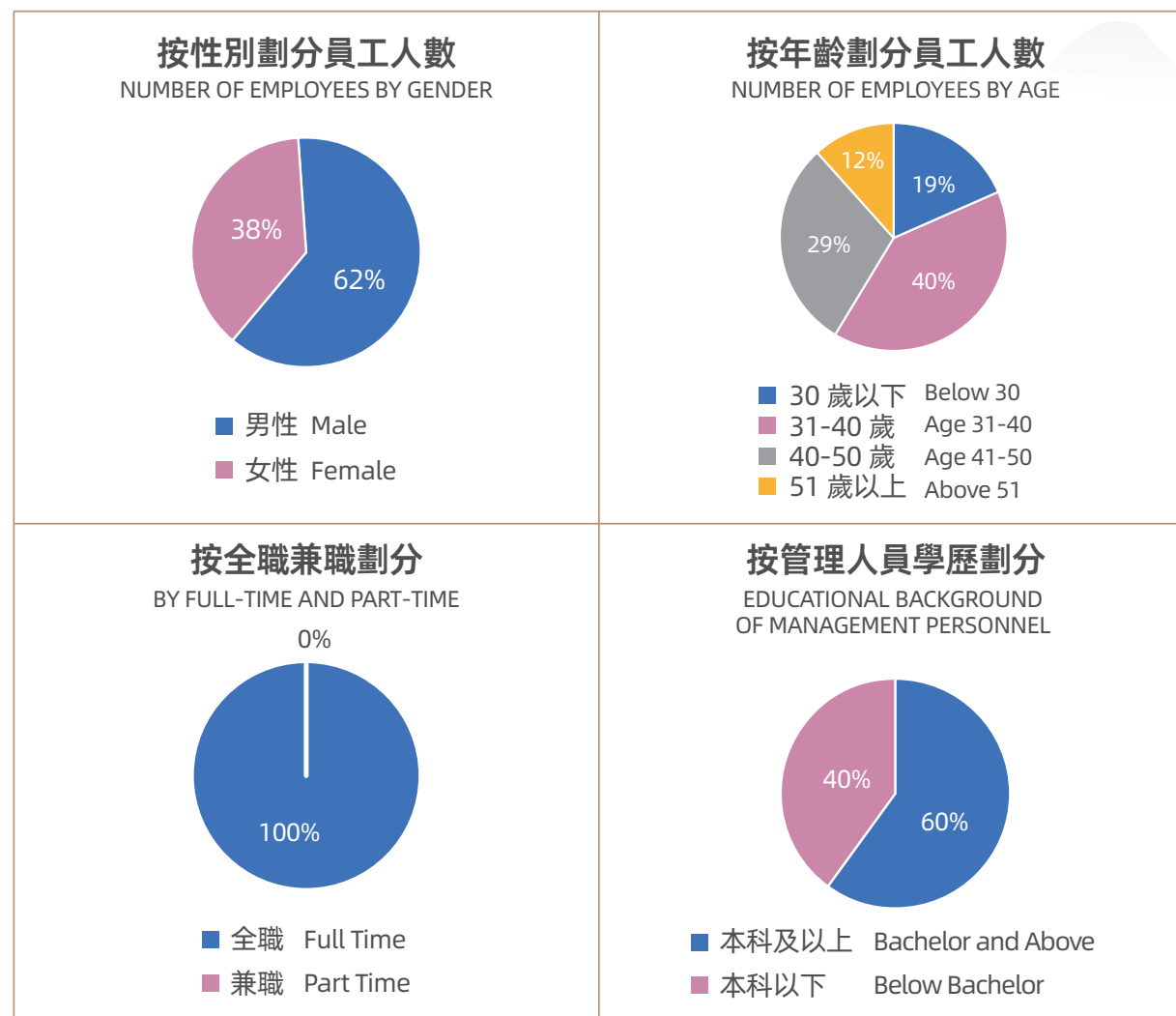
The Group has established a sound talent selection mechanism, adhering to the employment concept of "Let the right person be in the right place, and let the contributors have an equivalent return", and attaches importance to internal personnel training and external high-end talent introduction in the company's overall operation and management. The Company actively strives to create a diversified, fair and just working environment for its employees. The Company establishes management systems such as Regulations on Human Resource Management and Control of Tianneng Group and Recruitment Management Measures of Tianneng Group, in which the Company defines the training, promotion, contract termination, retirement and other related issues for employees, ensuring that all employees are not discriminated against on the basis of religion, gender, disability, etc.

In addition, in terms of employee income, ability and care, The Group actively responds to Zhejiang Province's construction of a demonstration area of common prosperity, and launches the "Tianneng Happiness Community Action Plan", committed to building a community of interests, cause and happiness between the enterprise and employees, so that employees can share the high-quality development results of the enterprise.

The total number of employees in the Group is over 27,000; among all staff, 62% are male and 38% are female with 100% full-time employees. Over 40% of the managers have a bachelor degree or above. There are nearly 1000 persons with professional and technical qualifications (titles).

## 2022 年各類別員工人數

## NUMBER OF EMPLOYEES IN VARIOUS CATEGORIES IN 2022



## 基本保障

## BASIC EMPLOYMENT PROTECTION

本集團嚴格執行《勞動法》中各項規定，平等僱傭，確保100%合法合規用工。所有員工入職當天必須簽訂勞動合同，本集團按規定為其繳納五險一金。員工依法享有婚假、孕產假等假期。工作時數、加班報酬、法定假期、帶薪休假及相關待遇均遵循當地勞動法律法規及僱傭合同所訂。本集團每年組織召開職工代表大會，討論商議涉及職工權益的重大事項。

The Group obeys all regulations in Labor Law, carries out equal employment strictly and makes sure 100% legal compliance. All staff must sign labor contract on entry day and the Group pays for 5 social insurances and housing fund according to the regulations. Staff has marriage leave, pregnancy leave and so on according to law. The hours of work, remuneration for overtime, statutory holidays, paid leave and related benefits are in accordance with the stipulations in local labor laws. The labor union organizes congress of workers each year to discuss big issues related to workers' rights and interests.

## 公平就業

## FAIR EMPLOYMENT

本集團嚴格遵循當地相關法律法規，堅持平等僱傭，在人員招聘及晉升過程中，杜絕因求職者或雇員的種族、性別、年齡、婚姻狀況、宗教信仰及國籍產生的歧視行為，拒絕任何職場上的歧視或騷擾。為人才提供公平、公正的就業機會。

The Group strictly follows the relevant local laws and regulations, adhere to equal employment, prevent discrimination due to race, sex, age, marital status, religious belief and nationality of job seekers or employees in the process of recruitment and promotion, reject any discrimination or harassment in the workplace, to provide fair and just employment opportunities for talents.

## 薪酬福利

## SALARY AND WELFARE

本集團堅持以人為本，為員工提供具備競爭力的薪酬及福利待遇。2022年，本集團進一步完善組織績效、個人績效考核和薪酬分配制度，建立突出崗位價值、工作業績、創新成果的薪酬福利機制，確保收入增長與企業效益相匹配。基於業務不同發展階段，本集團全面構建差異化薪酬激勵體系，進一步優化短期、中長期激勵方案。同時，本集團還建立了創新項目跟投機制，為集團戰略目標實現建立了共創、共享、共擔的利益共享與約束機制，激發了員工動力和組織活力。

The Group adheres to a people-oriented approach and provides employees with competitive remuneration and benefits. In 2022, the Group further formulated and improved the organizational performance, individual performance appraisal management systems and remuneration distribution system. The Group has established a compensation and welfare mechanism that highlights post value, work performance and innovation results to ensure that income growth matches corporate benefits. Based on the different stages of business development, the Group has built a comprehensive differential compensation incentive system to further optimize short-term and medium-and long-term incentive programs. At the same time, the Group has also established the mechanism of innovation project following investment, and established the benefit sharing and constraint mechanism of co-creation, sharing and undertaking for the realization of the Group's strategic goals, which has stimulated the motivation of employees and the vitality of the organization.

本集團為全體員工提供安全、健康的工作環境，同時為員工提供一系列福利待遇。本集團幫助解決員工住房、交通、子女教育等基本問題，在總部及多個生產基地建設環境良好的員工宿舍，提供了多班次、多線路的班車接送服務，提供食堂、購物券等補貼，並組織員工參加體育休閒活動，健全關懷幫扶機制，建立健全困難職工檔案，開展紅白喜事慰問、困難職工慰問10余次；推行談心談話機制，組織各黨組織開展「支部書記面對面」談心交心活動，收集活動信息35份，進一步暢通訴求渠道，提振信心，此外先後組織開展了「三八」婦女節、「六一」主題親子活動、誌願服務進車間、中秋聯誼等10場次凝心聚力活動等，精心設置活動議程，豐富活動形式，展現工作成效，得到集團內外部一致好評。

While providing a safe and healthy working environment for all employees, the Group also provides a series of benefits for employees to stimulate employees' work enthusiasm. We help to solve basic problems such as employee housing, transportation and children's education. We have constructed environmentally friendly employee dormitories at the headquarters and multiple bases. We also provide multi-shift, multi-route shuttle services, canteen food allowance, employee shopping vouchers, and organizes employee to participate sports and leisure activities. The Group has improved the caring and helping mechanism, established and improved the archives of employees with difficulties, and carried out more than 10 times of condolence for wedding and funeral events and employees with difficulties. The Group has carried out heart-to-heart talk mechanism, organized all party organizations to carry out "face-to-face" heart-to-heart talk activities of Branch secretaries, collected 35 pieces of activity information, further unimpeded appeal channels and boosted confidence. In addition, the Group has organized and carried out 10 cohesion activities such as "March 8" Women's Day, "June 1 Children's Day" theme parent-child activities, volunteer services into the workshop, Mid-Autumn Festival Friendship Fraternity, carefully set the activity agenda, enriched the form of activities, showed the effectiveness of the work, which has been praised by and beyond the Group.

## 案例 CASE

### 「金秋助學」，讓更多貧困學子圓夢 "GOLDEN AUTUMN STUDENT ASSISTANCE" ENABLES MORE POOR STUDENTS TO REALIZE THEIR DREAMS

2022年8月，天能位於河南省濮陽市的子公司開展一年一度的「金秋助學」活動。公司工會對2022年度被國家「985」「211」大學錄取的員工子女給予資助。受資助的員工表示，將繼續在崗位上刻苦勤奮工作，用優異的績效回報公司的關愛。濮陽子公司已經連續9年舉辦「金秋助學」活動，累計資助大學生60余名，發放教育補助金20余萬元。

In August 2022, Tianneng's subsidiary in Puyang city, Henan Province launched the annual "Golden Autumn Student Assistance" activity. The Labor Union of the Company will subsidize the children of employees who are admitted to the National "985 and 211" universities in 2022. The subsidized employees said that they would continue to work hard and repay the Company's care with excellent performance. Puyang Subsidiary has held the "Golden Autumn Student Assistance" activity for 9 consecutive years, with a total of more than 60 college students subsidized and nearly 200,000 Yuan of education subsidies issued.

### 「情滿中秋 聚愛添能」 天能隆重舉行2022年中秋聯誼活動

#### "FULL OF LOVE AND GATHER TOGETHER IN TIANNENG TO CELEBRATE THE MID-AUTUMN FESTIVAL" TIANNENG GRAND HELD 2022 MID-AUTUMN FESTIVAL FELLOWSHIP ACTIVITIES

濃濃中秋情，暖暖家人意。9月8日下午，2022年天能「情滿中秋 聚愛添能」中秋聯誼活動在美麗的龍之夢國際會議中心舉行。來自五湖四海的天能員工代表及特邀家屬近300人歡聚一堂，共慶佳節。天能共建單位新川村兩委班子也受邀參加了這次活動。

Deep Mid-Autumn festival sentiments and warm family affection, in the afternoon of September 8, 2022, "Full of Love and Gather Together in Tianneng to Celebrate the Mid-Autumn Festival" activity of Tianneng was held in the beautiful Longemont International Convention Center. Nearly 300 staff representatives from all over the world and invited family members gathered together to celebrate the festival. The two committees of Tianneng co-construction unit Xinchuan Village were also invited to participate in the activity.



## 健康安全 HEALTH SAFETY

本集團嚴格遵守《安全生產法》《職業病防治法》等法律法規，壓實各部門、各單位健康安全主體責任，加強危化品安全管理，製定《危化品安全管理製度》，防範風險。本集團堅持以人為本，建立健全職業健康安全管理體系，不斷改進員工工作環境與安全條件。本集團每年開展員工職業健康監護行動，並建立員工健康檔案。同時，本集團也積極開展應急演練、安全知識培訓、消防技能比武、安全宣傳等活動。本集團全年開展員工安全培訓約4.1萬人次，各類應急演練約410場。

公司通過了ISO45001職業健康安全管理體系認證，並在公司內部製定了《天能集團EHS管理體系製度》《應急管理製度》《工傷處理管理製度》等多項管理製度，旨在實現「分級管理、分線負責」的安全管理思路，堅持全員安全生產責任製。同時，公司規範了事故應急管理工作，建立和保持了應急管理體系，預防和減少突發事件的風險，提高了應對突發事件的能力。集團在每個基地均設有心理健康室，跨部門全程提供心理健康諮詢服務，保障廣大員工的心理健康。正是天能人牢守安全防線，2022年天能無工傷亡故情況。

The Group strictly abides by the Production Safety Law, the Occupational Disease Prevention and Control Law and other laws and regulations, carries out the health and safety main responsibilities of all departments and units, strengthens the safety management of hazardous chemicals, and formulates the Hazardous Chemical Safety Management System to prevent risks. The Group adheres to the people-oriented, establishes a sound occupational health and safety management system, and constantly improves the working environment and safety conditions of employees. The Group carries out employee occupational health monitoring every year and establishes employee health records. At the same time, The Group also actively carries out emergency drills, safety knowledge training, fire skills competition, safety publicity and other activities. About 41,000 man-time participated in safety trainings and 410 man-time participated in emergency drilling throughout the year.

The Company has passed ISO45001 occupational health and safety management system certification, and has developed a number of management systems in the Company like Tianneng Group EHS Management System, Emergency Management System and Industrial Injury Treatment Management System, aiming to realize the safety management idea of "hierarchical management and line responsibility" and adhering to the safety production responsibility system of all employees. At the same time, the Company has standardized the emergency management work, established and maintained the emergency management system, prevented and reduced the risk of emergencies, and improved the ability to deal with emergencies. The Group has a mental health room in each base, providing cross-department mental health consultation services to ensure the mental health of employees. It is Tianneng people who guard the safety line, and Tianneng has no work-related injuries and deaths in 2022.

## 案例 CASE

### 開展安全主題月「遵守安全生產法 當好第一責任人」築牢安全防線活動 Carry out Safety-themed Month - "Observe Safe Production Law, Play the Role of A Good First Responsible Person" Safety Line Building Activity

為進一步抓好安全生產工作，落實安全生產主體職責，確保集團安全生產工作高質量推進，集團各單位結合實際開展了以「遵守安全生產法 當好第一責任人」為主題的系列活動，為集團營造了「管行業必須管安全、管業務必須管安全、管生產必須管安全」的安全生產環境，取得了顯著成效。為普及消防安全應急救援等專業常識，提升員工應急能力，同時強化消防意識，進一步築牢安全防線，公司在2022年舉行「安全主題月」活動，參與人員達8,300人次。

In order to further pay attention to the work of safety production, implement the main responsibilities of safety production, and ensure the high-quality progress of the Group's work of safety production, all units of the Group have carried out a series of activities with the theme of "Observe Safe Production Law, Play the Role of A Good First Responsible Person" according to the actual situation, creating a safe production environment of "ensure safety for the industry, the business, and the production", with remarkable results. In order to popularize the professional knowledge of fire safety and emergency rescue, improve the emergency ability of employees, strengthen the fire awareness, and further build a strong safety line, the Company held a "Safety Theme Month" activity in 2022, with 8,300 man-time participating.



安全「技能比武」活動 Safety "Skill Contest" Activities

## 案例 CASE

### 應急專業技能培訓

#### EMERGENCY PROFESSIONAL SKILLS TRAINING

活動包括現場模擬火災疏散、初期火災滅火演練、夜間突擊消防演練、消防器材使用培訓等。其中消防器材使用培訓及初期火災滅火演練進一步使員工熟悉掌握乾粉滅火器、二氧化碳滅火器、消防栓、一鍵報警、一鍵斷電、絕緣棍等消防器材的操作使用步驟及方法，全面提升全員應急專業技能。

Activities include simulated fire evacuation, initial fire extinguishing drill, night assault fire drill and fire equipment use training. The training on the use of firefighting equipment and the initial firefighting drill further familiarized the staff with the operation procedures and methods of dry powder fire extinguisher, carbon dioxide fire extinguisher, fire hydrant, one-button alarm, one-button power off, insulation rod and other firefighting equipment, and comprehensively improved the emergency professional skills of all staff.



應急消防演練活動 Emergency Fire Drills

同時，天能在內部加快內生性人才培養，持續開展幹部梯隊培養、青年人才培養、校招大學生人才導師製培養、業務精英訓練、職能條線能力提升等多層次、多類別人才培養項目，集團建立了完善的人才培養課程體系，2022年員工培訓計劃達成率100%。重視組織經驗沈澱，持續培養內部講師、開發內部課程與微課、提煉文化案例和業務案例；通過推進學習型組織建設，完善內部人才能力提升與職業發展體系，搭建關注員工發展、助力員工成長的事業平臺。

At the same time, Tianneng accelerates internal talent training, and continues to carry out multi-level and multi-category talent training programs such as cadre training, young talent training, on-campus recruited college students tutorial system training, business elite training, and functional line ability improvement. The Group has established a sound talent training course system, and the completion rate of staff training plan in 2022 is 100%. The Group pays attention to the accumulation of organizational experience, continuously cultivates internal lecturers, develops internal courses and micro classes, refines cultural cases and business cases; improves the internal talent ability improvement and career development system, and builds a business platform that focuses on staff development and helps staff growth by promoting the construction of learning organization.

## 案例 CASE

### 「新征程·新挑戰」第十三期新入職幹部訓練營

#### The 13th New Cadre Training Camp of "New Journey • New Challenges"

2022年9月，為幫助新入職幹部快速融入天能，天能開展了「第十三期新入職幹部訓練營」，來自各組織單位的62位新入職幹部齊聚一堂，參加了此次的培訓課程。此次課程以打造「會幹事，敢幹事，幹成事」的幹部隊伍為目標，通過兩條主線任務，讓員工完成對工作場景中的複雜型任務的挑戰任務，完成領導力認證。培訓綜合滿意度約達98.39%。

In September 2022, in order to help new cadres quickly integrate into Tianneng, Tianneng launched the "13th New Cadres Training Camp", which brought together 62 new cadres from various organizations to attend the training course. This course aims to build a cadre team of "capable, courageous and accomplished". Through two main tasks, employees can complete challenging tasks on complex tasks in work scenes and complete leadership certification. The comprehensive satisfaction of training is about 98.39%.



「新征程·新挑戰」第十三期新入職幹部培訓 (New Journey • New Challenges "The 13th New Cadre Training")

## 人才培養 TALENT TRAINING

本集團始終把人才作為支撐企業發展的第一資源。持續引進行業領軍人才，培養內部人才，優化人才結構，夯實業務發展的人才基石。

本年內，在鋰電、鈉電、氫能、全球化等關鍵崗位持續引進領軍人才和核心人才，多人次入選國家級引才、省級引才、省萬人計劃，以高端人才支撐業務發展；並積極響應集團發展需求，提高研發技術類及營銷類崗位配置比例，提高本科及以上員工占比，通過各類員工關懷活動降低員工流失率，用一支穩定性好、素質高、能力強的人才隊伍支撐業務發展。

The Group takes talents for the first resource of supporting enterprise development. The Group continues to introduce leading talents in the industry, cultivate internal talents, optimize the talent structure, and consolidate the talent foundation for business development.

This year, we will continue to introduce leading talents and core talents in key positions such as lithium-ion electricity, sodium battery, hydrogen energy and globalization. We have selected a number of people into National Talent Introduction Program, Provincial Talent Introduction Program and Provincial 10,000 Talents Program to support business development with high-end talents. We actively respond to the Group's development needs, improve the proportion of R&D technology and marketing positions, increase the proportion of employees with a bachelor's degree or above, reduce the staff turnover rate through all kinds of staff care activities, and support business development with a stable, high-quality and capable talent team.

## 員工課程培訓體系表

### STAFF COURSE TRAINING SYSTEM TABLE

課程體系 Course System	課程類別 Type of Course	課程名稱 Course Name	
通用知識與技能 General Knowledge and Skills	企業文化 Corporate Culture	天能發展歷程與企業文化 Tianneng Development History and Corporate Culture	
		天能文化共識 Tianneng Cultural Consensus	
	規章制度 Rules and Regulations	公司管理體系各項管理標準及解讀 Company Management System Management Standards and Interpretation	
		商務禮儀 Business Etiquette	
	職業素養 Professional Quality	壓力與情緒管理 Stress and Emotion Management	
		職業生涯規劃 Career Planning	
		公文寫作 Document Writing	
	職業技能 Occupational Skills	辦公軟件技巧 Office Software Skills	
		目標管理 Management by Objectives	
		基於各條線任職資格搭建的課程體系 Curriculum System based on the Qualifications of Each Line	
專業知識與技能 Professional Knowledge and Skills	以專業條線為中心的課程體系 Curriculum System Centered on Professional Lines	基於各條線任職資格搭建的課程體系 Curriculum System based on the Qualifications of Each Line	
專項課程 Special Course	領導力系列 Leadership Series	業務戰略與資源匹配 Matching Business Strategy with Resources	
		經營分析與全面預算 Operational Analysis and Comprehensive Budgeting	
		組織設計與人才戰略 Organizational Design and Talent Strategy	
		戰略羅盤 Strategic Compass	
		組織能力三板斧 Three Axes for Organizational Ability	
		商業模式創新 Business Model Innovation	
		文化領導力 Cultural Leadership	
		目標績效管理 Objective Performance Management	
		高績效團隊管理 High Performance Team Management	
		領導力蓄能攻略 Leadership Accumulation Strategy	
		員工激勵 Employee Motivation	
		識人用人 Identify and Employ Personnel	
	新員工系列 New Employee Series	校招新員工 On-campus Recruits	天能發展歷程與企業文化 Tianneng Development History and Corporate Culture
			公司基本規章制度 Company's Basic Rules and Regulations
			天能組織與人才發展 Tianneng Organization and Talent Development
			安全人人有責 Safety is Everyone's Responsibility
			從校園走向職場的自我認知 Self-Cognition from Campus to the Workplace
			職業規劃與 IDP Career Planning and IDP
		新入職幹部 Newly recruited cadres	天能發展歷程與企業文化 Tianneng Development History and Corporate Culture
			公司基本規章制度 Company's Basic Rules and Regulations
			以客戶為中心的質量意識 Customer - Centered Quality Awareness
		車間一線新員工 Front Line Workshop New Recruits	天能發展歷程與企業文化 Tianneng Development History and Corporate Culture
			公司基本規章制度 Company's Basic Rules and Regulations
			三級安全培訓 Level 3 Safety Training
		師課共建系列 Tutor Class Co-Construction Series	微課眾創工作坊 Micro-Class Crowd Innovation Workshop
			課程開發與設計 Curriculum Development and Design
			演講技巧與表達 Presentation Skills and Presentation
全球化人才儲備系列 Global Talent Pool Series	商務英語 Business English		
	跨文化交流 Cross-cultural Communication		
技能人才資格認定系列 Skilled Personnel Qualification Identification Series	基於各技能崗位任職資格搭建的課程體系 Curriculum System based on Qualifications of Each Skill Post		

2022年，本集團圍繞“賦能內部員工，提升組織能力，打造天能人才供應鏈”的目標，依託天能大學所制定的《天能集團教育培訓管理辦法》，打造出了一套完備的員工培訓管理體系。針對員工職業發展依然採取“雙軌制”晉升模式，即管理職業發展通道和專業技術發展通道兩個軌道，設置“縱向晉升發展”和“橫向發展”兩種方式。《天能集團核心人才池建設管理辦法》《天能集團人才輪崗管理辦法》等相關制度也成功幫助公司實現了吸引和保留所需要人才、促使公司職位發展體系建設的科學化、合理化、規範化及制度化等目標。2022年培訓計劃達成率為100%。

In 2022, the Group, adhering to the goal of "empowering its employees, improving its organizational capabilities, and creating a talent pool for Tianneng" and relying on the Management Measures of Education and Training in Tianneng Group developed by Tianneng University, has created a comprehensive employee training management system. With the "dual track" promotion system (namely, the management and technical skill track,) for its employees' career development, the company allows both "vertical" and "horizontal" talent development. Relevant systems such as the Management Measures for Core Talent Pool Construction in Tianneng Group and the Management Measures for Talent Job Rotation in Tianneng Group have also successfully helped the company to achieve the goals of attracting and retaining desired talents and promoting the scientific, rational, standardized, and systematized construction of the company's position development system. In 2022, the company's training plan was 100% completed.

按性別劃分 Classification by gender	單位：小時 Unit: Hour
男性員工平均接受培訓時間 The average training time for male employees	≈41
女性員工平均接受培訓時間 The average training time for female employees	≈30

按員工類型劃分 Classification by employee type	單位：小時 Unit: Hour
基層員工平均接受培訓時間 Average training time for grassroots staff	≈33
中級管理層平均接受培訓時間 Average training time for middle management	≈90
高級管理層平均接受培訓時間 Average training time for senior management	≈298

## 文娛生活

### CULTURAL & RECREATIONAL ACTIVITIES

本集團為適應廣大員工的精神文化要求，陶冶員工情操，建設了籃球場、羽毛球場等文娛設施，並不定期組織豐富多彩的活動，包括拓展訓練、家屬聯誼會、「文化大使」講好身邊故事活動等。除此之外，本集團通過刊發《天能報》、《天能人》等內部讀物與雜誌，利用官方網站以及微信公眾號、抖音、快手等自媒體平臺，傳播天能好聲音，匯聚發展正能量，在行業和社會上產生了強烈反響。

In order to meet the spiritual and culture demands of the majority of employees, the Group has built recreational facilities such as basketball courts and badminton courts, and organizes a variety of activities from time to time, including extended training, family day, and "Culture Ambassador" Tells Stories. In addition, the Group continues to publish internal reading materials and magazines such as Group News and Tianneng Staff to utilize the official website and WeChat public account, Tik Tok, Kuaishou and other self-media platforms to spread the good voice of Tianneng and gather positive energy for development, which has produced a strong resonance in the industry and society.

## 保障投資者權益

### PROTECTION OF INVESTORS' RIGHTS AND INTERESTS

本集團高度重視投資者關係的管理，註重投資者的知悉權和對投資者保護教育。除規定的信息披露途徑外，本集團還安排專人通過投資者熱線電話、郵件往來、來訪接待、本集團網站投資者關係專欄和本集團官方微信等豐富的渠道與投資者保持密切交流，加強投資者關係平臺建設，提升投資者關係服務的效率與質量。

The Group attaches great importance to the management of investor relations, the investors' right to know, and investor protection education. In addition to the required information disclosure channels, the Group also arranges special personnel to maintain close communication with investors through various channels such as investor hotlines, email correspondence, visiting receptions, the investor relations column of the Group's website and the Group's official WeChat account to strengthen the construction of investor relations platforms and improve the efficiency and quality of investor relations services.

# 保障客戶權益

## PROTECTION OF CUSTOMERS' RIGHTS AND INTERESTS

本集團堅持以客戶為中心，不斷完善產品體系、營銷體系、服務體系，不斷提升產品質量、技術研發實力和服務水平。本集團秉承「以客戶為中心」的服務理念，實施「誠心、貼心、細心、耐心、舒心」五心服務滿意工程，積極加強客戶關係管理，變被動服務為主動服務。通過每年開展2次客戶滿意度調查、淨推薦值（NPS）調查，公司全面了解客戶需求，努力滿足並超越客戶需求及期望，獲得客戶忠誠，成為同行業跟進和超越的對象。

本集團在全國各地擁有3,000余家經銷商，已形成了以浙江為基點，輻射全國的龐大服務網絡。本著互惠共贏的原則，天能建立了完善的經銷商服務管理標準和流程，同時配備各類專職售後人員700余人為遍布全國的服務網絡提供技術支持及產品培訓服務。該培訓每周至少進行一次，每次覆蓋30人以上。

為有效保護企業品牌形象以及消費者權益，天能設立了品牌維權辦公室，製定了假冒電池回饋、打擊、管控機製和預防對策，包括：開通打假維權熱線、建立獎懲規定、配置維權打假專職人員等。天能對市場上的假冒天能電池產品現象進行調查、取證、溯源，並會同工商行政管理局、公安等執法部門對造假、售假行為給予嚴厲懲處和堅決打擊。2022年全年，本集團在全國範圍內聯合各地區執法部門開展專項品牌維權、打假維權行動20余場，有效減少了假冒天能電池流通市場，保護了消費者利益。

2022年，本集團提供並優化了400電話服務全流程閉環保障，通過微信公眾號、微信客訴群、QQ共贏商群、客戶服務專線、400熱線平臺以及開展客戶滿意度調查的方式，建立起客戶服務連結管理。基於產品特性，公司也在售後車間建立起產品專線維修平臺，為客戶提供培訓、維修學習等服務。2022年，天能新增248個二級渠道品牌，對於雅迪、愛瑪等重點客戶，天能指定服務專員進行專門對接，實現了市場服務效率的有效提高。

2022年，本集團通過數字化技術，重點搭建在「線上+線下」的立體化售後服務平臺，已基本完成全國1,000家的售後服務網絡建設，充分實現4小時響應、3天處理完結的售後服務時效承諾。

The Group adheres to customer-centric orientation, continuously improves product system, marketing system, and service system, and constantly improves product quality, technical R&D strength and service level. Adhering to the "customer-centric" service concept, we implemented the "Five Heart Service Satisfaction Project" of being sincere, considerate, careful, patient and reassuring, actively promoted and built customer relationships, and strengthened customer relationship management. By changing from passive service to active service, we conducted two customer satisfaction surveys and net promoter score (NPS) surveys every year to fully understand customer needs, and strive to meet and exceed customer needs and expectations, gain customer loyalty, and become the object to be followed and surpassed in the industry.

The Group has more than 3,000 resellers across the country, and has formed a huge service network based in Zhejiang and radiating across the country. We carried out cooperation based on the principle of mutual benefit and win-win, and have established complete service management standards, processes, and systems. At the same time, more than 700 full-time after-sales personnel are employed to provide technical support and product training services for the service network across the country. The training is conducted at least once a week, covering more than 30 people each time.

In order to effectively protect the corporate brand image and consumer rights, Tianneng established a brand rights protection office, formulated counterfeit battery feedback, combat and control mechanisms and preventive measures, opened a protection hotline and established reward and punishment regulations, and arranged full-time personnel for safeguarding rights and fighting counterfeits to investigate, obtain evidence and trace source of counterfeit Tianneng battery products on the market, and cooperated with the Administration for Industry and Commerce, public security and other law enforcement agencies to harshly punish and resolutely crack down on fraud and sales. During the whole year of 2022, the Group launched more than 20 special brand protection actions in cooperation with law enforcement agencies across the country, effectively reducing the counterfeit Tianneng battery circulation market and protecting consumer interests.

In 2022, the Group provided and optimized the whole process of 400 phone service endless-loop guarantee, and established customer service link management through Wechat public account, Wechat customer complaint group, QQ win-win business group, customer service special line, 400 hotline platform and customer satisfaction survey. Based on the product characteristics, the Company has also established a dedicated maintenance platform in the after-sales workshop to provide customers with training, maintenance learning and other services. In 2022, Tianneng has added 248 secondary channel brands. For key customers such as Yadea and Aima, Tianneng has designated service specialists for special connection, effectively improving the efficiency of market service.

In 2022, through digital technology, the Group focused on building an online and offline three-dimensional after-sales service platform, and has basically completed the construction of 1,000 after-sales service networks nationwide, fully realizing the after-sales service time-effectiveness commitment of 4-hour response and 3-day processing.

為進一步實施品質考核管理，確保產品品質穩定提升，公司最新制定了《產品品質的考核機制和監督機制》。該制度明確了品質考核與品質問責的方式，同時針對品質事故根據嚴重程度進行了區分。此外，公司還制定了《原材料品質管理辦法》《過程品質管理制度》《市場品質管理制度》《經營管理問責制度》等檔以輔助推進產品品質的考核工作。

# 保障供貨商權益

## PROTECTION OF SUPPLIERS' RIGHTS AND INTERESTS

本集團堅持“公開公正、誠信經營、長期合作、共贏”的原則，聚焦全球優質供應商，致力維護供應鏈生態系統的良好發展，善待供應商、共贏商和利益相關方，實現客戶價值、投資者利益和企業發展的互動共贏。公司制定了《供應商檔案管理制度》《供應商審核管理標準》《供應商退出與淘汰制度》等9項相關管理制度，通過嚴格的供應商准入機制有效把控供應商品質，同時針對供應鏈反賄賂問題也有一系列管理辦法，有效提升了供應鏈的可持續性。

本集團為保證公司與供應商之間的公平性和可持續性，避免腐敗事件發生，本集團在與供應商合作前要求其簽署《廉潔協議》，有效地規避了在採購過程中存在的賄賂事件風險，進而實現公司供應鏈的穩固發展。

未來，本集團將繼續推進集成供應鏈變革，全面優化供應鏈管理。

對內，我們優化供應鏈業務流程，創新供應鏈技術和模式，聚焦供應鏈物流環節搭建「天暢智運」平臺，實現可視化的全程物流、可視化的監控，幫助客戶更好地實施貨權的管控。未來，我們將構建集在線交易、資金結算、物流服務、金融服務、信息服務於一體的供應鏈集成服務平臺，提高供應鏈的市場響應效率和產品服務的質量穩定性。

對外，我們建立供應鏈戰略聯盟，在充分借鑒吸收供方優質經驗的同時，定期組織開展合格供方評價工作，通過對產品質量、工藝裝備、過程控制、技術服務、安全生產等內容的考察、調研及審核，及時分享經驗，提出合理化建議，並通過技術、資金和人力支持，幫助部分供貨商提升管理水平，實現價值鏈體系競爭力的共同提升。

In order to further implement quality assessment management and ensure stable improvement of product quality, the company has recently formulated the Product Quality Assessment and Supervision Mechanism. This mechanism clarifies the methods of quality assessment and quality accountability and distinguishes quality accidents based on the severity. In addition, the company has developed documents, such as the Raw Material Quality Management Measures, Process Quality Management System, Market Quality Management System, and Operating Management Accountability System to assist in and promote product quality assessment.

Adhering to the principles of "openness and fairness, honest operation, long-term cooperation, and sharing and win-win", the Group focuses on global high-quality suppliers, commits itself to maintaining the healthy development of the supply chain ecosystem, and treats well its suppliers, win-win partners, and stakeholders to achieve interactive and win-win results of customer values, investor interests and enterprise development. The company has developed nine relevant management systems, including the Supplier Archives Management System, Supplier Audit Management Standards, and Supplier Exit and Elimination System, to effectively control supplier quality through a strict supplier access mechanism. At the same time, the company has developed a series of management measures for anti bribery in the supply chain which effectively improves the supply chain sustainability.

In order to ensure fairness and sustainability between the company and its suppliers and to prevent corruption incidents, the Group requires its suppliers to sign an "Integrity Agreement" before cooperation, which effectively avoids the risk of bribery in the procurement process, thereby achieving stable development of the company's supply chain.

In the future, the Group will continue to promote integrated supply chain upgrade and comprehensively optimize supply chain management.

Internally, we optimize the supply chain business process, innovate supply chain technology and model, focus on the logistics links of the supply chain, and build a "Tianchang intelligent transportation" platform to realize visual logistics and visual monitoring, which means that customers can better implement the control of goods rights. In the future, we will build a supply chain integrated service platform integrating online transaction, fund settlement, logistics service, financial service and information service, so as to improve the market response efficiency of the supply chain and the quality and stability of products and services.

Externally, we establish strategic alliance of supply chain. While fully learning from and absorbing quality experience of suppliers, we regularly organize and carry out qualified supplier evaluation. Through the investigation, research and review of product quality, process equipment, process control, technical services, safety production and other contents, timely sharing of experience, we will put forward reasonable suggestions, and explain that some suppliers improve their management level through technical, financial and human support, so as to jointly improve the competitiveness of the value chain system.

# 氣候變化 直面挑戰

## CLIMATE CHANGE FACE THE CHALLENGE



# 節能減排 助力「雙碳」目標

## ENERGY CONSERVATION AND EMISSION REDUCTION TO CONTRIBUTE TO THE "DUAL CARBON" GOAL

本集團執行各類國家和地方要求的污染物排放限值標準，全面構建污染物自行監測、第三方委託檢測、固定污染源線上監測及政府部門監督相結合的全方位污染物防控體系，採用行業內最領先的技術和裝備，保障治理設施長期穩定運行，實現廢氣、廢水等各類污染物達標排放。對可利用的污染物和廢棄物採取科學管理措施，變廢為寶，進行資源再利用，既減少了環境污染，也提升了資源利用率。

The Group follows the pollutants emission limit standards of various countries and local governments, constructs a comprehensive pollutant prevention & control system that combines pollutants self monitoring, third-party commissioned testing, online monitoring of fixed pollution sources, and government supervision. With the most advanced technology and equipment in the industry, the company is able to ensure the long-term stable operation of treatment facilities and standard discharge of various pollutants, including waste gas and wastewater. For usable pollutants and wastes, it adopts scientific management measures to reuse them. In this way, it not only reduces environmental pollution, but also improves resource utilization.

汽車、交通、能源行業構成了緊密且完整的「碳鏈條」，其中交通領域的碳排放占全國終端碳排放約15%。天能2022年售出約3.73億只動力電池。按每組電池（4只電池為一組）蓄電後可騎行60公里，每組電池可充放電400次計算，天能每年售出的電池累計行駛里程可達到22,380億公里。

The automobile, transportation and energy industries form a close and complete "carbon chain", among which the carbon emissions from the transportation sector account for about 15% of the country's terminal carbon emissions. Tianneng sold about 373 million power batteries in 2022. It is calculated that each group of batteries (4 batteries in a group) can last 60 kilometers after charging, and each battery can be charged and discharged 400 times, the cumulative mileage of Tianneng's batteries sold each year can reach 2,238 billion kilometers.

天能每年售出約  
Tianneng sold annually

**3.73 億只動力電池**  
373 million power batteries

累計行駛里程可達

The accumulated mileage can reach

**22,380 億公里**  
2,238 billion kilometers

中國當前摩托車排放量限值為每公里排放一氧化碳2g，每億公里排放一氧化碳200噸；中國當前轎車排放量限值為每公里排放一氧化碳1g，每億公里排放一氧化碳100噸。

The current emission limit for motorcycles in China is 2g carbon monoxide per kilometer and 200 tons of carbon monoxide per 100 million kilometers. China's current emissions limit for cars is 1g of carbon monoxide per kilometer and 100 tons of carbon monoxide per 100 million kilometers.

假設以80%代替摩托車里程，20%代替轎車里程，那麼天能一年售出的電池（累計行駛里程22,380億公里），代替摩托車里程部分為17,904億公里，可實現減少一氧化碳排放3,580,800噸；代替轎車里程部分為4,476億公里，可實現減少一氧化碳排放447,600噸，則天能一年售出的電池可實現減少一氧化碳4,028,400噸，即402.8萬噸。

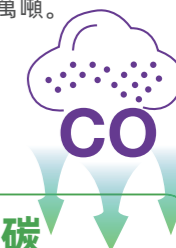
Let's say replacing 80% of motorcycle miles and 20% of car miles. Then, the battery mileage (Cumulative mileage of 2,238 billion kilometers) of Tianneng sold a year instead of motorcycle mileage is 1,790.4 billion kilometers, which can reduce carbon monoxide emission of 3,580,800 tons; the mileage of replacing cars' is 4,476 billion kilometers and 447,600 tons of carbon monoxide emissions can be reduced. As a result, Tianneng can reduce carbon monoxide by 4,028,400 tons, or 4.028 million tons, from the batteries it sells in a year.

天能每年售出約  
Tianneng sold annually

**3.73 億只動力電池**  
373 million power batteries

可實現減少一氧化碳  
Reduced carbon monoxide

**402.8 萬噸**  
4.028 million tons



摩托車百公里油耗為2.5升，汽油的碳排放係數為每升2.3Kg，摩托車百公里排放為5.75Kg，億公里排放為5750噸。轎車百公里油耗為9升，汽油的碳排放係數為每升2.3Kg，轎車百公里排放為20.7Kg，億公里排放為20,700噸。

The fuel consumption of motorcycles 100 kilometers is 2.5 liters, the carbon emission coefficient of gasoline is 2.3Kg per liter, the emission of motorcycles per 100 kilometers is 5.75Kg, and the emission of 100 million kilometers is 5,750 tons. The fuel consumption of cars is 9 liters per 100 kilometers, the carbon emission coefficient of gasoline is 2.3Kg per liter, the emission of cars is 20.7Kg per 100 kilometers, and the emission of 100 million kilometers is 20,700 tons.

假設以80%代替摩托車里程，20%代替轎車里程，那麼天能一年售出的電池（累計行駛里程22,380億公里），代替摩托車里程部分為17,904億公里，可實現減少二氧化碳排放10,295萬噸；代替轎車里程部分為4,476億公里，可實現減少二氧化碳排放9,265萬噸，由於電池用於電動車後每億公里自身會產生1,200噸二氧化碳排放量，那麼天能一年售出的電池在行駛過程中共產生2,686萬噸二氧化碳，則天能一年售出的電池可實現減少二氧化碳16,874萬噸。

Let's say replacing 80% of motorcycle miles and 20% of car miles. Then, the battery mileage (Cumulative mileage of 2238 billion kilometers) of Tianneng sold a year instead of motorcycle mileage is 1790.4 billion kilometers, which can reduce carbon dioxide emission of 102,950,000 tons; the mileage of replacing cars' is 4476 billion kilometers and 92,650,000 tons of carbon dioxide emissions can be reduced. Since batteries themselves produce 1,200 tons of carbon dioxide per billion kilometers for electric vehicles. In this case, a total of 26.86 million tons of carbon dioxide are generated by the batteries sold by Tianneng in a year, so 168.74 million tons of carbon dioxide can be reduced by the batteries sold by Tianneng in a year.



天能每年售出約

Tianneng sold annually

**3.73 億只動力電池**

373 million power batteries



可實現減少二氧化碳

Reduced carbon dioxide

**16,874 萬噸**

168.74 million tons

假設每公頃土地栽種松樹1,000棵，可實現每天吸收二氧化碳1噸，一年可吸收二氧化碳365噸。

Assuming that 1,000 pine trees are planted per hectare of land, it can absorb 1 ton of carbon dioxide per day, and 365 tons of carbon dioxide per year.

天能一年售出的電池可實現減少二氧化碳16,874萬噸，相當於種植462,316公頃的松樹林一年吸收的二氧化碳量，由於每公頃土地栽種松樹1,000棵，那麼天能一年售出的電池減少的二氧化碳量相當於種植了約4.6億棵松樹。

The batteries sold by Tianneng in a year can reduce carbon dioxide by 168.74 million tons, equivalent to the amount of carbon dioxide absorbed by planting 462,316 hectares of pine forest in a year. With 1,000 pine trees planted per hectare, the amount of carbon dioxide reduced by the batteries Tianneng sells in a year is equivalent to planting about 460 million pine trees.



天能每年售出約

Tianneng sold annually

**3.73 億只動力電池**

373 million power batteries



相當於種植松樹

Equivalent to planting pine trees

**4.6 億棵**

460 million trees

天能已通過了ISO14001環境管理體系認證。2022年，為了加強環保管理，減少污染物排放，天能頒布並實施了《天能控股集團環安管理體系製度匯編（B/0版）》，具體製度包括《環安設備設施管理製度》《污染物管理製度》《環安監測預警管理製度》《環安三同時管理製度》《投資項目環安審批管理製度》《清潔生產管理製度》《碳資源管理製度》等，同時建立了集團新時期三級管理模式，實行「分層級環安管理」和「分條線環安管理」雙軌並行的環安管理機製。

Tianneng has passed the ISO14001 environmental management system certification. In 2022, in order to strengthen environmental management and reduce pollutant emission, Tianneng promulgated and implemented the Compilation of Environmental Safety Management System of Tianneng Holding Group (B/0 version), including Environmental Safety Equipment and Facilities Management System, Pollutant Management System, Environmental safety Monitoring and Early Warning Management System, Three Simultaneous Environmental Safety Management System, Investment Project Environmental Safety Approval Management System, Clean Production Management System, and Carbon Resource Management System. At the same time, Tianneng has established the three-level management mode of the Group in the new period, and implemented the dual-track and parallel environmental safety management mechanism of "hierarchical environmental safety management" and "sub-line environmental safety management".

廢氣：本集團採用合適的工藝手段、引入先進設備，多措並舉妥善處理生產過程中的廢氣，滿足監管要求。

Waste gas: The Group adopts appropriate technological means, introduces advanced equipment, and takes multiple measures to properly treat waste gas during production so as to meet regulatory requirements.

鉛蓄電池產業 Lead-acid Battery Industry	再生鉛產業 Recycled Lead Industry	塑殼製造產業 Plastic Shell Manufacturing Industry
<p>各基地均採用“布袋+濾筒+高效過濾器”的組合配置，鉛實測排放濃度在0.08~0.2毫克/立方米之間，遠低於國家電池製造行業污染物排放標準限值0.5毫克/立方米。</p> <p>With the "Cloth Bag + Filter Cartridge + High-Efficiency Filter" configuration, all bases are able to control the lead emission concentration within the range of 0.08 to 0.2 mg/m<sup>3</sup> (actually measured), which is far below the pollutant emission standard limit of 0.5 mg/m<sup>3</sup> in the national battery manufacturing industry.</p>	<p>主要排放口採用“SNCR+余熱鍋爐+急冷+電除塵+制酸系統+離子液吸收+三級脫硫鹼液噴淋(應急)+濕電除塵+SCR脫銷”工藝，鉛及其化合物實測排放濃度在0~0.2毫克/立方米，遠低於國家排放標準2毫克/立方米。</p> <p>The main discharge outlet adopts the process of "SNCR+ HRSG+ Quenching+ Electrostatic Precipitation+ Acid Production System+ Ionic Liquid Absorption + Tertiary Desulfurization Alkali Spray (Emergency)+ Wet Electrostatic Precipitation + SCR Desale". The measured emission concentration of lead and its compounds is controlled within the range from 0 to 0.2 mg/m<sup>3</sup>, which is far below the national emission standard of 2 mg/m<sup>3</sup>.</p>	<p>各基地均採用RTO或RCO裝備處理有機廢氣，各產業污染物實測排放濃度值均處於國內領先水平。</p> <p>All bases adopt RTO or RCO equipment to treat organic waste gas, and the measured emission concentration of pollutants in each industry are among the lowest in China.</p>

廢水：本集團嚴格遵守《水污染防治法》等法律法規，對廠區產生的廢水進行統一管理並對處理後的污水進行抽查，確保排放的廢水水質符合《污水綜合排放標準》和地方排放要求，公司各產業廢水污染治理水準處於國際領先水準。

Wastewater: The Group strictly observes the Laws on Prevention and Control of Water Pollution and other relevant laws and regulations, conducts unified management of wastewater generated in the factory, and conducts spot checks on treated wastewater to ensure that the quality of discharged wastewater meets the Comprehensive Wastewater Discharge Standards and local discharge requirements. The company's wastewater control level in each industry is at an international leading level.

鉛蓄電池產業 Lead-Acid Battery Industry	再生鉛產業 Recycled Lead Industry
<p>廢水以“生化+斜板沉淀”工藝配套中水回用系統為主，水回用率70%以上，廢水總鉛實測排放濃度在0.15mg/m<sup>3</sup>以內。</p> <p>The wastewater is mainly treated by a "Biochemical+ Inclined Plate Sedimentation" process and reclaimed water reuse system. The water reuse rate is higher than 70%, and the measured discharge concentration of lead in wastewater is within 0.15 mg/m<sup>3</sup>.</p>	<p>生產廢水按照“近零排放”原則設計。 Production wastewater is designed according to the principle of "near zero discharge".</p> <p>純水製備採用“砂濾+二級RO+EDI+拋光混床”過程。 Pure water is produced using the "Sand Filtration+ Secondary RO+EDI+ Polishing Mixed Bed" process.</p> <p>綜合廢水採用“軟化+過濾+二級RO+NF”工藝。 The treatment of comprehensive wastewater adopts the "Softening+ Filtering+ Secondary RO+NF" process.</p> <p>濃鹽水採用“冷卻結晶+熱熔+MVR制無水硫酸鈉”工藝。 The treatment of concentrated brine adopts the process of "Cooling Crystallization+ Hot Melting+ MVR to produce anhydrous sodium sulfate".</p>

固體廢棄物：本集團編制了《固體廢物管理制度》，對生產過程中產生的含鉛廢物、廢勞保等危險廢物按照《固體廢物防治法》規定建設了危險廢物貯存間，並規範收集、貯存、轉移、處置流程，定期委託有資質的處置單位進行處置，完善台賬，實現產生、貯存、處置全生命週期的管理；對於生產過程中的廢紙板、廢鐵等一般固廢，公司建立一般固廢貯存間並委託有資質的處置單位進行迴圈利用，實現一般固廢的分類收集、轉移及合規處置。

Solid wastes: The Group has not only developed the Solid Waste Management System, built storage rooms for hazardous wastes such as lead containing wastes and labor protection wastes generated in the production process in accordance with the Laws on Prevention and Control of Solid Wastes, but also has standardized the collection, storage, transfer, and disposal processes and regularly entrusted qualified disposal units to dispose solid wastes, thus improving its accounting and realizing lifecycle management of production, storage, and disposal. For general solid wastes such as waste cardboard and iron generated in the production process, the company has a dedicated room to store them before entrusted qualified disposal units recycle them so as to achieve classified collection, transfer, and compliant disposal of general solid wastes.



在降本增效方面，天能還通過採用先進的清潔生產技術和環保設備對鉛粉製造工序、分刷板工序、鑄焊工序、內化成工藝升級等工序進行改造，採用膜過濾技術對污水進行脫鹽處理，提高水資源回用率，可為公司每年節約電解鉛65噸、合金鉛50噸、98%硫酸110噸，每年節約用水5.94萬噸，蒸汽3,344噸、電力894萬kWh，生產過程中的邊角料和廢棄物回收率接近100%；本集團全面推廣無紙化辦公，提倡線上辦公，減少紙資源使用，必要使用紙資源時，全集團採用租賃打印，綜合降低相關成本達40%，進一步節約辦公資源、改善工作作風，提升整體工作效率。

In terms of cost reduction and efficiency improvement, Tianneng also adopts advanced cleaner production technology and environmental protection equipment to transform the lead powder manufacturing process, brush plate splitting process, casting and welding process, internalization process upgrading and other processes, adopts membrane filtration technology to desalinate sewage and improve the reuse rate of water resources. It can save 65 tons of electrolytic lead, 50 tons of alloy lead, 110 tons of 98% sulfuric acid, 59,400 tons of water, 3,344 tons of steam and 8.94 million kWh of electricity every year. The recovery rate of scraps and waste in the production process is close to 100%. The Group fully promotes paperless office, advocates online office, and reduces the use of paper resources. When it is necessary to use paper resources, the whole group adopts leasing printing, which comprehensively reduces relevant costs by 40%, further saves office resources, improves work style and improves overall work efficiency.

## 降本增效

In terms of cost reduction and efficiency improvement

## 公司每年節約

It can save



# 綠色智造 構築可持續發展之路

## GREEN SMART MANUFACTURING TO BUILD THE ROAD OF SUSTAINABLE DEVELOPMENT

天能的綠色轉型是從2004年開始的。2004年5月，時任浙江省委書記習近平來到天能考察，勉勵天能「騰籠換鳥」，走綠色可持續的發展道路。2019年11月，在習近平總書記和法國總統馬克龍見證下，天能和法國帥福得公司簽約。雙方共同開發、製造和銷售高性能鋰電池，向全球市場提供動力和儲能領域的清潔能源系統解決方案。天能綠色高質量發展道路越走越堅實。2020年9月，中國明確提出了2030年「碳達峰」與2060年「碳中和」目標。天能作為全球新能源電池領域的領軍企業，助力「雙碳」工作，首當其沖，責無旁貸。

Tianneng's green transformation began in 2004. In May 2004, Xi Jinping, then secretary of Zhejiang Provincial Party Committee, visited Tianneng and encouraged it to "vacating cage to change bird" and take the road of green and sustainable development. In November 2019, under the witness of General Secretary Xi Jinping and French President Emmanuel Macron, Tianneng signed a contract with France SAFT Company. The two companies jointly develop, manufacture and sell high-performance lithium batteries to provide clean energy system solutions for power and energy storage to the global market. The road of green and high-quality development of Tianneng is becoming more and more solid. In September 2020, China set the goal of "carbon peak" by 2030 and "carbon neutral" by 2060. As a leading enterprise in the field of new energy batteries, Tianneng is the first to bear the brunt to help the "Carbon Peaking and Carbon Neutrality" work.

工業碳排放位列全球第三，是實現「雙碳」目標的重要一環。天能把綠色發展理念貫穿到產品設計、製造、回收處置的全過程中，通過綠色智造和循環回收，打造閉環式產業鏈，全面融入綠色產業生態，助力「雙碳目標」的實現。

Industrial carbon emissions rank third in the world, which is an important part of achieving the "dual carbon" goal. Tianneng has put the concept of green development into the whole process of product design, manufacturing, recycling and disposal. Through green intelligent manufacturing and recycling, Tianneng has created an endless-loop industrial chain, fully integrated into the green industrial ecology, and helped achieve the "Carbon Peaking and Carbon Neutrality goal".

近年來，天能全面探索綠色增長新模式，從綠色產品、綠色車間、綠色工廠、綠色園區、綠色標準、綠色供應鏈等入手，借助互聯網、大數據等手段，將「綠色智造」主線貫穿到生產經營全流程，引領產業向綠色、高端、智慧方向發展。集團先後獲得了8家國家綠色工廠、8家國家綠色供應鏈管理示範企業，22項國家綠色產品，5家國家工業產品綠色設計示範企業等多項榮譽。

In recent years, Tianneng has comprehensively explored a new model of green growth, starting from green products, green workshops, green factories, green parks, green standards, green supply chains, etc. with the help of the internet, big data and other means, it puts "green intelligent manufacturing" into the whole process of production and operation, leading the industry to develop in a green, high-end and intelligent direction. The Group has been awarded 8 National Green Factories, 8 National Green Supply Chain Management Demonstration Enterprises, 22 National Green Products, 5 National Industrial Product Green Design Demonstration Enterprises.



8 家國家綠色工廠  
8 National Green Factories



8 家國家綠色供應鏈管理示範企業  
8 National Green Supply Chain Management  
Demonstration Enterprises



22 項國家綠色產品  
22 National Green Products



5 家國家工業產品綠色設計示範企業  
5 National Industrial Product Green Design  
Demonstration Enterprises



# 智慧能源 打造循環綠色發展圈

## SMART ENERGY TO CREATE CIRCULAR GREEN DEVELOPMENT CIRCLES

儲能與資源循環是「雙碳」目標落地的重要支撐。天能攜智慧能源解決方案與資源再生解決方案持續精進，傾力構築綠色發展生態圈為未來蓄勢。

在智能能源領域，天能積極開發多層次儲能產品和系統解決方案，推進產業鏈條延伸和高端化升級，尤其在儲能上已形成綠色高能鉛炭電池、鋰離子電池、氫燃料電池等一系列解決方案，可根據客戶的不同應用場景，提供最佳方案。譬如2022年12月12日，集團附屬子公司天能股份與太湖能谷達成戰略合作意向，並簽署了《儲能項目戰略採購合作協議》。未來三年，太湖能谷將在其所實施的項目中採用本集團的鉛炭電池電芯，總量不低於30GWh，其中為本集團的生產基地投資配套建設不超過3GWh的儲能電站。

天能智能型儲能電站廣泛應用於光伏+儲能、風電+儲能等電網側、用戶側領域，打造了長興雒城儲能電站電網側項目、非洲光伏儲能離網項目、上海松江用戶側項目、長沙汽車產業園智能微電網系統等。

Energy storage and resource cycle is an important support for the realization of "Carbon Peaking and Carbon Neutrality" goal. Tianneng continues to improve with smart energy solutions and resource regeneration solutions, striving to build a green development ecosystem to build momentum for the future.

In smart energy, Tianneng actively develops multi-level ESS products and system solutions to promote the extension of the industrial chain and high-end upgrading. Especially in energy storage, Tianneng has developed a series of green high-energy lead carbon battery, li-ion battery, hydrogen fuel cell and other solutions, which can provide the best solution according to different application scenarios of customers. For example, on December 12, 2022, Tianneng, a subsidiary of the Group, reached a strategic cooperation intention with Tahoe and signed the Strategic Procurement Cooperation Agreement for Energy Storage Project. In the next three years, Tahoe will apply the Group's lead carbon battery cells in its projects, the total amount of which is no less than 30GWh. Among them, the energy storage power station with less than 3GWh is invested in supporting construction for the Group's production base.

Tianneng Smart Energy Storage Power Station is widely used in photovoltaic + ESS, wind power + ESS and other fields on the grid side and user side. It has created the grid side project of Changxing Zhicheng Energy storage Power Station, the Off-grid Project of Photovoltaic Energy Storage in Africa, the user side project of Shanghai Songjiang, and the smart micro-grid system of Changsha Automobile Industrial Park, etc.

天能智慧能源以客戶為中心，為高耗能、高污染園區或者企業提供一站式低碳綠色電力解決方案。天能在廠區建立了光伏綠電系統，充分利用廠區的空閒屋頂安裝光伏組件、支架、逆變器、交流匯流箱、接入櫃等設備，完成光伏系統的建設，採用自發自用余電電網模式接入電網。截至2022年12月31日，我們已建成屋頂光伏項目約37.93MW，擬建約140.10MW，項目全部建成後可形成178.03MW規模的發電能力，每年可產生綠電約1.87億度。天能2022年已完成浙江省吳山基地、河南省濮陽基地等5個生產基地分布式能源項目並網工作，目前計劃及在建的項目達16個，以安徽省界首生產基地項目為例，該項目建成後，每年將提供綠電1,583萬度，每年將減少CO<sub>2</sub>排放量12,758.60噸。

在資源再生領域，天能主動打造電池生產、使用、梯次利用、回收與資源再生全閉環，挖掘城市「新礦山」的價值。依托鉛鋰強大的管道力，通過在全國各地的終端門店，將廢舊電池分散回收、集中處置、無害化再生利用，形成了閉環式的循環經濟生態圈。同時，加快大循環事業的全國布局，除已在15個省取得了回收試點資質外，全國最大的廢舊電池「回收雲」平臺也已經上線運行。

Tianneng Smart Energy is customer-oriented and provides one-stop low-carbon green power solutions for high energy consumption and high pollution parks or enterprises. Tianneng has established a photovoltaic green power system in the factory, and has made full use of the idle roof of the factory to install photovoltaic modules, supports, inverters, AC confluence boxes, access cabinets and other equipment to complete the construction of the photovoltaic system, which is connected to the power grid in the mode of self-generated and self-used surplus power grid. As of December 31, 2022, we have completed about 37.93MW rooftop photovoltaic project and planned to build about 140.10MW. When fully completed, the project will form a power generation capacity of 178.03MW and generate about 187 million KWh of green electricity per year. By 2022, Tianneng has completed the grid connection of five distributed energy projects in its production bases, including Wushan base in Zhejiang Province and Puyang base in Henan Province. Currently, 16 projects are planned or under construction. Taking the Jieshou Production Base Project in Anhui Province as an example, once completed, the project will provide 15.83 million KWh of green electricity annually and reduce CO<sub>2</sub> emissions by 12,758.60 tons annually.

In the field of resource regeneration, Tianneng takes the initiative to create a full endless loop of battery production, use, step utilization, recycling and resource regeneration to tap the value of the city's "new mines". Relying on the strong channel power of lead and lithium, through the terminal stores throughout the country, the waste battery is subject to dispersed recycling, centralized disposal, harmless recycling, forming an endless-loop circular economic ecosystem. At the same time, the national layout of the major recycling business has been accelerated. In addition to obtaining the qualification of pilot recycling in 15 provinces, the largest "recycling cloud" platform of used batteries in China has also been put into operation.



天能智慧能源以客戶為中心，提供一站式低碳綠色電力解決方案

Tianneng Smart Energy is customer-oriented and provides one-stop low-carbon green power solutions

我們已建成屋頂光伏項目約 **37.93MW**

We have completed about 37.93Mw rooftop photovoltaic project

擬建約 **140.10MW**

Planned To Build About 140.10MW

項目全部建成後可形成 **178.03MW** 規模的發電能力

When fully completed, the project will form a power generation capacity of 178.03MW

每年可產生 **1.87** 億度綠電

Generate about 187 million KWh of green electricity per year.

# 攜手共進 守護綠色家園

## JOIN HANDS TO PROTECT THE GREEN HOME

世界能源發展的變局，關係到世界經濟、氣候與環境的發展變化，是全球命運共同體的核心發展內容與全球性課題，更關係到每個家庭與個人的能源使用與能源安全。

天能堅持開放的合作態度，積極參與國際性的行業展會與學術會議，並且與國內多家主流車企開展合作，共同促進綠色能源可持續發展。

2022年，公司參加了中國新能源電池技術高峰論壇、2022世界電池產業博覽會暨第七屆亞太電池展、第六屆新型電池電解質/隔膜材料技術國際論壇、第五屆先進高功率電池國際研討會等各種活動，掌握行業動態，了解技術發展趨勢，促進行業發展。

面對全球氣候變化與環境要求，公司積極承擔著「低碳」發展使命；面對社會的關切，公司履行保障能源安全的責任，積極面對市場痛點，組織其他同行業企業共同應對市場無序競爭。2022年8月19日，由天能主辦的第五屆819電池節暨新能源發展峰會，以在線直播+線下聯動的形式成功舉辦。大會以「共創未來美好世界」為主題，來自新能源領域的科研院士、經濟學家、專家學者和企業領袖，共同圍繞綠色發展、低碳科技、共贏未來等關鍵詞，以及全球能源轉型、新能源產業發展與中國「雙碳」目標實現路徑、新能源科技創新等核心議題，進行交流與分享。大會通過新華社現場雲、鳳凰新聞、今日頭條、抖音、全球電動車、同花順等平臺進行全球同步直播，累計觀看人數突破2,000萬人次。

The change of world energy development is related to the development and change of world economy, climate and environment, which is the core development content and global topic of the global community of destiny, but also related to the energy use and energy security of every household and individual.

Tianneng adheres to an open attitude of cooperation, actively participates in international industry exhibitions and academic conferences, and cooperates with a number of domestic mainstream automobile enterprises to jointly promote the sustainable development of green energy.

In 2022, the Company participated in various activities such as China New Energy Battery Technology Summit Forum, 2022 World Battery Industry Expo and the 7th Asia Pacific Battery Exhibition, the 6th International Forum on New Battery Electrolyte/Diaphragm Materials Technology, the 5th International Symposium on Advanced High Power Batteries to master the industry dynamics, understand the technology development trend, and promote the development of the industry.

In the face of global climate change and environmental requirements, the Company actively undertakes the mission of "low-carbon" development; in the face of social concerns, the Company performs the responsibility of ensuring energy security, actively faces the market pain points, and organizes other enterprises in the same industry to jointly cope with the disorderly market competition. On August 19, 2022, the 5th 819 Battery Festival and New Energy Development Summit hosted by Tianneng was successfully held in the form of online live broadcasting and offline linkage. The theme of the conference is "Creating a Better World in the Future". Academicians, economists, experts, scholars and business leaders from the field of new energy exchanged and shared with each other around key words such as green development, low-carbon technology and win-win future, as well as core issues such as global energy transformation, new energy industry development and China's "Carbon Peaking and Carbon Neutrality" goal realization path, and new energy technology innovation. The conference was broadcasted live around the world through Xinhua News Agency Live Cloud, IFENG, Toutiao, Tik Tok, Global Electric Vehicle, Flush and other platforms, and the cumulative number of viewers exceeded 20 million man-time.



2009年起，天能先後在浙江長興、安徽界首、河南濮陽和貴州臺江建成鉛蓄電池循環經濟產業園，並在全國15个省建設規範有效的回收體系。採用國際最先進的再生鉛熔煉工藝，打造了鉛蓄電池行業集「回收—冶煉—再生產」為一體的循環式綠色循環產業鏈。

天能在動力電池回收領域穩占優勢地位的同時，正在大步進軍鋰電池回收領域，逐步構建了「鉛、鋰」雙循環體系。天能在浙江長興已建設年處理1萬噸廢舊鋰電池回收再利用新材料基地，與同產能的原礦企業相比，年可減少廢水、廢渣排放數百萬噸，取得國家工信部《新能源汽车廢舊動力蓄電池綜合利用行業規範條件》再生利用、梯次利用資質。與此同時，濱海10萬噸鋰電回收項目開工，該項目位於江蘇濱海經濟開發區沿海工業園，占地約450畝，分兩期實施。為響應國家「雙碳」戰略目標，解決資源約束突出問題，天能成立江蘇天能新材料有限公司，實施廢舊鋰電池高值資源化利用項目，預計2023年底建成投產。項目建成後形成年處理10萬噸廢舊鋰電池及含鎳、鈷、鋰原材料能力；將提供勞動就業崗位700多個、工業產值35億元以上。

Since 2009, Tianneng has built lead-acid battery recycling economic industrial parks in Changxing, Zhejiang province, Jiashou, Anhui Province, Puyang, Henan Province and Taijiang, Guizhou Province, and established standardized and effective recycling systems in 15 provinces in China. Adopting the most advanced recycled lead smelting process in the world, the Company has built an end-less-loop green cycle industry chain integrating "recovery, smelting and reproduction" in the lead-acid battery industry.

While holding a dominant position in the field of power battery recycling, Tianneng is striding into the field of Li-ion battery recycling and gradually building "lead and lithium" double cycle system. Tianneng plans to build a new material base for recycling and reuse of 10,000 tons of waste Li-ion batteries in Changxing, Zhejiang province. Compared with raw mining enterprises with the same capacity, it can reduce the annual discharge of waste water and waste slag by millions of tons, and obtain the qualification of recycling and step utilization for Industry Specification Conditions for Comprehensive Utilization of Waste Power Batteries of New Energy Vehicles by the Ministry of Industry and Information Technology. At the same time, Binhai 100,000-ton Li-ion battery recycling project started. Located in the coastal Industrial Park of Jiangsu Binhai Economic Development Zone, the project covers an area of about 450 mu and will be implemented in two phases. In order to respond to the national "two-carbon" strategic goal and solve the prominent problem of resource constraint, Jiangsu Tianneng New Materials Co., Ltd. was established by Tianneng to implement the high-value resource utilization project of waste lithium batteries, which is expected to be completed and put into operation by the end of 2023. After the completion of project, the annual processing capacity of 100,000 tons of waste Li-ion batteries and raw materials containing nickel, cobalt and lithium will be formed. More than 700 jobs will be created and the industrial output will exceed RMB 3.5 billion.



2022年10月，由天能發起，各專業領域的各家企業及專家代表共同響應參與的天能全球化聯盟(TGA)在深圳正式成立，將進一步在開發新能源應用需求，構建產業生態，協同推進關鍵技術、標準製定、技術測試和認證，提升產業影響力和認同度等方面發揮積極作用。

In October 2022, the Tianneng Globalization Alliance (TGA) was formally established in Shenzhen, which was initiated by Tianneng and participated by various enterprises and expert representatives in various professional fields, which will further play a positive role in the development of new energy application needs, construction of industrial ecology, coordinated promotion of key technologies, standard formulation, technology testing and certification, and enhancement of industrial influence and recognition.

## 案例 CASE

### 天能、合力再攜手，共奔「雙碳」新藍海

TIANNENG AND HELI WILL JOIN HANDS TO MARCH TOWARDS  
THE NEW BLUE OCEAN OF "CARBON PEAKING AND CARBON NEUTRALITY"

攜手合作九年，天能與安徽合力股份有限公司，共商雙方未來的戰略合作。期間，雙方簽訂戰略合作框架協議，並就鉛鋁儲科技創新、循環再生利用、智慧物流以及後市場服務等領域的合作展開深入交流，天能與合力同處新能源行業，有著深厚的事業淵源，是緊密相連的命運共同體。合作以來，雙方彼此信賴、相互支持、合作共贏，充分發揮各自領域優勢，為新能源行業能源轉型和技術創新貢獻力量，期待雙方擴大合作，碰撞出更多的「火花」。

After nine years of cooperation, Tianneng and Anhui Heli Co., Ltd. have discussed their future strategic cooperation. During the period, the two sides signed a strategic cooperation framework agreement, and carried out in-depth exchanges on cooperation in such fields as technological innovation, recycling, and utilization of lead, hydrogen and lithium storage, intelligent logistics and after-market services. Tianneng and Heli are both in the new energy industry. They have deep career origins and are closely linked to each other. Since the cooperation, the two sides have trusted and supported each other for win-win cooperation, made full use of their respective advantages, and contributed to the energy transformation and technological innovation of the new energy industry. It is hoped that the two sides will expand cooperation and create more "sparks".



### 攜手航天，大循環項目達成戰略合作

REACHED STRATEGIC COOPERATION WITH AEROSPACE ON GRAND CYCLE PROJECT

瞄準國家「雙碳」戰略新機遇，基於兩家公司戰略布局及高質量發展的長遠考慮，2022年5月31日，天能和航天生態就環保綜合項目達成合作，並舉行合作簽約儀式。此次簽約是天能與航天生態達成合作的重要里程碑，將大大推動天能資源循環環保項目的建設。該項目總規劃設計規模22.5萬噸/年，其中一期擬建產能規模13.5萬噸/年，計劃於2024年初投產。

Aiming at the new opportunity of the national "dual carbon" strategy, based on the strategic layout of the two companies and the long-term consideration of high-quality development, On May 31, 2022, Tianneng and Aerospace Ecology reached cooperation on environmental protection comprehensive project, and held the cooperation signing ceremony. The signing of this contract is an important milestone in the cooperation between Tianneng and Aerospace Ecology, which will greatly promote the construction of Tianneng resource recycling and environmental protection project. The total planning and design scale of the project is 225,000 tons/year, including the proposed capacity of 135,000 tons/year in the first phase, which is scheduled to be put into operation in early 2024.



### 攜手國家電投、國家電網、太湖能谷，共拓新型儲能賽道

COOPERATE WITH SPIC, SGCC AND TAIHU ELECTRIC TO DEVELOP NEW ENERGY STORAGE

2022年12月12日，天能、國家電投、國家電網、太湖能谷達成戰略合作夥伴關係，共同簽署長興和平鎮、煤山鎮等共享儲能項目合作協議，助力中國能源綠色變革及「雙碳」目標實現。

On December 12, 2022, Tianneng, State Power Investment Corporation Limited ("SPIC"), State Grid Corporation of China ("SGCC") and Changxing Taihu Electric Co., Ltd. ("Taihu Electric") reached a strategic partnership and signed cooperation agreements on shared ESS projects such as Changxing Heping Town and Meishan Town, which will help realize China's energy green revolution and "Carbon Peaking and Carbon Neutrality" goals.

此次合作，天能將與國家電投、國家電網、太湖能谷共同攜手，充分發揮各自在行業、技術、產品、資源、政策、人才等方面的優勢，本著「優勢互補、資源共享、相互促進、共同發展」的原則，在儲能領域和綜合能源管理服務等方面共同探索創新、深入開展合作，共同構建以新能源為主體的新型能源系統，廣泛應用於用戶側、5G基站和共享等領域。

In this cooperation, Tianneng will work together with SPIC, SGCC and Taihu Electric to give full play to their respective advantages in industry, technology, products, resources, policies, talents and other aspects. Based on the principle of "complementary advantages, resource sharing, mutual promotion and common development", we will jointly explore innovation and carry out in-depth cooperation in the field of energy storage and comprehensive energy management services, and jointly build a new energy system based on new energy, which will be widely used in the user side, 5G base stations and sharing.



# 普惠發展 價值共享

## INCLUSIVE DEVELOPMENT AND VALUE SHARING

## 就業與納稅 EMPLOYMENT AND TAXATION

天能創造就業總量達百萬以上。其中直接創造就業崗位近3萬，集團旗下40萬個終端營銷網點，在全國範圍解決了超過100萬人的就業。先後開辦了天能大學、天能數智培訓學校、天能帥福得工匠學院等學習，提供多樣化的職業技能培訓等措施，助力員工高質量就業。近年，天能加快了轉型升級和高質量發展的步伐，需要新鮮力量加入公司，共同發展；同時，2022年大學畢業生的就業形勢嚴峻，天能積極響應國家『穩就業』的部署，強化了招聘力度，招聘了近千名大學應屆畢業生，為歷年來最高。

2022年，本集團在全國各地共繳納稅收超人民幣37億元。2023年1月28日，天能第八次獲得湖州「金象」企業、「納稅大戶」兩項榮譽。

Tianneng has created more than one million jobs. Among them, nearly 30,000 direct jobs have been created, and 400,000 terminal marketing outlets of the Group have provided employment for more than 1 million people nationwide. Tianneng has established Tianneng University, Tianneng Digital Intelligence Training School, and Tianneng Shuaifude Artisan College, etc., providing diversified vocational skills training and other measures to help employees find high-quality employment. In recent years, Tianneng has accelerated the pace of transformation and upgrading and high-quality development. Fresh forces are needed to join the Company for common development. Meanwhile, the employment situation for college graduates in 2022 was grim. Tianneng actively responded to the state's deployment of 'stable employment' and strengthened recruitment efforts, recruiting nearly 1,000 college graduates, the highest in the past years.

In 2022, the Group paid more than RMB 3.7 billion in taxes across the country. On January 28, 2023, Tianneng won the "Golden Elephant" enterprise and "large taxpayer" of Huzhou for the eighth time.



校招大學生訓練營集中培訓 Centralized Training for On-campus Recruited College Students

# 建言獻策

## GIVE ADVICE AND SUGGESTIONS

繼第十二屆、第十三屆人大代表，天能董事局主席張天任先生再次當選第十四屆人大代表，他不僅關注民生熱點，還聚焦行業發展，多次深入一線調研，廣泛聽取中小企業在發展中的難題，為他們出謀劃策。

2022年1月，國家財政部和國家稅務總局聯合發布了《關於完善資源綜合利用增值稅政策的公告》。根據公告，《資源綜合利用產品和勞務增值稅優惠目錄（2022年版）》自2022年3月1日起執行。公告和目錄內容顯示，從事再生資源回收的增值稅一般納稅人銷售其收購的再生資源，增值稅按照一般計稅方法計算，徵收率從13%調整為3%；「廢舊電池及其拆解物」退稅比例由30%提高至50%。

這兩項重大調整，正是張天任代表向全國「兩會」提交的《關於進一步支持鉛蓄電池產業發展循環經濟，促進資源綜合高效利用的建議》中的核心觀點。經過連續兩年的呼籲，這件關係到資源綜合利用行業高質量發展的建議，成為了現實。

Following the deputies to the 12th and 13th National People's Congress, the Chairman of the Board was re-elected as the deputy to the 14th National People's Congress, not only pays attention to the livelihood of the people, but also focuses on the development of the industry. He has conducted in-depth research for many times, listened to the difficulties of small and medium-sized enterprises in their development, and offered them advice and suggestions.

In January 2022, the Ministry of Finance and the State Administration of Taxation jointly issued the Announcement on Improving the VAT Policy on Comprehensive Utilization of Resources. According to the announcement, the Preferential List of value-added Tax on Products and Services of Comprehensive Utilization of Resources (2022 Edition) will come into effect on March 1, 2022. According to the announcement and the contents of the catalogue, for general VAT taxpayers engaged in recycling renewable resources to sell their purchased renewable resources, the VAT will be calculated according to the general tax method, and the levy rate will be adjusted from 13% to 3%. The tax rebate for "used batteries and their disassembled materials" will be raised from 30% to 50%.

These two major adjustments are the core ideas of Zhang Tianren's Suggestions on Further Supporting Lead-acid Battery Industry to Develop circular Economy and Promoting Comprehensive and Efficient Utilization of Resources submitted to the national "Two Sessions". After two consecutive years of appeals, this proposal, which relates to the high-quality development of the comprehensive utilization of resources industry, has become a reality.

2022年全國「兩會」，張天任代表提交28件議案和建議，其中議案4件，建議24件，包括助推國家「雙碳」戰略和能源結構轉型，推進鄉村振興和共同富裕，支持實體經濟，倡導企業綠色發展，鼓勵綠色出行，推進長三角一體化等國家重大戰略和社會民生問題，這些議案建議，受到了媒體的廣泛關注。

In 2022, Zhang Tianren submitted 28 proposals and suggestions during the national "Two Sessions", including four proposals and 24 suggestions, which cover promoting the national "Carbon Peaking and Carbon Neutrality" strategy and energy structure transformation, promoting rural revitalization and common prosperity, supporting the real economy, advocating green development of enterprises, encouraging green travel, promoting the integration of the Yangtze River Delta and other major national strategies and social and livelihood issues. These proposals have received widespread media attention.



全國人大代表張天任

Zhang Tianren, Deputy to the National People's Congress

# 公益慈善

## PUBLIC WELFARE AND CHARITY

同心共築公益夢，砥礪奮進正當時。勇擔社會責任，永葆赤子初心，這既是承諾更是責任，天能始終相信回饋社會，與環境、人類共生發展是企業在發展中必須肩負的使命，也是企業實現可持續發展的基礎和前提。

It is time to work together to build a public welfare dream and forge ahead. Taking social responsibility and preserving our original aspiration is not only a commitment but also a responsibility. Tianneng always believes that giving back to the society and developing symbiotic with the environment and human beings are the missions that enterprises must shoulder in their development, as well as the basis and premise for enterprises to achieve sustainable development.

作為新能源電池行業領軍企業，天能一方面以科技創新驅動高質量發展，另一方面積極承擔「企業公民」的角色，以實際行動回報社會關心。多年來，天能累計向社會捐贈了數千萬元的物資和現金，用於各類搶險救災、公益慈善、養老助學等。

As a leading enterprise in the new energy battery industry, Tianneng drives high-quality development with scientific and technological innovation on one hand, and actively assumes the role of "corporate citizen" on the other hand, and returns social concern with practical actions. Over the years, Tianneng has donated RMB 10 millions in materials and cash to society for various kinds of rescue and disaster relief, public charity, pension and education.

2022年4月，上海疫情防控正處於最緊要的關口，在張天任董事長的指揮下，天能緊急行動，向上海市閔行區紅十字會捐贈一批戶外移動電源，幫助上海抗疫。此前，天能還捐贈了一批可降解塑料袋等抗疫物資。2022年4月21日，裝載著天能戶外移動儲能電池的卡車，從長興出發，馳援上海抗擊疫情。2022年7月，上海市閔行區委、區人民政府專程發來感謝信，對天能捐贈抗疫應急物資予以感謝。

In April 2022, Shanghai epidemic prevention and control is at a critical moment. Under the command of Chairman of the Board, Zhang Tianren, Tianneng urgently donated a batch of outdoor mobile power supplies to the Red Cross Society of Minhang District of Shanghai to help Shanghai fight the epidemic. Earlier, Tianneng also donated a batch of biodegradable plastic bags and other anti-epidemic supplies. On April 21, 2022, a truck loaded with Tianneng outdoor mobile ESS departs from Changxing to help Shanghai fight the epidemic. In July 2022, Minhang District Committee and the People's Government of Shanghai sent a special letter of thanks to Tianneng for its donation of emergency supplies.



同心守「滬」，共克時艱  
Work together to safeguard "Shanghai" and tide over difficulties

2022年6月，天能黨委聯合長興縣人民醫院醫共體集團黨委、浙大二院心血管內科第二黨支部、煤山鎮衛生院黨支部等開展義診活動，為長興縣煤山鎮新川村村民送去優質醫療服務，讓老百姓在家門口享受優質醫療資源，切實感受到了便捷、貼心的專業醫療健康服務體驗。

In June 2022, the Tianneng Party Committee cooperated with the Party Committee of the Medical Community Group of Changxing County People's Hospital, the second Party Branch of the Cardiac Medicine Department of the Second Hospital of Zhejiang University, and the Party branch of the Health Center of Meishan Town to carry out free medical treatment activities, which provides high-quality medical services to the villagers of Xinchuan Village, Meishan Town, Changxing County, so that people can enjoy high-quality medical resources at their doorstep, and truly feel the convenient and intimate professional medical and health service experience.



義診活動現場 Free clinic activity site

2022年9月，天能界首公司組織走訪慰問界首市田營鎮一線防疫人員，感謝他們在防疫一線的堅守，並為他們送去了礦泉水、方便面、八寶粥等慰問物資。

In September 2022, Tianneng Jieshou Company organized a visit to the frontline epidemic prevention personnel in Tianying Town, Jieshou City, thanked them for their adherence to the epidemic prevention front line, and sent them mineral water, instant noodles, eight treasures porridge and other sympathy supplies.



送去慰問，表達敬意 Send condolences and show respect

2022年11月，供應鏈平臺事業部為天能員工患有急性髓系白血病的女兒小忻，發出《愛心捐款倡議書》組織了「愛心捐款」活動，大家紛紛慷慨解囊，獻出自己的愛心，一天時間就籌集捐款14,255元。這些愛心募捐款經過清點核算後，已送至天能員工手上，用於小忻的病情治療。

In November 2022, the supply chain Platform Business Department issued a Love Donation Proposal for Little Xin, the daughter of a Tianneng employee who suffered from acute myeloid leukemia and organized a "Love Donation" activity. Everyone generously donated their money and gave their love, and raised RMB 14,255 in one day. After counting and accounting, these donations have been sent to the staff of Tianneng for the treatment of Little Xin.



獻出愛心，傳遞正能量 Give love and transmit positive energy

一直以來，天能積極投身幫扶助殘、愛心助學、扶貧濟困等慈善公益活動和光彩事業，構建了「鄉賢會平臺」、「村企共建平臺」、「天能公益基金平臺」三大平臺機製，打造「責任天能」，以自身實際行動回報社會。

As always, Tianneng has been actively engaged in charitable and public welfare activities such as helping the disabled, caring for students and helping the poor. Tianneng has built three platform mechanisms, namely "Village Elites Association Platform", "village enterprise co-construction platform" and "Tianneng Public welfare Fund platform", and created "Responsible Tianneng" to repay the society with its own practical actions.

# 振興鄉村 共同富裕

## REVITALIZE RURAL AREAS AND ACHIEVE COMMON PROSPERITY



位於浙江省長興縣煤山鎮的新川村  
Xinchuan Village in Meishan Town, Changxing County, Zhejiang Province

## 村企共建 落後小村莊蝶變成「綠富美」

### VILLAGE ENTERPRISE JOINT CONSTRUCTION- BACKWARD VILLAGE BECOMES "GREEN RICH BEAUTY"

天能與新川村多年堅持開展「村企共建」模式，以產業帶動強經濟，以模式創新促增收，以鄉賢支持謀發展，全力打造全國全省村級共富樣板。走上了一條生態優先、綠色發展的新路子，新川村從落後的小村莊蝶變成「綠富美」，成為了浙江省全面小康建設示範村、浙江省美麗鄉村特色精品村，2020年村民年人均收入已逾人民幣15萬元。

以產業帶動強經濟，夯實共富基礎。天能充分發揮龍頭企業的帶動輻射作用，引導當地村民發展電池配套產業，還投資建成煤山綠色製造產業園，吸引了毛竹深加工、塑殼加工、建築服務等一批「大好高」項目在鎮村落戶，形成以動力電池為核心的新能源、新材料、新服務等產業生態圈，真正做到「天能製造、新川配套」，為廣大村民鋪就了一條「就業不離土、安居不離鄉」的富民路。

以模式創新促增收，拓寬創富渠道。新川村正在實施強村惠民工程，大力發展數字化賦能行動、新鄉賢帶富行動、多業態經濟行動，進一步推進鄉村振興和共同富裕。創新性引入現代股權基金模式，建設了三家「共富公司」，不僅盤活了村民閑置資金，用於發展綠色工業、休閒農業、旅遊經濟、精品民宿等特色優勢產業，不斷壯大村級集體經濟，豐富鄉村經濟業態，進一步延長富民產業鏈，還讓村民成為股東，共享鄉村發展紅利。目前，新川村民創辦企業共有80家，用工人數1,831名、年產值人民幣17億元。

以鄉賢支持謀發展，共建富美未來。截至目前，天能協同新川村連續舉辦了三屆新鄉賢大會，累計收到捐款近人民幣2,000萬元，用於全村經濟社會發展。天能的股東和外地管理人員成為新川新鄉賢，會把更多信息、資金、技術等優勢資源帶到村裏、支持家鄉建設發展，並引導在外新鄉賢回歸家鄉、建設家鄉、反哺家鄉。同時，天能退休員工也會加入新川村治理事會和鄉賢會，投身美麗鄉村建設，參與鄉村善治，為全村經濟社會高質量發展建言獻策。

Tianneng and Xinchuan Village have been adhering to the "village-enterprise co-construction" model for many years, driving the economy with industry, increasing income with model innovation, and seeking development with the support of rural elites, and striving to build a model of village-level shared wealth in the whole province. Taking a new path of ecological priority and green development, Xinchuan Village has transformed from a backward small village into a "green rich beauty", becoming a demonstration village of all-round well-off construction in Zhejiang Province and a featured fine village of beautiful countryside in Zhejiang Province. In 2020, the annual per capita income of villagers has exceeded RMB 150,000.

Strengthen the economy through industry and consolidate the foundation for common prosperity. Tianneng gives full play to the leading enterprises' driving and radiating role, guiding local villagers to develop battery supporting industries, and investing in the construction of Meishan Green Manufacturing Industrial Park, which has attracted a number of "large, great and high-tech" projects such as deep-processing of bamboo, plastic-case processing and construction services to be settled in the town and village, which has formed an industrial ecosystem of new energy, new materials and new services with power batteries as the core, truly realizing "Tianneng Manufacturing and Xinchuan Supporting", and paving a prosperous road of "Local Employment and Settlement" for the majority of villagers.

Promote income growth through model innovation and expand channels for creating wealth. Xinchuan Village is implementing the project of strengthening the village and benefiting the people, and vigorously developing the action of digital empowerment, the action of bringing prosperity by new rural elites, and the action of multi-business economic, so as to further promote rural revitalization and common prosperity. Innovative introduction of modern equity fund mode and the construction of the three company of "wealth", not only revitalize the idle funds of the villagers, to develop the green industry, leisure agriculture, tourism economy, boutique home stay facility, such as special advantage industries, develop the village-level collective economy, enrich rural economy forms, further extend the rich industrial chain, but also let the villagers become shareholders to share rural development dividend. At present, there are 80 enterprises founded by villagers in Xinchuan, with 1,831 employees and an annual output value of RMB 1.7 billion.

Seek development with the support of rural elites and build the future of green rich beauty. Up to now, Tianneng cooperated with Xinchuan Village to hold three consecutive sessions of New Village Elites Congress, and received a total of nearly RMB 20 million of donations for the economic and social development of the whole village. The shareholders and non-local managers of Tianneng will become the new village elites of Xinchuan, who will bring more information, capital, technology and other advantageous resources to the village to support the construction and development of their hometown, and guide the new village elites to return to their hometown, build their hometown, and re-nurture their hometown. At the same time, the retired employees of Tianneng will also join the Xinchuan Village Governance Council and the Village Elites Association, devote themselves to the construction of beautiful villages, participate in the good village governance, and offer suggestions for the high-quality economic and social development of the whole village.



## 結對幫扶 奔向美麗鄉村共富路

### PARTNER ASSISTANCE THE ROAD TO COMMON PROSPERITY IN BEAUTIFUL COUNTRYSIDE

長期以來，天能還積極響應國家「東西協作」、浙江「山海協作」號召，助力26縣跨越式發展，深入開展「萬企幫萬村」「對口幫扶」等行動，推動企業製定產業拉動、利益聯結、就業增收扶貧計劃。從2005年起先後在河南、江蘇、安徽、貴州等省份開建工廠，與界首市大黃鎮史爐村、沭陽縣合興村等當地貧困村「結對子」，通過就業扶貧、消費扶貧、捐贈扶貧，解決了上萬群眾的穩定就業和生活問題。在2020年，僅雲、貴、川三省就有3,241名建檔立卡貧困戶在天能實現穩定就業，年人均收入超人民幣6萬元。

2018年天能貴州分公司落地國家級貧困縣貴州臺江，以「公司+貧困戶+保底+分紅」的方式共建扶貧產業園，同時持續完善產業鏈建設，打通蓄電池產業的上下遊，直接帶動上遊產業鏈產值人民幣11億元，有效帶動上下遊產業鏈集群發展，將全力打造西南地區最具影響力的廢舊動力電池回收利用循環經濟產業基地。利益聯結了1,600名貧困戶，保障了貧困戶長效脫貧，2020年3月臺江縣退出貧困縣序列。目前，天能貴州正在加緊建設三期項目的西南售後中心，將帶動2,000人就業，工業產值將達到人民幣40億元。

For a long time, Tianneng has also actively responded to the call of the national "East and West Cooperation" and Zhejiang "Mountain and Sea Cooperation", helped 26 counties leap forward development, carried out in-depth actions such as "Ten Thousand Enterprises Help Ten Thousand Villages" and "Partners Assistance", and promoted enterprises to formulate poverty alleviation plans for industry promotion, interest linkage, employment and income increase. Since 2005, it has built factories in Henan, Jiangsu, Anhui, Guizhou and other provinces, and partnered with Shilu Village in Dahuang Town of Jiesshou City and Hexing Village in Shuyang County. Through poverty alleviation through employment, consumption and donation, tens of thousands of people have been provided with stable employment and livelihood. In 2020, 3,241 registered poor households in Yunnan, Guizhou and Sichuan provinces alone had stable employment in Tianneng, with an annual per capita income of over RMB 60,000.

In 2018, Tianneng Guizhou Branch landed in Taijiang, Guizhou, a national-level poor county, and built a poverty alleviation industrial park by the way of "company + poor households + minimum guarantee + dividend". Meanwhile, it continued to improve the construction of the industrial chain, opened up the upstream and downstream of the battery industry, directly drove the upstream industrial chain output value of RMB 1.1 billion, and effectively drove the upstream and downstream industrial chain cluster development, which will strive to build the most influential industrial base for recycling waste power batteries and recycling economy in Southwest China. The benefits have connected 1,600 poor households and ensured their long-term poverty alleviation. In March 2020, Taijiang County was removed from the list of poor counties. At present, Tianneng Guizhou is stepping up the construction of the southwest after-sales center of the third phase of the project, creating 2,000 jobs with the industrial output value reaching RMB 4 billion.



2022年11月，天能煤山公司認購了500箱紅心李，幫助汶川縣果農創收脫貧。此次愛心認購，緩解了汶川縣紅心李的滯銷困境，讓果農渡過難關，助力「好貨出山」。

此外，天能還「牽手」浙江慶元縣結對共建，助力慶元縣跨越式發展，簽訂發展合作框架協議，山海協作奔向共富路。

天能董事長張天任任職全國人大代表十年來，一直在為鄉村振興鼓與呼，先後提出《關於進一步建好管好用好農村文化禮堂的建議》、《關於繼承創新優秀傳統鄉土文化，助力鄉村振興的建議》等多件涉及推動鄉村振興高質量發展的建議，並通過建強基層黨組織戰鬥堡壘，以綠色產業為引領，發展多業態經濟，帶領鄉親們集體致富，走向共同富裕。

在慈善方面，2022年9月天能獲得了「鄉村振興獎」，12月榮獲第四屆「湖州慈善獎」——「機構捐贈獎」等；在社會責任領域，天能還榮獲了「浙江同心共富榜樣企業」「2021浙江省企業社會責任優秀報告」和「2021浙江省企業社會責任標桿企業（小區參與和發展）」，以及「湖州市生態文明建設十大公關案例」金獎等榮譽。這些榮譽獎項，再次見證了天能作為一家負責任的新能源行業領軍企業，長期以來一直所踐行的「富而思源，義利兼顧」的價值觀和義利觀。

In November 2022, Tianneng Meishan Company ordered 500 boxes of red flesh plum to help fruit farmers in Wenchuan County to generate income and alleviate poverty. The love subscription alleviates the unsalable dilemma of red flesh plums of Wenchuan County, so that fruit farmers tide over difficulties and help "good goods out of the mountain".

In addition, Tianneng also "hand in hand" with Zhejiang Qingyuan County for partner assistance, which aims to help Qingyuan County achieve leapfrog development. They signed a development cooperation framework agreement to head for common prosperity through mountain and sea cooperation.

Zhang Tianren, Chairman of the Board, has been advocating rural revitalization for a decade as a deputy to the National People's Congress. He has put forward a number of proposals on promoting high-quality development of rural revitalization, including Suggestions on Further Building, Managing and Utilizing Rural Cultural Halls and Suggestions on Inheriting and Innovating Excellent Traditional Local Culture to Help Rural Revitalization. By building and strengthening the fighting fortress of grass-roots Party organizations, taking green industry as the lead, and developing a multi-business economy, he led the villagers to get rich collectively and march towards common prosperity.

In terms of charity, Tianneng won the "Rural Revitalization Award" in September 2022, and the fourth "Huzhou Charity Award" - "Institutional Donation Award" in December 2022. In terms of social responsibility, Tianneng also won the honors of "Zhejiang Joint Effort and Common Prosperity Model Enterprise", "2021 Zhejiang Province Enterprise Social Responsibility Excellent Report", "2021 Zhejiang Province Enterprise Social Responsibility Benchmark Enterprise (Community Participation and Development)", and "Top Ten Public Relations Cases of Ecological Civilization Construction in Huzhou City". These honors and awards once again witness the values and views of righteousness and profit of Tianneng, as a responsible leader in the new energy industry, which has been practicing "thinking about the source of wealth and balancing interests and obligations" for a long time.



## 附錄01: 關於本報告

本報告涵蓋天能動力國際有限公司（「天能」或「本公司」，涵蓋各子分機構統稱「本集團」），內容涉及本集團在主要營運點中華人民共和國（「中國」）的環境、社會及管治表現。

報告時間範圍為2022年1月1日至2022年12月31日，部分內容根據需要追溯至以前年份。

### 參考標準

#### Reference Standard

香港證券交易所《環境、社會及管治報告指引》

"Environmental, Social and Governance Reporting Guide" issued by The Stock Exchange of Hong Kong Limited

國際標準化組織《社會責任指南（ISO26000）》

International Organization for Standardization "Social Responsibility Guide (ISO26000)"

全球報告倡議組織《可持續發展報告指南（G4）》

Global Reporting Initiative Sustainable Development Report Guide G4

聯合國全球契約（GC）10項原則

The 10 principles of the United Nations Global Compact (GC)

國家品質監督檢驗檢疫總局、國家標準化管理委員會《社會責任指南》GB/T36000-2015、GB/T36001-2015《社會責任報告編寫指南》和GB/T36002-2015《社會責任績效分類指引》

National Bureau of Quality Supervision, Inspection and Quarantine, National Standardization Management Committee "Social Responsibility Guide" GB/T36000-2015, GB/T36001-2015 " Social Responsibility Report Writing Guide" and GB/T36002-2015 "Social Responsibility Performance Classification Guidelines"

National Bureau of Quality Supervision, Inspection and Quarantine, National Standardization Management Committee "Social Responsibility Guide" GB/T36000-2015, GB/T36001-2015 " Social Responsibility Report Writing Guide" and GB/T36002-2015 "Social Responsibility Performance Classification Guidelines"

### 報告數據說明

#### Description of the Report Data

本報告使用數據來自年報、正式檔及統計報告。數據以2022年為主，部分包括以前年度數據。本報告中所涉及貨幣金額以人民幣作為計量幣種，特別說明的除外。

## Appendix 01: About the Report

This Report involves Tianneng Power International Limited ("Tianneng" or "the Company", and the various subsidiaries, collectively referred to as the "Group"), and the content relates to the environmental, social and governance performance of the Group in its main operating venue, the People's Republic of China ("China").

The report covers the period from 1 January 2022 to 31 December 2022, and some of the content may date back to previous years as needed.

The data used in this Report comes from annual reports, official documents and statistical reports. The data are mainly for 2022, and some may include data for previous years. The currency amounts involved in this Report are measured in Renminbi, unless otherwise specified.

### 報告保證

#### Guarantee of the Report

本集團董事會及全體董事保證本報告內容不存在任何虛假記載、誤導性陳述或者重大遺漏，並對內容的真實性、準確性和完整性承擔個別及連帶責任。

The board of directors and all directors of the Group guarantee that there are no false records, misleading statements or major omissions in the content of this Report, and assume individual and joint responsibility for the authenticity, accuracy and completeness of the content.

### 報告形式

#### Form of Report

本報告以中文繁體和英文兩種語言發布，以電子版形式提供。

The Report is divided into two languages of Chinese Traditional and English and is provided in electronic format.

## 附錄02: 《環境、社會及管治報告》指標索引

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## 附錄02:

## 《環境、社會及管治報告》指標索引

## Appendix 02:

Indicator Index of the Environmental,  
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